Fourth Canadian Migration Monitoring Network National Meeting

3 - 5 October 2003 Calgary, Alberta

Hosted by the Calgary Bird Banding Society at the Inglewood Bird Sanctuary

Friday, October 3rd

The meeting got underway at 5 pm Friday with a pizza and beer dinner followed by a presentation by Amanda Cole on the history of the Inglewood Bird Sanctuary, site of the meeting and the Calgary Bird Banding Society's migration monitoring and MAPS study area.

The 32-hectare park is part of the City of Calgary's park system. The Visitor Centre was built in 1996. Volunteers are involved as stewards (orient visitor and patrol site daily), exhibit hosts, and in research (CBBS projects).

Site is a federal Migratory Bird Sanctuary. Originally established as such due to lagoons used as wintering site for Canada Geese and Mallards. Different management styles in the past with various birds being introduced, including Wood Ducks and pheasants. Now managed to protect and restore native species and habitats as part of the Bow River riparian corridor. Work by CBBS has confirmed the importance of this site to migrating landbirds. River system is controlled by dams. Lack of flooding means that no regeneration of Balsam Poplar. Have been planting young trees and native prairie forbs.

An environmental education program for local schools is run at the visitor centre. This includes a week-long "Bird School", sponsored by Petro-Canada (refinery is adjacent to the site), and day visits by classes. Inglewood gets sponsors for these programs and for the busing, but this does not cover all of the costs associated with these programs.

Saturday October 4th

STATE OF THE NETWORK UPDATE (Audrey Heagy)

The CMMN is a cooperative venture among Bird Studies Canada, the Canadian Wildlife Service and the 15 independent member organizations that operate 20 migration monitoring stations from coast to coast across Canada. One new organization, the Bruce Peninsula Bird Observatory, has applied for CMMN membership and is presently under review. Applications from two other organizations are pending.

Some pilot migration monitoring projects are underway that may develop to become full members in the future. A number of other migration monitoring projects are affiliated with the CMMN.

Heagy presented the following updates from CMMN stations not able to attend the meeting:

Atlantic Bird Observatory

Migration monitoring continues:
- Banding results now posted on ABO website weekly.
- Spring monitoring on Bon Portage Island only (unusually low number of birds this year)
- Fall monitoring on both Seal and Bon Portage Islands ongoing (numbers in keeping with expectations).

Migration research continues:
- Mike Peckford collecting data on multi-scale patterns of bird migration in Atlantic Canada, using migration monitoring data supplemented by radar data.
- Trina Fitzgerald is currently writing up research on orientation of migrating Myrtle Warblers on Bon Portage.

Observatoire d'oiseaux de Tadoussac

- Reduced field program in the last few years due to changes in administration at the field site.
- New site for passerine banding operations being tested.
- Major re-organization in 2002/03 with new management team.
- Interim Director is Bruno Drolet.

Whitefish Point Bird Observatory

- Some difficulties in past few years
- Changes in staffing
- Migration monitoring at Vermillion station discontinued (temporarily).
- Other monitoring programs at Whitefish Point (banding, waterbird count, hawk counts, owls) are operating this fall.
- Great website with ETs and logs posted daily!

Innis Point Bird Observatory

- Spring migration monitoring program and other projects are on-going.
- Unable to find a full-time bander for spring 2003, so used various banders from local area and elsewhere, along with 50 local volunteers.
- Successful fund-raising proposal for major purchase of mist nets and equipment.

Haldimand Bird Observatory

- Continues to operate three stations with extensive coverage in spring and fall.
- 100% volunteer-based operation, including the banders.
- New hawk banding station established in fall 2003.

Delta Marsh Bird Observatory:

- Heidi unable to attend.
- Fall 2003 banding total of ~ 6153 birds made it the busiest season ever.
- Frequently had to close nets so catch per net hour will be very high.
- Spruce budworm associated species were all up in numbers, with over 1100 Tennessee Warblers banded.
- Continuing with fall Saw-whet Owl banding project.

Prospective CMMN Members

Bruce Peninsula (Cabot Head), ON:
- application under review by Jon McCracken.
- McCracken indicated that he was prepared to approve the application.

Vaseaux Lake, BC:
- application pending (had indicated they were planning to apply for CMMN membership but formal application process not initiated yet).
- See full report later in these notes.

St. Andrew's, NB:
- application pending.

Pilot Projects
- New pilot station on **Pelee Island, ON**. 2003 was 1st year of operation.
- New pilot station in **Toronto, ON**. (see full report later).
- **Albert Creek, YK** site under development (see full report later).
- **Holiday Beach, ON** migration monitoring station under development, not full daily coverage yet.
- New site in **PEI** under investigation [Additional details: The site is on Cameron Island. Contact is Donna Martin. Pilot work in fall 2002 in association with Holland College.]
- New site near **Sechelt** on Vancouver Island, BC being operated by a husband and wife team, who are also affiliated with the program at Rocky Point BO this year.

Affiliated Stations

- Brier Island, NS (see station report)
- Gros Morne, NF (station report at 2001 meeting)
- Revelstoke-Columbia, BC (see station report)

Bird Studies Canada

Funding
–CMMN Development Coordinator contract position (Ontario Trillium Foundation)
–no general CMMN funding in 2002 or 2003.

Staffing
– Audrey Heagy network coordination and development (especially in Ontario, because of provincial stipulation of the Ontario Trillium Foundation).
– Debbie Badzinski looking after trend analyses
– Jon McCracken reviewing new applications.
– Charles Francis left (now at CWS), not replaced.
– BSC regional staff in BC, Prairies (Lisa Priestley), QC and Atlantic Regions.

STATION REPORTS

Rocky Point Bird Observatory (David Allinson)

Site is located on Department of National Defense lands. Lose a few days a year due to DND demolition training operations. In fall 2001, shut down for season following 11 September.

Catch many western species including Golden-crowned Sparrow, Black-throated Gray Warbler and Yellow-rumped Warblers races (MYWA, AUWA and intergrades). Rarities include some eastern species (AMRE, BGGN) and BC Interior species.

Site also has large (by western standards) hawk movement including 17 species of diurnal raptors. Turkey Vulture passage of up to 4000 birds per day. Also some Broad-winged Hawks, including a few dark morphs that may be from the Peace River area.

Also good numbers of shorebirds, including Western Sandpiper.

Paul Levesque started a pilot NSWO banding project in fall 2002, with 210 owls banded in 19 evenings. Full report is available on the Rocky Point website. So far in 2003, have banded 47 owls, a little behind 2002.

Habitat at the site includes abandoned farmland with a mix of native and introduced vegetation (including gorse). Riparian corridor setting. Pond area is dried up this year due to very dry weather (nets closed for less than 20 minutes due to rain all season).

Catch rate was 0.53 birds /nh in 2001. In 2002, banded 3153 birds of 56 species. So far in 2003, have banded more than 3000 birds from 13 nets. This is a record high capture rate. Good numbers of RCKI, PSFL, and WIWA. Local population of bushtits appears to have crashed in 2003.

Total of 287 species recorded in the area, including 12 new species in 2003. Total of 18 species of warbler (amazing for the west coast). Have retrap data on 3000 birds.

MAPS project started in 2003. Retrapped some birds from 7 years ago.

Wind seems to be most important factor causing fall outs.

More information available on RPBO website.

Mackenzie Nature Observatory (Vi and John Lambie)

Station is located west of the Rockies in the Rocky Mountain Trench, on the shores of Williston Lake. Occasionally, high water levels in the lake (hydro reservoir) impact on the site. 2002 was one of those years, so had to establish several new net lanes. Only 3 of the previous net lanes were usable in 2002. In 2003, had to decide which net lanes to use. Kevin Fort (CWS BC) visited site in June and assessed which lanes to use. Decided to keep busiest nets from 2003 and previous set up, covering similar range of habitats. Increased total number of nets by one to 13.

Fall 2003 very busy at start. New bander from Ontario, not familiar with western birds, and encountered. frequent backlogs. New bander in charge was brought in part way through the season.

During 53 days of coverage banded 3346 birds of 59 species. Several species with high banding totals included 411 NOWA (highest ever), 377 RCKI, 373 PISI, 343 AMRE, 181 COYE.

491 recaptures over fall 2003 season. 53 returns, including a Western Tanager and a SWTH each banded as AHY in 1997. Capture rate: 0.9 birds per net-hour (similar to 1998 and equivalent period in 1997).

Owl banding in September 2003, 2 to 3 hours on 9 evenings, yielded 84 Saw-whets and 2 Borealis. High small rodent populations in the area the last two years may account for good numbers of owls..

In future, may go back to 12 standard nets. Are considering having two banders during busier part of season.

Vaseaux Lake, BC (Andy Bezener)

Station being run by the Okanagan Similkameen Conservation Alliance. Funding from various sources. Location is 1 h north of U.S. border, between Oliver and Kelowna.

In 2001, changed locations to new site, 750 m to north of previous location (1994-1998). Similar riparian setting, fewer problems with public access.

Since station re-activated in 2001, have experimented with 19 net lanes, now have 14 mist nets lanes, with 12 standard nets and 2 optional nets. Census route is 1 km.

Habitats include riparian woodland with dominant water birch, oxbows, marshes, and channnelized river.

Total of 96 species banded to date (all fall seasons). GRCA is # 1 species. Area appears good for SWTH moult. OCWA also caught in good numbers..

Annual banding totals range from 700 to 1600 captures. E.g. 1500 birds in 5300 net hours (0.3 b/nh) is typical.

WIFL: longevity record of at least 8 years, 2 months.

Forest fire in 2003 came within 1 km of station but did not interfere with operations.

Future priorities:
- continue fall migration monitoring program to get long-term data (need funding, rely mostly on volunteers, some support from PIF?)
- spring migration under consideration, possibly more effective
- start MAPS program at this site
- additional monitoring stations at higher elevation (2 days in 2002 at Venner Meadows site, caught different species)
- continue to improve facilities (new platform and banding table in 2003)
- Expand community outreach re bird conservation and migration.

Columbia River Revelstoke, BC (John Woods)

Station operated since 1998 as a five-year pilot project. Located at end of Revelstoke airport runway along Columbia River. Wooded island in high-water year (on reservoir system) but usually dry. Access by driving down the runway and either walk or canoe. Can camp on site.

Site was a known local bird hotspot. Within 10 km greenbelt section of the reservoir. Rest of reservoir/river system impacted by fluctutating water levels, either water, mud or rock, not vegetation.

Captured 10000+ birds in 5 years, 1000 to 3000 per fall. 60 species in 2002 (best year). COYE dominant species, including 1468 in one year!
Also good numbers of YRWA (all forms), YWAR, TRFL, REVI, WAVI, OCWA, LISP, SOSP, MGWA. A lot of one-off unusual species (CSWA, CONW, CANW).

Capture rate ranges between 0.6 birds per net hour to 1.1 b/nh. Boom or bust site, overload frequent in August. 14 nets, often with 60 birds on a round.

Many land management issues in the vicinity re hydro-electrical, recreational, etc. Bird data are used in connection with various land use planning issues. Fall migration wouldn't have been noted if not for banding work.

Have operated MAPS station at Mt Revelstoke for 10 years. Longevity records include MGWA for 9 years, SWTH for 9 years. Same personnel at both stations, overlap in dates.

Main bander at both sites was a young person who became trained. Volunteer corps is boom or bust; people tend to move once retired. Hard to get continuity due to small population. Dependent on funding for bander and assistant. Bander ill in 2003, therefore did not operate.

Now assessing the feasibility of running long-term program. Developing a financial business plan and protocol. To date, the banders have also served as the fund raisers - which leads to burn out. Meetings are scheduled for this fall re future plans.

Other work includes waterfowl surveys and point counts in breeding season. Difficulty re getting qualified personnel for point count work. Use a combination of good birders and a technician to do simultaneous point count and record to mini disc. System costs are $5 for disc for 160 minutes, $400 for a new recorder, microphones are Sony $39 stereo mikes which are ok for 50 m range but can spend up to $1000. Use recordings to audit results and for training purposes.

Albert Creek Banding Station, YK (Ted Murphy-Kelly)

In spring 2001 tested an area near Watson Lake in the southeast Yukon. Wetland complex near Liard River. Limited logging patches. Habitat consists of willow alder-birch poplar succession and mature spruce.

In 2002 got money from variety of sources in Yukon including CPAWS Yukon, CWS, and Yukon Bird Club. Spring coverage 9 May – 15 June, 32 days. Fall coverage, 10 August to 25 Sept, 23 days. Captured 1242 birds of 41 species.

In 2003, continued funding from variety of sources including Baillie Fund, CWS, and Yukon Environment. Coverage 1 May to 14 June, 40 days, and 4 Aug to 13 September (snowed out). Total of 2173 birds of 51 species banded. Top species include WIWA (470), MYWA (228) and OCWA (189).

There has been very little work on forest birds in southern Yukon, therefore regional biologists are interested in results.

Owing to latitude, the daily bird activity pattern is different than in southern Canada. Often not much activity until 2.5 hours after sunrise. Depends on temperature. Activity typically boom or bust.

Running up to 18 nets, depending on personnel and bird activity. Volunteers are scarce. Have had summer student past 2 years. One newly trained competent bander. Alaska BO bander visited in spring 2003 at peak of migration.

Provide programs for school groups on forest birds, banding and migration monitoring.

Banding facility was a gazebo tent (later stolen). Looking into building permanent shack.

Inglewood Bird Sanctuary, CBBS (Collister)

Inglewood site is on the Bow River in Calgary, surrounded by urban industrial and golf course. 35 ha in total. Site managed by City of Calgary Parks. Banding is in the fenced reserve area, which is not open to the public and only 3 researchers are allowed at a time. No minors. The census route covers the whole sanctuary site.

CBBS has recently done some pilot work at the Cominco Natural Area, 5 km downstream of Inglewood. In fall 2001, did same effort at both sites, found almost no interchange of banded birds during migration. A few breeding birds from the other site have shown up at Inglewood. No work was done at the alternate site in 2002 or 2003. Site is now being developed as a city park. Public access may make security an issue and preclude further CBBS work.

2003 is 9th year of fall migmon at Inglewood, 2nd spring program. Fall program runs from 1 August to at least 30 September (usually 6 October). Initial concerns re impact of spring banding program damaging the reserve are now allayed. Capture rate pretty constant, .35 to 0.40 b/nh. Census data highly variable, inconsistent effort.

2003 highlights: About average. Pretty steady year to year. 1st CMWAs and high numbers of TEWA, a pattern that seems to be consistent with several other stations in the network. 17 years since last irruption of budworm species in Calgary.

In addition to BSC's trend analyses, CBBS does in-house trend analyses of 27 species including SOSA. Four species showed significant or near significant trends up to 2002. Most of these trends will likely be dampened by the 2003 data.

- WAVI, -2%
- YWAR, 3.8
- DEJU, -2.7
- BAOR, -2.4

Also run MAPS program (1991-2003, except 1994). Use 7 net lanes for both MAPS and mig mon.

During 2003, completed 2nd year of pilot spring mig mon at Las Caletas site in Costa Rica (see presentation on Saturday evening).

NSWO banding. Fall 2000 program, monitored for entire 2 month window and caught only 3 birds. In fall 2003, CBBS is testing a new site, located 40 km sw of Calgary. Will start monitoring on 7 October. [38 NSWO banded as of 22 October, DC]. Also hoping to catch Boreal Owls.

CBBS membership: 53 active members. Funding from Alberta Gaming and Liquor commission (raised $50k in 2-day casino). This money is restricted to activities in Alberta. Need to find other funding for Costa Rican project (currently funded by Birdathon proceeds, personal donations, and memberships).

Have been working on separating MOWA and MGWA 1st year birds. Inglewood is located in a zone of sympatry. Requested data from other stations with pure populations. Mackenze has provided data. Other stations in the west are asked to provide additional data this year. CBBS collected rectrix feathers in 2003 for isotope analysis.

Have started a stable Isotope project:

- Keith Hobson's lab will do for $35 if they receive prepared samples (otherwise longer turnaround and $100+ fee)
- collecting feathers from SWTH, MOWA, MGWA.
- Also HYs and returns of local breeders YWAR, HOWR, WAVI, etc.
- Science 2002 article by Hobson.

[BBO interested in supplying additional samples]

Calgary Airport Raptor Relocation

- lots of bird-airplane issues
- Contractors trap hawks (SWHA, RTHA) and CBBS members band, colour mark and relocate.
- <20 hawks in 2001-03 period

Beaverhill Bird Observatory (Chuck Priestley)

Located at south end of Beaverhill Lake, 45 minutes east of Edmonton. BBO established in 1984, non- profit group.

Spring migration:

- 2003 very slow.
- Capture rates: 36 birds per 100 net hours in last 4 years, versus 26.8 in 2003
- 3rd week in May: warblers didn't show!

MAPS:

- 3 stations x 5 rounds; full coverage in 2003
- Slow in 2003
- 0. 23 b/nh in 2003 (64% LEFL) compared to average of 0.35 b/nh.

- OVEN and YBSA showing up now, due to maturing forest.

Fall mig mon:
- Seems to be slower this year than previous.
- More RCKIs than normal?

Habitat at BBO is quite different now than when station was first established. Not just that trees are growing up; the lake is drying out. Nets are now a long distance from edge of the lake. Habitat management is not possible. Moving the nets to similar lakeside habitats is not possible. Focus is on monitoring changes to MAPS and migration data due to habitat succession.

NSWO banding: 1999-2001 pilot project, ran a few nights, caught 13 birds
Began full coverage in 2002, 147 saw-whets captured. Educational program focus: "Steaks and saw-whets." Good media promotion.

Challenging to get volunteers out to crew the station, due to 45-minute drive from Edmonton, plus 20 min walk.

Bander's workshop started a few years ago, plus station reports. Expanded to conference. Format changes to the workshop are planned for 2004: instead ofstation reports, will present talks and special projects only.

Staffing: In 2003 had 2 seasonal staff, plus a long-term volunteer (May to August), plus a high school student for 2 months.

Funding: Student work programs. Also CWS, ACA (re education), Shell, etc.

Bander turn-over is a bit of an issue (as with many other stations); trying for longer-term head bander. Currently pay BIC $10/h, $9 for other banders for ~40 hours per week. Seen as training program so that banders move on after one or two years.

Bander pay at other stations:
- CBBS pays per diem of $100 per day for 6 hours banding plus all data entry.
- MNO pays $120/d
- Higher pay for expert banders is needed to get proper skill set and consistency of approach.
- Rates are very low compared with gov't wildlife technicians ($160 to $250 per day).

BREAK: 1113 -1122

Lesser Slave Lake Bird Observatory (Jul Wojnowski)

Site is 3 h drive north of Edmonton on east shore of Lesser Slave Lake.

2003 marks 10th year of migration monitoring:
- 50 d coverage in spring (21 April – 10 June)
- 73 d coverage in fall (12 Jul – 30 Sep)
- 150 species encountered so far this year

Spring 2003:

- 692 banded (average ~ 1000).
- fewer net hours due to weather
- runoff from snow, 2 nets flooded out for the spring.
- Passage not heavy

Fall 2003:
- started great through July early August, double previous year (2002 also high)
- Dropped off so overall 30% of days with less than 20 captures.
- Second highest TEWA total

Running total is 33,000 birds banded during migration to date.

Staffing:
- BIC plus assistant plus volunteers,
- 2 long-term volunteers, May through Labour Day (4 months).
- 282 person days,
- 130 person-days of volunteer effort.

MAPS:
- 3 stations since 1994,
- Now up to 4 stations
- 6 visits per site.
- Overlaps with fall migration.
- Fairly quiet unless get some migrants on last day (100+ on last day).
- In 2003, total of 423 banded, plus 156 recaps/returns, and 10 unbanded.
- Top species similar to migrants: AMRE, WTSP, CAWA, MYWA, SWTH

How Aged and How Sexed Criteria codes:
- In 2003 changed from numerical system to alpha system .
- No conflicts with MAPS coding.
- Collaborated with CJ Ralph on proposed system (cj was guest speaker at LSLBO's Birdathon event in 2002)
- Have broken plumage and other general criteria down, still some gaps.
- submitted ms to North American Bird Bander

Started a CAWA project in 2003
- common breeder
- colour banding adults for ecology project.
- Marked 30 birds in spring mig mon, then 30 more during MAPS.
- Established 13.5 ha study area with 50 x 50 m grid, 200 x 650 m area
- Study area overlaps all of the MAPS sites.
- Spot mapping.
- Difficult to find nests.
- would like to get a grad student involved.

Moult studies:
- because of its northern latitude, LSLBO sees relatively large numbers of birds in active moult.
- Recording primary moult score as part of the banding routine.
- See presentation in afternoon

LSLBO Boreal Centre Update:

- $1.6 million announcement in 2003.
- Alberta provincial government is primary financial supporter of the facility. Province will retain ownership of the facility.
- LSLBO will be a tenant of building and residence, with focus on boreal bird research.
- About 1/3 of facility will be designated for personnel/operations from Parks, 1/3 for LSLBO, 1/3 for other tenants.
- LSLBO will be responsible for maintenance fees, research monitoring programs.
- Joint tourism and education program between LSLBO and Parks is also a focus.
- Architects should be selected in January. Completion of facility is planned for fall 2004?

Brier Island Bird Migration Research Station, NS (Lance Laviolette)

Located at north end of Brier Island on land owned by Acadia University since 1976. First banding at site in 1954. 330 species recorded on Brier Island. 40000 birds banded to date. Banding during August 14 – Sep 14 window each year.

Get reverse migration in morning. Station samples birds breeding in Atlantic provinces primarily, some from Quebec. Also get 1000s of sharpies in September.

Habitat is alder thicket, some white spruce. Successional habitat is actively managed at and around nets (trees/shrubs are trimmed to net height).

Mig mon results mirror local observations, particularly for budworm warblers. In a comparison of trend data with LPBO, Brier Island had previously seen opposite trends for NOWA up to 1993. However, since then, trends are parallel and synchronous.

LUNCH: 1200 – 1325 Including guided tours of the Inglewood banding area.

Last Mountain Bird Observatory (Al Smith)

Located in a regional park on Last Mountain Lake. Totally man-made habitat. Usually no problems with campers or vandalism.

Run 13 nets (3 other net lanes used in past). Also census route. Catch rate of 0.5 birds per net-hour.

Spring 2003:

- 732 birds of 49 species (2nd highest).
- Lot of locals. Regular species.

Fall 2003:

- 3300 birds of 74 spp, 2nd highest, finish on Oct 7th.
- Caught 2nd and 3rd Blackpoll Warblers, species doesn't fly over the prairies.
- Highs for budworm species TEWA, CMWA, BBWA.
- Peaked around 10 August, two weeks earlier than normal for 2nd year in a row.
- YRWA way down for last 2 years

Phenology changes:

- MODO and NOFL appear to be migrating later (2 days later than in 1992)
- BLPW 1.5 days earlier
- BHCO, later in spring and fall. 0.8 and 1.5 days respectively.
- Computer template is available from Al Smith re calculations for phenology analysis. CMMN stations are invited to contact him about this.

- 100 to 600 visitors per year, 100% increase in visitation.
- Established a nature trail and nature centre.

Thunder Cape Bird Observatory (Jon McCracken)

Located east of Thunder Bay, adjacent to Sleeping Giant PP. Operational since 1991.
Joint venture of Thunder Bay Field Naturalists, Bird Studies Canada and Ontario Ministry of Natural Resources. Field naturalists responsible for facilities, coordinating volunteers, and hiring summer student(s). MNR involvement as part of program to assess impact of forest management in northern Ontario on forest birds. BSC is responsible for project management and administration and hiring the BIC (John Woodcock this year).

Presently two Master's projects:

- moult studies using TCBO and LPBO data
- NSWO migration data.

Also run MAPS station and Forest Bird Monitoring Program (point counts) station.

TCBO protocol is rigorous and highly standardized, including protocols for landbird monitoring plus NSWO and CONI monitoring.

Long Point Bird Observatory (Jon McCracken):

Established in 1960. Three field stations (previously had raptor station as well)

- Band 22000 to 24000 birds per year
- +700000 banded to date.
- 0.8 to 1 birds per net hour

Staffing: Permanent Long Point Program Coordinator position. Person left in March 2003, went back to having two (sometimes 3) seasonal wardens this year.

Training programs include Latin American Training program, Young Ornithologist Workshop (6 teenagers for a week, 12 to 30 applicants per year)

Other banding programs include colour banding of HOWA, LOSH and PROW.

One Master's student finishing up thesis on orientation of nocturnal migrants.

In 2003, grant from Ontario Trillium Foundation to develop a 5-year strategic plan.
Working with LGL consulting company re getting a NSERC Industrial Research Fellowship, for a post-doc migration scientist. Person will analyze LPBO data +/- CMMN data.

New cabin at Breakwater field station. New BSC HQ building

New technology: have changed to using scannable log sheets. May be able to provide scannable form service for other stations in future.

Volunteers: fantastic crop in 2003. Passed several on to other stations. International scope, 60% Canadian content rule.

Turnover of staff: expect will never be in a position to pay banders big bucks; job is seen by most as a stepping stone in their career development rather than a permanent position.

Prince Edward Point Bird Observatory (Brian Joyce)

Produced a full colour brochure for the station. Joint project of the Bird Observatory and the Prince Edward County South Shore Important Bird Area working group.

Migration Monitoring:

- Spring 2002 banded a record 5200+ birds of 103 species (BHCO top species)
- Fall 2002: banded 658 NSWO.
- Spring 2003, 2 weeks later opening than in 2002 but banded 4213 birds of 97 species
- Fall 2003 (3rd fall), slow to start but busy in late September, continue through 7 November.
- ~ 0.6 birds per net hour
- 75 to 80 recoveries, including 20 NSWO per fall.

Education program

- Reached 676 kids in 2003
- Have developed six educational programs on various topics including owls, Monarch butterfly migration, green power (re solar energy power system), etc.

Volunteers:

- 37 volunteers, 1238 volunteer hours. 227 days.
- High school students involved in building a waterfowl viewing blind and habitat management work.

Toronto Bird Observatory (Sandra Znajda)

TBO has been operating for past 25 years. Lot of changes in past few years.

Until this past spring, TBO operated on Muggs Island in Toronto Harbor. Access by ferry and canoe. Difficult to get volunteers. Were 100% volunteer program, mostly weekends. Vegetation had grown up and was deemed to be a major problem at the site: capture rates had dropped.

TBO Board set goal of becoming CMMN member station. Got some funds from McLeans, and Mountain Equipment Co-op for equipment. Hired a contract bander in spring 2002 as test. Numbers captured were ok. Access difficult. Accommodation in B&B. Hardly any volunteers, resulted in a lot of solo days. Site is also infested with red ants, so couldn't use bottom panel of nets. Vegetation problem. Possible expansion of Toronto Island airport was also problematic.

Board was re-assessing the program when Toronto Region Conservation Authority contacted TBO about opening a banding station in partnership with TRCA on the Leslie Street spit (Tommy Thompson park). The Conservation Authority is quasi-government organization that is partly funded by municipal and provincial governments, and partly by gate fees, foundations, and other fund-raising initiatives.

Leslie Street spit is a man-made feature in Toronto Harbour, composed entirely of construction landfill. Site is in natural succession, being developed as an urban park. Presently used for education and recreation programs. The spit is also an Important Bird Area. Migration monitoring would be part of overall monitoring plan.

Started pilot program in spring 2003. Banding lab on site. Site is very accessible, so now no problem with finding volunteers. 45 TBO members plus Conservation Authority volunteers. Paolo Viola (TRCA) was the main BIC for spring 2003 (short season). Dan Derbyshire was BIC for the fall 2003 season. Park is open to the public on weekends only; the banding site is off the main trail.

Preliminary results:

- Spring 2003: 1033 birds of 66 species. SWTH, YWAR, MAWA.
- Fall 2003: 1110 birds of 68 species as of end of September. BLJA (113), NAWA, MAWA
- Have been concerns about partnering with large organizations like TRCA, but so far so good
- Public accessibility may be a problem, had one incident of nets being opened overnight.
- Numbers have been low, but similar to other stations in southern Ontario.

Bird Banding Office Update (prepared by Lesley Howes, presented by Wendy Easton)

First I want to say that I am sorry I am unable to attend the Canadian Migration Monitoring Network meeting. The CMMN is a very important component of migratory bird research in North America and contributes lots of quality data to the bird banding office. I was looking forward to learning more about the network as well as meeting everyone.

I have a few items that I wanted to pass on to you:

1. As you know, I have recently joined the Bird Banding Office as Bird Banding Biologist. I am very happy to be in this position and I look forward to working with and supporting the CMMN and Canadian banders.

2. I would be interested to hear from you if there are things that you feel the banding office can do to better to support the CMMN, bird banding observatories or bird banders.

3. Staffing: The bird banding office has hired temporary help to assist us process the backlog of work that accumulated while Louise was alone at the banding office. In the near future, we will be hiring a permanent employee to help Louise. Once that has been accomplished we hope the office will run in a more efficient manner.

4. Band Supply: The Bird Banding Office now has all band sizes in stock.

5. Website: The National Wildlife Research Centre will be launching their new website in the near future. Information for the banding site has been updated somewhat, but it requires further attention. I will make this a priority issue during my first months in the office. If there is particular information you would like to see on the website, please contact me. Likewise, we would like to have more pictures of people banding birds, birds in nets or traps, birds being processes etc. If you have any pictures you would like to see on the website please send them to me.

6. West Nile Virus: As you may know, there are a few confirmed cases of Canadian banders with west Nile virus. The mode of infection was likely a mosquito bite. It is important to remember that banders are often exposed to mosquitoes in the field and must protect themselves. It is also important to remember that live virus can be found in the feces of infected birds and there is potential for infection through a skin abrasion. I encourage you to familiarize yourselves and your fellow banders with the symptoms of west Nile virus and the precautions you should take. Visit health Canada's website for more information and the latest updates: http://www.hc-sc.gc.ca/english/westnile/animals.html

7. I am working on the next issue of Memorandum to Banders. If you would like to inform banders across the country about a particular issue or event, please let me know and I will be happy to include it in this or an upcoming issue.

8. Have a great meeting.

Lesley Howes, Bird Banding Biologist , Canadian Wildlife Service Ottawa, Ontario K1A 0H3
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North American Banding Council Update (prepared by Brenda Dale, presented by Audrey Heagy)

Promoting Sound and Ethical Banding Principles and Techniques
www.nabanding.net/nabanding

What is NABC?
- NABC is an incorporated non-profit group representing organizations whose members utilize bird banding as a tool.
- forum held in 1995
- NABC started in 1996

Council composition:
- Banding Offices (*ex officio*)
- American Ornithol. Union
- Assoc. Field Ornithol.
- Cooper Ornith. Soc.
- EBBA
- IBBA
- Int. Assoc. Fish &Wildlife Agencies (1 Canadian, 1 US representative)
- Ontario BBA
- Pacific Seabird Group
- Raptor Research Foundation

- Society of Can. Ornithologists
- The Waterbird Society
- WBBA
- Western Hemispheric Shorebird Reserve Network
- Wilson Ornith. Society
- members at large to fill species or geographic gaps
- Caribbean & Central Americans invited to join

NABC Goals :
- Increase skill and knowledge levels
- Establish standards of competence & ethics

Who will benefit?
- **Banders**
  - will have best possible reference materials & a standard means of testing
- **Science**
  - increased # of skilled banders
  - more reliable data
  - more opportunities for collaborative studies
- **Birds**
  - from a safer, more effective banding program

What is NABC doing?
- Producing training manuals
  - Completed
    - Study Guide
    - Passerine
    - Instructor's Guide
    - Hummingbird
    - Raptor
    - Shorebird
    - translation of first 3 manuals into French & Spanish
  - In Preparation
    - Waterfowl (progress made in past year but still not complete)
    - Seabird

- Developing a Bander Certification program
  - Developing Certification Standards
    - Bander
    - Trainer
  - Running Evaluation Sessions
  - Standing committees
  - Infrastructure
  - charter trainers

- Developing Educational Materials
  - skin collections, web sites, photos
  - Planning more publications (Owl & Woodpecker guides)

How does certification work?
- **Certification** will require passing a written test and field evaluation of banding skills.

- **NABC certified trainers** will certify banders and trainers.
- **NABC will issue and register the formal certifications.**
- **Banding offices** will not require certification
    - will recommend certification
    - will recognize certification as evidence of qualifications for a federal permit

Canada and NABC
- Canadian manuals used as starting point for NABC manuals
- Canadians on every committee
- Experiences in our training workshops have influenced the format of certification
- 2003 meeting held in Canada

……. Just in (from the latest meeting at Delta Marsh in September 2003)
- Certification
    - Several Landbird evaluations held including one in Canada last weekend
    - A Hummingbird evaluation was held
    - Process continues to evolve to maintain standards, but make process easier for candidates and trainers
    - Materials will be posted on web site within next few weeks (application/ expectation on regular site and all testing materials on a password site for Trainers)
    - List of certified banders will be added to Web site
    - First Raptor certification planned
- New Chair is Mark Shieldcastle - the IAFWA representative from the United States
    - Active as both a landbird and a waterfowl bander and trainer
    - Experienced in working with the banding office on important issues

… on a personal note
- Resigned as Chair after 2.5 years
- Remain on Education Committee and as Chair of Bander Certification sub-committee
- These two committees reflect my strong interest in making sure quality learning opportunities and materials are readily available to all of the banding community
- the level of banding knowledge and skill considered to be acceptable becomes more consistent throughout North America

TECHNICAL PRESENTATIONS

<u>CMMN Trend Analyses (Debbie Badzinski)</u>

Each year, BSC analyzes all of the trend data for stations with at least 5 years of data, produces trends, and posts on the web site. Methodology available in reports on BSC website.

Considerations:
- Sample size: mean of at least 10 individuals per season and ETs/captures on at least 5 days per season.
- Coverage: Cover most of the migration window for that species. Also screen for days with poor coverage (rule of <10 species on a given day = poor coverage). There was some discussion as to whether this was a reasonable rule for all stations.
- Resident species: Stations are asked to flag species breeding in local area. Species with predominantly local population are excluded.

- Non-landbirds and diurnal migrants not included presently in trend analyses.

Station summary:

MNO: 7 years of data (1996-2002),
- 37 species (few to be added),
- 57% decrease,
- 43% increase.
- RUBL sig decline, HAFL sig increase

LSLBO: 9 years 1994-2002
- Sig declines: COYE
- RBGR sign +

BBO: 9 years of data,
- 9 species in spring,
- 13 in fall,
- rest are resident species.
- Large number of declines, potentially due to site habitat changes.
- ALFL sig decline.

IBS/CBBS: 8 years of data,
- 21 species in fall only.
- Sig decline in WAVI only species, no +ve.

LMBO: 9 years of data,
- large number of declines.
- BLBW, OCWA sig declines, no +ve

DMBO: 10 years of data
-large declines
NAWA, CMWA sig declines.

LPBO: 43 years of data
- 64 spring, 61 fall
- sig declines: CMWA
- sig +ve: EAPH

Ruthven/HBO: 5 years of data
- 28 species in spring, 19 in fall
- more declines in fall than in spring
- only sig increase YTVI.

Selkirk/HBO: 7 years
- 46 species, 36 fall
- sig decline EAME
- sig increase: GCKI.

PEPtBO: 5 years of data
- 39 species in spring
- no significant changes

Bon Portage, ABO

- 6 years of data
- 22 spring, 36 fall
- no sig declines
- sign + SWTH, BTNW

Seal Island, ABO

- 6 years
- 17 spring, 23 fall
- no sig dec
- sig +ve BTNW

Missing station/years

- TCBO: fixing data issues
- IPBO: backlog of data entry
- PEPtBO: backlog of data entry for earliest years.
- New stations with <5 years of data.

Summary

- few consistent patterns, but there are some
- noticeable declines at LMBO and DMBO
- LPBO, recent trends show more declines.
- more research needed into analytical methods including selection of weather variable, ET vs. census vs banding, corrections for effort data, etc.
- stations with significant habitat changes should probably be treated differently, or at least with suitable caveats
- analyses need to be more tailored for station-specific and species-specific analyses (but no funding is presently available for doing this).

Data Issues

- important to submit data on time in proper format
- report changes to protocols
- stations are responsible for error checking and "quality control" of data they submit
- stations to provide input into species selection
- look at trends on website to see if look ok.
- Need station input into analysis.

Group Discussion:

- Need to develop means of pooling regional data.
- Need to come up with some concrete messages on results of 10 years of data.
- Al Smith compared BBS and LMBO trend analysis and found very significant correlation.
- Apparent that "something is going on", especially wrt to perceived declines in the Prairies,
- need to get the message out. Look at correlations between stations.
- Need to look at big picture, habitat change in breeding areas, etc.
- Need to show use of data.
- LPBO switched to using Scannable forms recently; in the future, BSC may be able to do scanning for stations on a contract basis.

- New version of the CMMN DET program has been developed, test version is available from Audrey Heagy at BSC

Action item: Need to communicate what the trend analyses are showing and get the message out. This can be accomplished through articles in popular journals, newspaper articles, as well as peer-reviewed publications and presentations at ornithological conferences. CWS and BSC are in the best position to act upon this.

Stopover site fidelity of transient fall migrations at Inglewood Bird Sanctuary, AB (Doug Collister)

Returns of transient migrants to a site during successive migrations appears to be a very rare phenomenon. Known to occur in shorebirds and waterfowl, but exceptionally rare in passerines.

Winker & Warner, 1991. Wilson Bulletin 103:412-414, paper re Wilson's Warbler.
- Defined "good" transients as more than 160 km from regular breeding or wintering range
- Cited 21 records of 10 species in literature from 1969-1991.

Inglewood Bird Sanctuary site (species at least 30 km from the nearest breeding range):
- TEWA in three successive seasons.
- SWTH; 7 records. 1 to 2 or 3 years, 1 bird 1 and 3 years after banding.
- OCWA: 1 record next year
- YRWA: 1 record next year

Why in passerines?: - good refueling sites? - familiarity with site results in enhanced survival?

Why so rare? Year to year mortality, stopover, capture probability

Why IBS? High quality foraging and security area for stopover and prebasic moult (SWTH, TEWA). Dunn's analysis showed good mass gain. Natural funnel along river corridor?

CBBS is collecting feathers for stable isotope analysis from all fall SWTH to learn more about distance to breeding grounds.

Al Smith commented on local dispersal effect in spring at LMBO re YWAR (banded at his site during migration, found breeding in vicinity by other researchers).

Habitat Monitoring

Habitat Monitoring Overview (Audrey Heagy)

Presented an overview of:
- why we need to monitor habitat (changes can affect number of birds present and number of birds detected),
- types of habitat change include succession, management-induced, invasive species, natural catastrophes,
- general approaches to habitat monitoring (mapping, photo points, quantitative assessments) and
- variables that can be measured (habitat type, % cover in horizontal layers, % cover in vertical strata, species abundance, density, frequency, biomass).

What other stations are doing?

- Most stations have habitat map and some photos
- Some do MAPS habitat assessment (e.g. Inglewood)
- LPBO has done quantitative assessment in 1994 and again in 2001)
- BPBO and PEPtBO did quantitative assessment in 2002
- CWS in BC did quantitative assessments at CMMN stations in 1998 and again in 2003.

Prince Edward Point BO 2002 habitat work (Audrey Heagy)

Three methods were field tested:

1. Photo points along the census route
2. Net-centred quantitative plots
3. Linear transects across adjacent old field area that is being actively managed.

Netting area at PEPtBO is linear woods; nets are all parallel, perpendicular to edge of woods, run across habitat gradient.

Quantitative methods based on LPBO methodology (adapted from James & Shugart 1970, plus use of cover "density board"). AT PEPtBO used square rather than circular plot, centred on the net lane rather than offset, and more intensive sampling pattern.

Results show strong differences between nets, have not compared to differences in captures but could do this. Will repeat in 3 to 5 years.

Active management is occurring at both the netting area (regular pruning, removal of poplar saplings along edge habitat) and old field area (removing green ash sapling). Management plan linked to monitoring program being developed.

Observer effects on habitat sampling (Debbie Badzinski)

Presented results of an experiment using 7 observers (mostly novices) to collect habitat information using density board and ocular tube. Found wide variation between observers. May have been problems recording data for density board (report number of squares covered rather than visible or vice versa). With ocular tube, small sample size results in large variation. Ocular tubes tend to overestimate canopy cover because of understorey vegetation. Use of digital cameras was suggested as a way to increase reliability and/or to audit results.

Community Development and Funding Raising at PEPtBO (Brian Joyce)

Started small, with small grants for banding equipment. Relied upon a volunteer bander in charge for 7 years. Started a Board. Put an ad in local paper re an open house in 1998 and a cottage clean up. 13 people came out

Local community is viewed as a big factor, especially wrt doing fundraising and getting grants and getting small (and large) improvement projects completed.

A quick survey of potential Foundation support suggested that most foundations were geared towards supporting Education, followed by Community Development. Last, was Bird Research. Volunteers: the station has a strong base from diverse sources, including universities, high school, local naturalist clubs, ads in birders list serves (international response). Many local volunteers live 1 hour+ away from site.

Volunteers are involved in various activities, depending on their skill sets and desires: construction, maintenance as well as birding/banding, volunteer coordinator, sales, make contacts with local businesses (especially tourism operators), newsletters, funding proposals, leading educational programs, organizing fund raising events (4 a year), manning displays at fair, etc.

Observatory hosts an annual volunteer appreciation event and BBQ. This is seen as an impt way of acknowledging and recognizing station volunteers and local supporters.

Fundraising:

Long-term goal is to have a stable yearly revenue.
- 100 members (goal is 1000 @ $20 each means $20,000, enough to hire a bander)
- fundraising events, Birdathon group event.
- Multi-year funding
- Government assistance
- Awesome corporate sponsors
- Endowment – provides long term security, but needs substantive "seed" money from eager supporters to get it started

Time-limited funding:
- yearly fundraising proposals – receiving small grants
- donations

Events:
- Birdathon
- music evening (tickets $15)
- Fall bird ball (tickets $60)

Owl band lottery: 600 bands, in increments of 20. Prizes for first band recovered, farthest recoveries (get free membership).

PEPtBO received Ontario Trillium Foundation grant in 2001, total of $150,000
- diverse activities, diverse dollars.
- Proposal tailored around community building and involvement
- Providing work experience for students
- Educational programming

Funding allowed PEPtBO to
- renovate building
- plumbing and solar
- hire a full time bander and project coordinator
- begin fall monitoring
- develop education program (6 done, 2 in prep)
- build a banding lab

Large grants provide organization with credibility

Keep sending in proposal every year regardless of outcome.
Use 5 templates re education, volunteers, conservation, community development,. ..

Other funders
- CWS (in kind)
- BSC
- Metcalf
- Peacock (volunteers)
- George Lunan Fdn
- CNF , IBA (education)
- MNR (equipment), $5000 P&E fund
- Baillie Fund
- Friends of the Environment
- Quinte Field Nats
- Shell Canada (gas vouchers)
- Kinsmen paid for busing of school kids

Brian suggests that station's identify their strengths and weaknesses. What can you build on? He also suggests that stations develop a strategic/business plan.

Marketing your strengths:
- NSWO (charges visitors a small fee to "Owl Prowl" during NSWO banding period)
- Tourism (200,000 visitors to region in summer, opportunity to develop birding-related shoulder season traffic, form partnerships with tourism operators)
- Spring tour packages with local inns and B&Bs
- Free interpretive programming for children, parents, visitors (10-12 a.m.).
- Planning to start a Birding Festival (with support from local county economic developer, local birders, tourism, etc). Proceeds to go to Observatory. Concert and Birdathon events will be part of the 10-day festival in May.

Cater to different interests
- Birdathon for birders
- "Bird Ball" as dress up event
- Music lovers
- Tie to local interests (wineries, cheese factory)
- Local politicians

Two-sided
- more exposure, more dollars
- but more exposures also mean more disturbances, interruptions, human encroachments (around 1000 visitors per year)
- education and public awareness is your damage control.

Goals of organization are stated jn all fundraising proposals:
- maintain coverage in spring and fall
- develop stronger partnership
- secure long term funding
- continue to monitor health for birds and ours
- create a large education component for the local school board and the public.

What does station have to offer funders?
- positive and extensive press coverage

- partnering in significant environmental project
- developing or collaborating on fundraising events
- award ceremony as acknowledgement for funders. Plaques.
- Open for public viewing (#s of visitors)

Loggerhead Shrike bill colour study (Jon McCracken)

- Susan Craig observed that on the wintering grounds some shrikes had pale base to lower mandible, and that the difference did not appear to be age related.
- Breeding ground survey needed to see if sex related.
- The Eastern LOSH recovery team is undertaking a very expensive captive breeding program, need to pair female-males, DNA sexing was wrong 40% of the time.
- Field study during breeding season meant that sex could be determined by presence of a cloacal protuberance or brood batch, most birds could also be aged as SY or ASY.
- Study showed that bill colour is sex related but not age related
- Females have pale base to lower mandible, retain year round.
- Males have all black mandibles.

Moult Studies at Lesser Slave Lake BO (Jul Wojnowski)

Adults in active moult are common at LSLBO in early fall period. Catch about 75% adults in first 2 weeks of July, drops to less than 5% adults after mid August.

LSLBO has been collecting moult data since 1994 but not consistent, used shorthand system only, recorded extent of primary moult but not full pattern.

- In 2000, recorded moult scores for all tracts on 67 birds
- In 2001, recorded complete moult for 5 birds, primary moult scores for 155 birds.
- In 2002, made concerted effort to record moult and collected data from 205 birds.
- In 2003, continued to collect moult data from all adults during both migration and MAPs stations.

Moult score system based on Ginn and Melville's 5 point scale. Each primary feather is scored from 0 (old feather) to 5 (new feather fully developed). Scores summed (max score of 45 for species with 9 primaries) and converted to a percentage.

Main species (local breeders): AMRE, MYWA, TEWA, OVEN, CAWA.

Compared the timing of moult between sexes and age classes. Birds of North America account for AMRE says that SY males are the first to moult. Work at LSLBO confirmed this pattern.

Also looked at rate of completion of moult. Overall average rate of about 2% (+/- 0.2%) per day. Obvious differences between species, CAWA and YWAR faster, than MYWA.

Future directions
- Collect more moult data
- Investigate habitat selection for moult location (where do adults go after July?)
- Collaborate with other stations

BREAK FOR POTLUCK DINNER -

CBBS COSTA RICA PROJECT (Collister, Traklo, Watson)

Project started following a visit to the area by Doug Collister in 1997. The lodge owners were interested in ecological research projects.

Site is located on Pacific side, on Osa peninsula. Based at Las Caletas ecological lodge, just north of Corcovado National Park. Lodge property is about 4 or 5 acres.

Idea was to look at migration through the Central American isthmus. Not aware of any previous history of similar projects at this site.

High interest within CBBS, but not unanimous. Funding was an obstacle, and it understandably took a little time before the CBBS board was comfortable in its commitment to this off-site project.
Co-funded. Canadian participants pay way to San Jose and in San Jose. Once leave San Jose, the CBBS club covers their expenses. Cost for participants is about $1500 expenses (tax receipt); club costs are about $1500 to $2000 per participant.

Want to cover entire spring migration window. Two pilot years were conducted in 2002 and 2003. Covered 17 March – 12 April period in 2002. 15 April to 9 May in 2003. In 2004 planning to do a full project.

Required Costa Rican government research project permit. Obtained through a broker. Costs US$30 per person. CWS has no jurisdiction but CBBS requires permitted BICs.

Use USFWS bands on migrants. Buy own bands for residents ($485 for bands at about ~30c/band. Hummingbirds bands 86c each.)

The presenters showed many interesting photos of the lodge and - of course – tons of pretty birds. Also discussed hazards, including ants, scorpions, snakes (including fer de lance), thorns, etc.

Results for 2002:

- 882 new captures of 77 species
- 420 residents of which 94 were hummers
- 462 “migrants” of which 439 were SWTH (95%), 9 Yellow-green Vireos
- several winter residents including KEWA, MGWA, CSWA, YBFL, WEWA.

In 2003:

- 979 new captures of 68 species.
- 518 residents of which 184 were hummingbirds
- 461 migrants of which 406 SWTH, also 10 YGVI and ALFL (into May 7)
- hummingbirds, clipped tail feathers, not banded.
- Only one YBFL banded in 2002, was recap in 2003.

In agreement with other studies, the capture rate of residents birds declines over catching period. Increased activity in hummers in late April-May. SWTH moving throughout April. ALFL migrating into May.

In 2004 will be operating during spring migration from 26 March through 30 April. Predicting to band upwards of 1000 SWTH, and reasonable numbers of migrating YGVI and ALFL. Focus of the work is now on those three species in particular.

What now?

- year to year survivorship of residents
- stable isotope ratio analysis of SWTH
- moult studies, little existing information on residents.

Sunday, October 5th

The Sunday session only lasted a few hours so that people could head home that afternoon. Participants identified the following items for discussion:

- Birdathon update (Heagy)
- Action items from 2001 meeting
- Brochure
- CMMN national funding
- Cooperative projects
- Next meeting

Since there was considerable overlap between the "action items" from the last meeting and the "new business", the discussion on many topics covered both an update and new ideas.

UPDATE ON THE ACTION ITEMS FROM 2001 MEETING

Habitat Monitoring Working Group

The proposed habitat working group was not established. Little progress was made since 2001 on developing habitat monitoring protocols, though it was apparent that several stations (e.g. BC stations, Prince Edward Point, Bruce Peninsula, and LPBO) had made significant progress on developing and implementing habitat monitoring programs.

At the 2003 meeting, there was general agreement that habitat monitoring was essential and that a central approach is needed so that information from different sites could be compared (as well as comparing changes over time at each station). Need to consider various geographic scales.

Habitat monitoring should be linked to management objectives and a habitat management plan. Not all stations are able to actively manage habitat at their sites. At all sites, the extent of active management is constrained by practical limits.

Wendy Easton felt that there is a real need to have a standard habitat monitoring protocol established. Al Smith, Debbie Badzinski and others commented that this creates an excellent opportunity for research projects using veg and banding data.

There is a clear need to have some methods that are used at all stations. Since most (all?) stations are tracking catch per net, it is possible to compare captures with habitat data for each net within and between stations. Additional variables may be relevant to particular stations, such as proximity to water.

Action: Heagy to take lead in compiling habitat monitoring methods that all stations can use. Badzinski, McCracken and Fort to provide details of methods they have used. Methods to be considered include MAPS habitat assessment, photo points and quantitative assessment methods such as cover boards, James and Shugart (1970) paper. One week of effort every 5 years considered "do-able" effort.

Visual reference materials

Proposed working group not active but several individuals have been active in compiling existing information on visual reference materials for banders and in developing new materials. Available resources include:

- Dan Froehlich's new guide: *Ageing North American Landbirds by Molt Limits and Plumage Criteria: A Photographic Companion to the Identification Guide to North American Birds, Part 1*. See http://www.birdpop.org/danflyer.htm.
- Spread wing photos of museum specimens by Puget Sound University: http://www.ups.edu/biology/museum/wingphotos.html
- Powdermill Station bird photos: http://www.westol.com/~banding/Past_Pictorial_Highlights.htm

The latter two sites and others are included in the list of bander learning materials maintained on the North American Banding Council website at:

- http://www.nabanding.net/nabanding/learning.html

Work is underway on a book(s) with photographs for determining id, age and sex of North American birds, similar to Jenni and Winkler's book on European passerines. Collaborators on this project include Mike Lanzone, Bob Mulvihill (Powdermill), and Jerry Ligouri.

Station species lists:

In 2002, Debbie Badzinski sent each station a list of the species that could potentially be monitored at their station (based on number and frequency reported) and asked each station to flag those species that breed at or near the station. Stations were also asked to indicate which species (or time periods) should not be analyzed because a significant portion of the individuals detected were local birds rather than migrants.

Action: Stations should contact Debbie if they want to review the station species list.
Station trend analyses:

In 2001, Badzinski requested that each station review the trend analyses for their stations. Only a few stations have contacted her regarding the trend graphs.

Action: Stations should review the latest trend graphs for their station (posted on BSC website at: http://www.bsc-eoc.org/national/migmain.jsp). Please provide Debbie with

feedback on any trends that look wrong or that you think could be due to local factors (change in effort, change in habitat, etc.).

Cooperative research projects:

There has been little follow up on the many suggestions for possible CMMN research projects compiled at the 2001 meeting. A large-scale isotope project was proposed in 2001 but a proposal was not developed. Only certain stations and a modest number of species were included in the project done by Dunn and Hobson.

In 2003, CBBS collected tail feathers from SWTH for isotope analysis. They are preparing the samples for analysis and are covering the cost of the analysis.

A number of graduate students are collecting and analyzing feather samples for specific projects including

- grad student in California has done work on SWTH in North American and Central America (**Action: Wendy Easton to provide contact information to Doug Collister).**
- Theresa Burg has looked at the coastal – inland movement of some birds in BC (e.g. Queen Charlottes to mainland).

Permits for collecting tail feathers. In Alberta, both a provincial and federal permit is required. This is not the case in all provinces. All feather collecting protocols must be approved by an Animal Care Committee. Stations should also have a salvage permit that allows them to store feathers, specimens, etc.

The merit of having stations collect tail feather samples and store them for future analyses was discussed. Concern was expressed about the possibility that samples could be misplaced or improperly stored if analyses were not done promptly. This concern could affect the ability to get a permit for collecting samples for a feather "bank".

There was some discussion re the difficulty of finding out about who is doing what research, and the value of knowing what each station is doing and how their data are being used. This information can be used to raise awareness and increase credibility of the CMMN.

Action: Stations to include list of current research projects and collaborations with other researchers in annual reports (or directly to BSC). BSC to compile this information and make accessible to all stations and others.

Al Smith suggested that Swainson's Thrush could be used as a focal species for the network. It is widespread and is shows declining trends at many stations. Audrey Heagy had also selected SWTH as a focal species for draft brochure.

Action: Heagy to pursue the idea of using Swainson's Thrush as a focal species for CMMN communications strategy.

CMMN Communications

Brochure

Since 2001, McCracken (2001) and Heagy (2003) have prepared draft text for a generic CMMN brochure. Drafts have not yet been circulated to member stations and partners.

Heagy asked for clarification as to how stations would use a brochure. Some stations with public access indicated they would like a brochure to give to visitors to their site. A template that could include one panel with station specific information would fit their needs. However, including station specific information would increase production costs and require more frequent updates. Possibility of having an online "brochure" which could be updated as needed with minimal costs involved was suggested. A full-colour glossy brochure is needed to promote the CMMN at the national level. It was generally agreed that the CMMN needs to be front-and-centre as a national program. To be cost-effective, this brochure needs to be generic rather than station-specific and have a shelf life of about 3 years. This brochure could be included with all fund-raising proposals. Content would be suitable for a range of audiences including funders and general public. Should include stations on map and/or website contact info, but not space assigned to particular stations..

Action: BSC (Audrey Heagy) to develop national, generic, CMMN brochure for review and approval by 31 December 2003 BSC will also develop generic text re CMMN for stations to use in their own brochures and publications.

CMMN directory and website

Need to update the station information in the CMMN directory and website, including information on pilot projects.

Action: Audrey Heagy to distribute current CMMN directory and webpage info to each station and request that each station review, update and send new info to Heagy. Heagy will update CMMN directory and distribute new file early in 2004.

Waiver forms

Jon McCracken distributed copies of the LPBO waiver form, which all LPBO volunteers must sign upon arrival at Long Point. He noted that although these waivers have little legal clout.,they do have psychological value and people may be less likely to attempt an insurance claim or law suit.

Action: McCracken will distribute electronic version of the LPBO waiver form through the CMMN list serve for stations that want to adopt a similar procedure.

Insurance and Bander Safety

Lambie asked if any stations have had a bander make a claim re Workers Compensation due to banding-related injury. None of stations present had had anyone make a claim (but potential exists).

West Nile virus was discussed in connection with Lesley Howes' report that some banders in Canada had contracted West Nile virus. No one present knew any details. [Additional information provided by Lesley Howes re WNV and banders: I haven't got very much information other than infection of banders may be at a higher rate than in the general population due to spending time in the field where mosquitoes occur.

Two of the 16 people who were banding with CWS crews this summer have tested positive for the West Nile virus and a third person is listed as probable. One person tested positive in Alberta

and the other two are in Manitoba. The symptoms for the two who tested positive include a rash and being extremely tired. Both are recovering.]

WNV is a safety hazard for banders and stations need to show due diligence to ensure that all staff and volunteers are informed and aware of hazards and take appropriate precautions. At LPBO, McCracken prepared a safety notice that is posted at all LPBO field stations. Additional information is available on the Health Canada website.

Action: McCracken will distribute the LPBO WNV safety notice through the CMMN list serve for use/modification by other stations.

CMMN list serve

Since 2001, the CMMN list serve became fully automated by BSC. Anyone subscribed to the list can post to all members.

New subscribers can join by sending a message (from the email address you want to receive messages) to:
majordomo@bird.bsc-eoc.org

The message should say: **Subscribe cmmnlist**

You will then get a message asking you for confirmation, to which you must reply to complete the registration. To remove your name from the list, send a message to the same address that says: **Unsubscribe cmmnlist**

To send messages to the list, you send the message to: **<cmmnlist@bird.bsc-eoc.org>**

There is not a lot of traffic on this list serve, though you'll usually get some response when asking for assistance or advice. It was agreed that it would be good to have stations regularly post a seasonal synopsis (but not regular sightings board messages).

Action: Each station to post a synopsis at the end of each migration season. Doug Collister to develop and post a template for these reports. Audrey Heagy will compile information from station reports (e.g. banding totals) and prepare summary.

CMMN Web Pages

It was pointed out that some of the station information on the CMMN website is out of date.

Action: Stations to review the station descriptions on BSC's CMMN web pages and provide Audrey Heagy with any changes/additions that are needed.

North American Migration Monitoring Network

Heagy provided an update on recent progress re: the development of a North American Migration Monitoring Network. This is not a new initiative; CJ Ralph has been promoting the concept for years. What is new is that a part-time coordinator has been hired on the U.S. side, and a work plan was prepared at the Western Bird Banding Association meeting in August 2003. The working group is preparing a research plan and funding proposal and have requested and received PIF (U.S.A.) endorsement.

While there was general sentiment that the CMMN needs to stay focused on developing CMMN in Canada, there was broad agreement that we need to cooperate with NAMMN organizers in the U.S. (and Latin America?) and share the benefits of the Canadian experience to a wider audience.

CMMN Development

It was noted that we need to be able to tell people what the information we collect is being used for, and to more fully build awareness that the CMMN is a truly national program.

Need to get more CWS buy-in/endorsement of CMMN. Migration monitoring is included in the federal landbird monitoring strategy (PIF Canada) and NABCI strategies.

Trend data: A longer data set is providing increasing evidence of trends. Now need to get the message out re species showing trends. Also need to get CWS to acknowledge and support the CMMN as an important monitoring program.

Action: BSC needs to pursue an agreement with CWS nationally in support of the CMMN program.

Action: Al Smith and Wendy Easton will work within their regions to promote CWS support of the network.

Action: BSC to take lead in promoting CMMN communications to raise profile and increase awareness

Action: Debbie Badzinski to investigate possibilities of attracting graduate students to use CMMN data for their theses. Project/data base descriptions will be circulated to ornithology professors, making them aware of the opportunities. Audrey Heagy will look into setting up a small scholarship to attract students.

Next meeting:

Doug Collister and Calgary Bird Banding Society did a fantastic job of organizing and hosting the 2003 meeting. Participants felt that the Friday night – Sunday noon format worked well for them and did not think an extra day was needed. Meeting facilities were great.

Action: Brian Joyce and Prince Edward Point Bird Observatory offered to host the next CMMN national meeting in October 2005 in Prince Edward County, Ontario (near Kingston). Brian promises owls. There will be an opportunity to see the banding station in action.

Changes to Birdathon and Baillie Fund (Audrey Heagy)

Audrey noted that the CMMN share of Birdathon gross proceeds had been recently reviewed and revised by BSC's board. Effective next year, all designated CMMN stations will receive a 60% share of Birdathon proceeds that they raise (compared to 50% under previous arrangement).

As an added incentive to increase Birdathon support, the following sliding scale has been introduced:

$ Raised by CMMN station	**Old Arrangements**			**New Arrangements**		
	CMMN share	Baillie Fund share	BSC share	**CMMN share**	Baillie Fund share	BSC share
$1 -$2,000	50%	17%	33%	**60%**	0%	40%
$2,001-$4,000	50%	17%	33%	**70%**	0%	30%
$4,001 & up	50%	17%	33%	**90%**	0%	10%

Heagy provided the following examples of the increased share of Birdathon revenues flowing to CMMN stations under the new arrangements:

Amount Raised	**Old**	**New**
$600	$300	$360
$2400	$1200	$1480
$4800	$2400	$3,320
$10000	$5000	$8000

This was received as good news by most member stations. However, Audrey noted that this decision was being made in tandem with a decision by the Baillie Fund Trustees and BSC's National Science Advisory Council to discontinue the Baillie Fund's special migration monitoring grants program. The migration monitoring grants program was started in 1993 as a five-year program to provide seed money for new migration monitoring stations. Initially there was some start up funds from CWS to support this program. For several years, it has been funded entirely from Birdathon revenues. The program was extended for a total of 11 years.

The Trustees found the migration monitoring grants program increasingly difficult to manage for several reasons:

- Demand for the migration monitoring grants greatly exceeded the available funds.
- Established stations were competing with pilot projects.
- There were no objective criteria for deciding how best to allocate funds.
- Administrative costs made the program inefficient.

Therefore, it was decided that it was better to provide all member stations with an enhanced share of Birdathon revenues rather than to re-distribute funds. CMMN member organizations will not be eligible for Baillie Fund grants. This decision will impact those stations that have continued to rely on the Baillie Fund, particularly those that have relatively poor prospects to grow Birdathon.

One minor change that is being implemented as part of this re-organization is that Bird Studies Canada will hold back up to $500 of each station's share of Birdathon income until the annual terms of the CMMN agreement have been met, i.e. data have been submitted to BSC in an acceptable format. Funds in excess of this holdback will be distributed in the fall of each year as in the past (the 2003 Birdathon club share cheques are being processed and should be mailed out soon). The holdback should be available well in advance of the spring migration season, provided data are submitted on time.

2003 CMMN Birdathon prize

In 2003, any CMMN station whose supporters raised a total of more than $500 doing Birdathon was entered in a draw for a digital camera donated by Pentax Canada. Twelve stations were eligible. Thunder Cape Bird Observatory was the lucky winner. This small incentive seemed to motivate several stations to raise more than $500.

Action: BSC will try and get a similar CMMN prize donated for the 2004 Birdathon.

ACKNOWLEDGEMENTS

Many thanks to the staff of Inglewood Bird Sanctuary and volunteers of the Calgary Bird Banding Society for organizing and hosting the meeting, and for the tremendous logistical support (accommodations, food, hospitality, transportation, and the weather were all first rate!). Thanks to all the people who attended the meeting. Special thanks to all of the station representatives for their presentations and open discussion. The 2003 CMMN meeting was co-chaired by Doug Collister (Calgary Bird Banding Society) and Audrey Heagy (Bird Studies Canada). Amanda Cole provided invaluable help with the projectors. Audrey compiled the meeting notes, with help from Jon McCracken and Debbie Badzinski. Bird Studies Canada contributed to food costs.

List of Participants

Cole, Amanda	Calgary Bird Banding Society
Collister, Doug	Calgary Bird Banding Society
Crawford-Parr, Judi	Calgary Bird Banding Society
Ebel, Rainer	Calgary Bird Banding Society
Flynn, Dick	Calgary Bird Banding Society
Flynn, Lenora	Calgary Bird Banding Society
Hornbeck, Garry	Calgary Bird Banding Society
Koch, Michelle	Calgary Bird Banding Society
Lane, Steve	Calgary Bird Banding Society
McLeod, Shonna	Calgary Bird Banding Society
Meyer, Greg	Calgary Bird Banding Society
Mitchell, Pat	Calgary Bird Banding Society
Moffatt, Kerry	Calgary Bird Banding Society
Peterson, El	Calgary Bird Banding Society
Smiley, Gwen	Calgary Bird Banding Society
Stiles, Don	Calgary Bird Banding Society
Trakalo, Barry	Calgary Bird Banding Society
Watson, Catherine	Calgary Bird Banding Society
Watson-MacDonald, Catherine	Calgary Bird Banding Society
Wiggins, Linda	Calgary Bird Banding Society
Allinson, David	Rocky Point Bird Observatory, BC
Badzinski, Debbie	Bird Studies Canada, HQ
Bezener, Andy	Vaseux Lake Migration Monitoring Station, BC
Easton, Wendy	Canadian Wildlife Service, BC
Fort, Kevin	Canadian Wildlife Service, BC
Heagy, Audrey	Bird Studies Canada, HQ
Joyce, Brian	Prince Edward Point Bird Observatory, ON
Kinsey, Sandra	Mackenzie Nature Observatory, BC
Lambie, Vi	Mackenzie Nature Observatory, BC
Lambie, John	Mackenzie Nature Observatory, BC
Laviolette, Lance	Brier Island Bird Migration Research Station, NS
Law, Laird	Mackenzie Nature Observatory, BC
McCracken, Jon	Bird Studies Canada, HQ
Murphy-Kelly, Ted	Albert Creek Station, Yukon
Priestley, Chuck	Beaverhill Bird Observatory, AB
Priestley, Lisa	Bird Studies Canada, Prairies
Smith, Al	Last Mountain Bird Observatory, SK
Wojnowski, Jul	Lesser Slave Lake Bird Observatory, AB
Woods, John	Revelstoke, BC
Znajda, Sandra	Toronto Bird Observatory, ON