Bio Link

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Expansion of New Brunswick's Protected Natural Areas network

Written by Jonathan Cormier

In March of this year, the Government of New Brunswick committed to doubling the amount of Protected Natural Areas on forested Crown land in an effort to protect natural habitats to support our plant and wildlife species. This is in keeping with a recent public survey in which a majority of New Brunswickers expressed that we do not have enough protected areas. Reinforcing the existing Protected Natural Areas system will strengthen nature's resilience to our use of land and resources.

Approximately 122,000 ha of forested Crown Land will be added to the existing 158,000 ha Protected Natural Areas system. Currently 3% of New Brunswick's landscape is protected by the provincial or federal government in Protected Natural Areas, provincial parks, national parks, national wildlife areas and migratory bird sanctuaries. Once these new sites are designated, approximately 5% of the Province's natural heritage will be preserved for existing and future generations to enjoy.

Over the last two years, employees from the Department of Natural Resources, foresters, scientists and naturalists collaborated to identify 190 candidate sites on Crown land, totaling 143,000 hectares (353,000 acres). These sites were identified based on their ecological value, their importance as wildlife habitat, and their distribution throughout the province. An attempt was made to avoid areas that are of priority for development or resource use. The Department of Natural Resources intends to select approximately 122,000 hectares of these candidate sites, and designate them as new Protected Natural Areas.

Selection of the Candidate sites considered the following criteria:

1. Distribution – where should Protected Natural Areas be located around the province
2. Composition - what features should be included or avoided
3. Configuration – what are the appropriate sizes and shapes

1. Distribution: Representation of New Brunswick's Ecosystems

The Province of New Brunswick is divided into distinct natural regions that are based on physical features such as soil type, elevation, landform, and climate. These physical features create the conditions for different habitats, such as hardwood forests or raised bogs. Different habitats influence the plant and wildlife species that are present. Candidate sites were selected in each of the natural regions to capture samples of the province's habitat types and to protect a broad spectrum of the province's biodiversity. An attempt was made to equalize the amount of protected land surfaces among the natural regions, while also considering the contribution of two national parks and some of the provincial parks that have wilderness characteristics.

2. Composition: Targeting Natural Biodiversity

Specific natural features were targeted to maximize the ecological value of the Protected Natural Areas network. Priority features included old forests, rare forest types, rare geological features, sites with a rich

ASFWB
49th Annual Meeting and Conference
October 23-25, 2012
Rodd Charlottetown Hotel, Charlottetown, PEI

Sessions include: Ecosystem Studies, Wildlife Health, and Management & Conservation
Registration (Wed/Thurs lunches included): Member $45, Non-member $65, Student $25, Banquet $40
See the web site for more details or email atlantic@cchwc.ca
http://www.chebucto.ns.ca/Environment/ASFWB/springseminar.html

See Pages 3-4 for listing of speakers and times.

diversity of species, and sites with rare species. Elements that are counter to conservation goals were avoided where possible. These elements included plantations, forests where trees have been recently harvested, maple sugar operations, land with mineral and petroleum rights, areas with many roads, and Crown Land that is allocated for various other uses. While the exercise focused mainly on forests, other habitats such as wetlands and rivers were also included.

3. Configuration: Many Small Sites versus Fewer Large Ones
When creating a functioning protected area one would ideally select sites that are large and round. Fewer exterior influences can degrade a large, circular protected area than a small elongated one. Larger sites are more likely to weather dramatic environmental disturbances such as insect outbreaks or fire. Also, in larger sites, there are more habitat types, and more space for wildlife, resulting in a better chance for the wildlife populations to survive over time. However, the total area in protection and the potential size of any single protected area is constrained by society's other demands for the land. Timber production, mining, and agriculture are also important to New Brunswickers, and it can be difficult to identify large pieces of land that have not been impacted by these activities.

The final sizes and shapes of the candidate Protected Natural Areas were chosen to maximize the amount of unaltered wildlife habitat while minimizing the amount of land impacted by human activities contained within the candidate Protected Natural Areas. By not having a minimum or maximum size requirement for the candidate Protected Natural Areas we had the flexibility to create smaller candidate sites to capture rare wildlife habitats or geological features, or to create large contiguous natural areas with a variety.

The result of this exercise was the identification of 190 candidate Protected Natural Areas of various sizes, distributed throughout the province. Some sites are adjacent to existing Protected Natural Areas, but most are entirely new sites.

The Province is currently setting up a citizen engagement process to hold open public information sessions in select locations across the Province where staff from the Fish & Wildlife Branch will be on hand to answer questions and gather public input on the candidate Protected Natural Areas sites.

Photo courtesy of NB Department of Natural Resources web site

ASFWB Meeting and Conference Scientific Program 2012

Day 1 (October 24th)
8:00 REGISTRATION
8:45 Opening remarks

Session 1: Wildlife Management and Conservation
09:00 Gary Schneider PUTTING A PUBLIC FACE ON FOREST RESTORATION
09:40 Kirby Tulk MANAGING FOREST ECOSYSTEMS IN TERRA NOVA NATIONAL PARK OF CANADA: THE GOOD, THE BAD, THE UGLY
10:00 John Brazner VERNAL POOL MAPPING AND MONITORING PROJECT: PROMOTING STEWARDSHIP AND UNDERSTANDING OF NOVA SCOTIA'S SMALLEST WETLANDS
10:20 Paul Chamberland GEESE, GULLS, GRAINS AND GOLF: PROPER PERMITS PROVIDE PROTECTION FROM PROTECTED BIRDS
10:40 COFFEE BREAK
11:00 Alyssa Mitchell OPERATION SHREW POO: A COMMUNITY-CENTERED APPROACH TO CONSERVING RARE WETLAND SHREWS IN NOVA SCOTIA
11:20 Kate Bredin THE MARITIMES BREEDING BIRD ATLAS: CONSERVATION APPLICATIONS, CHANGES IN MARITIMES BIRDS AND CONTINUING VOLUNTEER SUPPORT
11:40 Margaret Campbell USING BREEDING BIRD ATLAS DATA TO CONSERVE SPECIES AT RISK IN INDUSTRIALLY MANAGED ATLANTIC FORESTS
12:00 Becky Whittam BANK SWALLOWS IN THE MARITIMES: PRELIMINARY SURVEYS AND FUTURE NEEDS FOR A DECLINING AERIAL INSECTIVORE
12:20 LUNCH
1:40 ASFWB Annual General Meeting
2:40 COFFEE BREAK
Session 2: Wildlife Health
3:20 Pierre-Yves Daoust ANIMAL WELFARE AND WILDLIFE USE
4:00 Heather Fenton UNUSUAL MORTALITY EVENT OF YOUNG GREY SEALS (Halichoerus grypus) ASSOCIATED WITH APICOMPLEXAN PROTOZOAL HEPATITIS IN NOVA SCOTIA, CANADA
4:20 Ana Gradil COMPARATIVE IMMUNOLOGICAL DEVELOPMENT AND RESPONSES IN LOWER VERTEBRATES – SHORTNOSE (Acipenser brevirostrum) AND ATLANTIC (A. oxyrhynchus) STURGEON
4:40 David Groman RESULTS OF FISH HEALTH ASSESSMENTS OF GLASS EELS, ANGUILLA ROSTRATA, FROM CANADIAN MARITIME RIVERS FROM 2006-2010
5:00 Helene Van Doninck LEAD POISONING IN BALD EAGLES Note: underlined names denote student presenters

Day 2 (October 25th)
8:00 REGISTRATION/ Announcements

Session 3: Wildlife Management and Conservation II
8:40 Brad Toms NEW FINDS IN EASTERN MOUNTAIN AVENS (Geum peckii) CONSERVATION ON BRIER ISLAND AND DIGBY NECK
9:00 Scott Roloson DELINEATING ANADRAMOUS MOVEMENTS OF NON-NATIVE RAINBOW TROUT ON PRINCE EDWARD ISLAND
9:20 Rick Hawkins AQUATIC CONNECTIVITY IN PRINCE EDWARD ISLAND NATIONAL PARK: MONITORING FOR ECOSYSTEM INTEGRITY AND MANAGEMENT EFFECTIVENESS
9:40 Daryl Guignion SILENT STREAMS: THE IMPACT OF IMPOUNDMENTS ON HEADWATER STREAMS IN PRINCE EDWARD ISLAND
10:00 COFFEE BREAK
10:20 Kate Goodale HOW DO NOVA SCOTIA FARMERS FEEL ABOUT BIODIVERSITY ON THEIR PROPERTIES?
10:40 Megan MacIntosh THE EFFECT OF LANDUSE ON WATERFOWL HABITAT QUALITY IN AN AGRICULTURAL REGION OF ATLANTIC CANADA
11:00 Cassandra Mellish MONITORING OF GREEN CRABS FROM TWO PRINCE EDWARD ISLAND ESTUARIES: EXPLORING THE BASIS FOR A POTENTIAL MANAGEMENT PLAN
11:20 Garry Gregory MUSKRAT HARVEST AND THE INFLUENCE OF EXTERNAL VARIABLES
11:40 LUNCH

(Continued on next page)

Session 4: Ecosystem Studies

1:00 Donna Giberson PUTTING THE RESEARCH INTO ACTION: HOW DO WE GET FROM UNIVERSITY STUDIES TO WORK ON THE GROUND?

1:40 Paula Tummon Flynn OCCURRENCE OF AUTOTOMY IN PEI GREEN CRAB POPULATIONS AND THEIR INFLUENCE ON THE POTENTIAL IMPACT OF THIS INVASIVE SPECIES

2:00 Julia A. Whidden SKATING AROUND THE DRINK: PRELIMINARY MOVEMENT PATTERNS, POPULATION DENSITY AND DISTRIBUTION OF LITTLE SKATE AND WINTER SKATE IN THE AVON ESTUARY

2:20 Lauren Banks TOO MUCH? TOO LITTLE? OR JUST RIGHT?: IMPACTS OF NUTRIENT AVAILABILITY ON DUCK BROOD PRESENCE IN THE ANNAPOLIS VALLEY

2:40 Lee Millett FACTORS AFFECTING PRODUCTIVITY OF DUCK BROOD REARING IN SMALL WETLANDS IN THE ANNAPOLIS VALLEY, NOVA SCOTIA

3:00 COFFEE BREAK

3:20 Rosemary Curley WERE BEAVERS NATIVE TO PRINCE EDWARD ISLAND?

3:40 David J. Lieske USING MODELS TO LINK SURVEY DESIGNS: A CASE STUDY INVOLVING MARITIME AMERICAN BLACK DUCKS

4:00 Paul Giroux MONITORING WETLAND ODONATA COMMUNITIES IN PRINCE EDWARD ISLAND NATIONAL PARK OF CANADA

4:20 Student Awards/Closing

New Wilderness Areas Designated in Cumberland County, Nova Scotia

Based on NS Department of Environment News Release June 6, 2012

Crown lands of the Kelley River and Raven Head areas of Cumberland County have now been designated under the *Wilderness Areas Protection Act*. Public feedback helped government make informed decisions on wilderness area boundaries and management of these important lands. The designation follows more than two years of review, public consultation, and consultation with the Nova Scotia Mi'kmaq.

Kelley River Wilderness Area straddles the watersheds of Kelley River and Atkinson Brook, and includes wild sections of River Hebert, Halfway River and a tidal portion of Maccan River.

At 20,950 hectares (52,000 acres), Kelley River is the third largest wilderness area in Nova Scotia. This is an area of extensive, mature and older forest. It provides habitat for species at risk, including wood turtle, Inner Bay of Fundy Salmon and the endangered mainland moose. Raven Head Wilderness Area protects 36 km of undeveloped coast along the Bay of Fundy, between Apple Head and Shulie River. The 5,270 hectare (13,000 acres) area includes fossil cliffs, sheltered coves, beaches, saltmarshes, and coastal forest. It also provides habitat for the endangered mainland moose and other sensitive species.

These new wilderness areas are ideal for outdoor recreation such as sport fishing, hiking, canoeing, camping, hunting and beachcombing, as well as for research, education and community stewardship. Some vehicle access will be permitted on existing forest roads and trails to ensure valued public access and connections between communities.

Kelley River and Raven Head wilderness areas are the 39th and 40th wilderness areas to be designated in Nova Scotia. Together, these areas contribute almost 0.5% toward the province's goal of legally protecting 12% of Nova Scotia's landmass by 2015.

Aerial shot of Apple Head in the new Raven Head Wilderness Area. *Photo courtesy of Nova Scotia Department of Natural Resources web site.*

Investigating Invasive Species in Sydney River Watershed

Submitted by Cathy Munro

Nova Scotia Department of Fisheries and Aquaculture, Inland Fisheries Division and Unama'ki Institute of Natural Resources have teamed up to work on investigating the spread and establishment of invasive chain pickerel (*Esox niger)* and smallmouth bass (*Micropterus dolomieu*) in the Sydney River Watershed. This is the first illegal introduction of chain pickerel on Cape Breton Island, and only the second occurrence of smallmouth bass. The Unama'ki Institute of Natural Resources Guardians have been setting fyke nets once a week, for a 24 hour set, July thru the end of September on a number of headwater streams. This data will provide insight into the extent to which these two species are migrating and utilizing the upstream portion of the watershed.

From left: Cathy Munro, fisheries technician with Nova Scotia Fisheries and Aquaculture, Membertou Natural Resources Guardians George Christmas, Rosalinde Christmas and Lance Paul, along with Keith Christmas, Unama'ki Institute of Natural Resources.

New Wildlife Journal

The first issue of the open-access Canadian Wildlife Biology & Management is now available online at http://cwbm.ca. As explained by editor Gilbert Proulx, all papers have been refereed, revised and published within 6 months of their original submission. This new Journal reflects the aim to help wildlife professionals and naturalists report their findings, encourage more fieldwork on wildlife populations, habitats and behavior, and provide managers with recommendations for state-of-the-art conservation programs. And, as Dr. Proulx editorializes,

Canada "encompasses 15 ecozones, 25 per cent of the world's wetlands and boreal forests, and a diversity of landscapes reaching the Atlantic, Pacific and Arctic Oceans. It is home to hundreds of wildlife species distributed across coniferous, deciduous and mixed forests, mountains and prairies, lakes, rivers, wetlands, muskegs, and marine environments. Despite the fact that Canada has over 75 universities, hundreds of provincial and territorial wildlife offices, and many wildlife researchers and managers, the number of scientific journals focusing on natural history, and on wildlife biology and conservation, is less than the number of fingers on one hand!"

Conservation Leadership Programme Awards

The Conservation Leadership Programme (CLP) is currently soliciting applications for 2013 Conservation Awards. These awards are aimed at early-career conservationists (less than 5 years professional experience in the conservation sector). Successful applicants will 1) develop the knowledge, skills and abilities of team members; 2) implement a focused, high-priority conservation project combining research and action; and 3) contribute to the long-term success of local conservation efforts.

There are three tiers of CLP support. New teams will apply for a Future Conservationist Award.

. Future Conservationist Awards: Approximately 20 awards of up to $15,000 each

. Conservation Follow-up Awards: Approximately 6 awards of up to $25,000 each (available only to previous CLP award winners)

. Conservation Leadership Awards: 1 award of $50,000 each (available only to previous CLP award winners)

The application deadline is November 9, 2012 and awards will be announced in April 2013. Please visit the CLP website at http://www.ConservationLeadershipProgramme.org for detailed eligibility criteria, guidelines and an application form.

A Career with International Overtones

Adapted with permission, from an article by Randy Milton in The Newsletter of the Scientific & Technical Review Panel (STRP) of the Ramsar Convention Issue #1, 2012

In 1974, while volunteering with World Wildlife Fund in Indonesia, Randy Milton read an article on the Ramsar Convention published in the IUCN Bulletin and concluded that applying the Ramsar goals could greatly assist the conservation of wetlands and waterbirds in Indonesia. After his posting was finished, he gave little further thought to Ramsar until 1992, when two Ramsar Sites became his "responsibility" as manager for the Ecosystems and Habitats Program with the Nova Scotia provincial government. Thus he met Clayton Rubec (retired) of Canada's Ramsar Administrative Authority. During meetings on other federal/provincial issues, their side discussions invariably lead to peatlands, wetland inventory, Ramsar, and a unique opportunity. An invitation to participate on the Canadian Delegation to Ramsar Conference of the Parties (COP 7) in Costa Rica led Randy to further meetings with a diverse group of peatland scientists and managers; and to becoming Canada's Scientific & Technical Review Panel (STRP) member of the Ramsar Convention National Focal Point in 2001. He has further attended COPs 8, 9, 10 and,11 and remains involved in varying roles with the STRP including peatlands, wetland inventory, wise use, Recovery Implementation Strategies, poverty alleviation and regional networking.

Randy Milton, Manager-Wildlife Resources, Ecosystems & Habitats Program, Nova Scotia Department of Natural Resources

Randy notes, "What keeps me returning? It is more than the opportunity to work on a diverse range of wetland management issues with committed individuals drawn from around the world. The work undertaken by the STRP on behalf of the Contracting Parties is relevant to the often complex wetland management issues among competing societal, individual and sectoral needs. Increasingly, the relationship of people and local communities to wetlands and their role in wetlands conservation and management has rightfully captured more of the COPs time and been reflected in the make -up of the STRP work program. Although the content of STRP documents may not be as specific as required by some Ramsar site managers, the principles and approaches to successfully address issues are generally based upon case studies. I have applied these materials in my work with community and private land owner stewardship, wetland inventory and wetland policy." Being involved with the STRP certainly brings a broader perspective to Randy's daily work.

New Baby Boy!

After much waiting Mason Dale Drouillard arrived to ASFWB's Secretary/Treasurer, Deanne Meadus, at 4:34am weighing in at a whopping 9lbs, 10.4oz and 22 inches long. Congratulations to Deanne and her family!

During Deanne's maternity leave, Nic McLellan of Ducks Unlimited will be taking over secretary and treasurer duties for ASFWB. Welcome Nic!

Shedding Light on Bird Movements

Originally published in Bird Studies Canada's electronic newsletter Latest News (www.birdscanada.org/organization/bscnewsarchive.html) on 16 May 2012

Ever wondered where birds go when they leave your backyard? Environment Canada has launched an online version of the **Canadian Atlas of Bird Banding**. This website presents a comprehensive overview of bird-banding results involving birds banded, recaptured, or recovered in Canada for all species of birds except waterfowl (e.g. landbirds, seabirds, raptors, waterbirds, and shorebirds). Each species account shows maps with the locations of banding and recovery for each record or group of records, as well as summary statistics such as the number of each species banded or encountered, and the maximum distance travelled. Check out your favourite species – you're guaranteed to learn something new!

Decline of the George River Caribou Herd

Based on NL Environment and Conservation News Release August 16, 2012

The George River Caribou herd, which migrates between Quebec and Labrador, is now estimated to be less than 28,000 animals, which represents about a third of the population that was estimated two years ago. In 2001 the population size was estimated to be around 385,000 and in the late 1980's this same herd was estimated to be comprised of 800,000 animals.

Thus far, biologists have been unable to determine the cause of the dramatic decline in numbers, although change in quality and quantity of food is believed to be one of the driving factors. Other factors that might have contributed to this decline include predation, disease, parasites, and climate change.

For more information please visit: http://www.healthywildlife.ca/?p=1478

Murre Conservation Fund Call for Applications

The Newfoundland and Labrador Murre Conservation Fund is now accepting applications for projects to be carried out during the 2013-14 fiscal year. Co-managed by Wildlife Habitat Canada and Bird Studies Canada, the Murre Conservation Fund supports projects that promote the conservation of Murre and their habitat in Newfoundland and Labrador. This includes assessments of Murre breeding populations, productivity, survival, harvests and other mortality factors, and projects that focus on long-term conservation of high-quality habitat, particularly that which is vulnerable.

To be eligible to receive a Murre Conservation Fund grant, the project must meet the criteria for current priority program areas. Applicants must complete and submit a grant application form to bstewart@birdscanada.org by the November 1, 2012 deadline.

Warran Ballard

1948-2012

A former director of the New Brunswick Cooperative Fish and Wildlife Unit from 1993-1996 passed away recently in Lubbock, Texas. Dr. Warran Ballard Jr. died of pancreatic cancer in January 2012 at the age of 64. Warren earned a Bachelor's degree in Fish and Wildlife Management from New Mexico State University in 1969 and his Master's degree in Environmental Biology from Kansas State University. After working with the US Fish & Wildlife Service, he spent 18 years as a wildlife biologist and research scientist with the Alaska Dept. of Fish & Game. He earned his doctorate of Wildlife Science from the University of Arizona in 1993. During his career he conducted research on white-tailed deer population ecology in northern latitudes and served in a number of editorial roles, including as Associate Editor ,and later Editor-in-Chief, for the Wildlife Society Bulletin for a number of years up to his death.

Photo courtesy of Healthy Wildlife web site.

RECENT LITERATURE

NOTE: Paste the available DOI information into your browser and find the article/abstract.

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Upcoming Events

October 23 -25th, 2012: ASFWB Annual General Meeting. Rodd Charlottetown Hotel, Charlottetown, Prince Edward Island. See http://www.chebucto.ns.ca/environment/ASFWB/ for more information.

1 November 2012 is the deadline for submitting expressions of interest to develop **research projects within the Canadian Municipal Water Consortium** - http://www.cwn-rce.ca/initiatives/municipal-consortium/calls-for-research/

28 February 2013 is the deadline for the **Canadian Water Resources Association graduate student scholarships**. Five scholarships are awarded annually to students whose programs of study focus upon**applied, natural or social science aspects of water resources** - http://www.cwra.org/about/scholarship/default.aspx

March 15-17, 2013 Science Atlantic Conference: Joint Aquaculture & Fisheries, Biology, and Environment Conference. Acadia University, Wolfville, NS.

The Wildflower Society of Newfoundland and Labrador is a province-wide organization primarily interested in the enjoyment of the wildflowers and other plants in the Province of Newfoundland and Labrador. The Society has an Indoor Program and an Outdoor Program. Regular Society meetings are held at the Memorial University Botanical Garden, 306 Mount Scio Road in St. John's. Visit our site http://www.wildflowersocietynl.ca/

The Nova Scotia Wild Flora Society is dedicated to the appreciation and conservation of wild flora and habitat, especially in Nova Scotia. A non-profit organization and an affiliate of the North American Native Plant Society, the society welcomes all people who are interested in native flora. Members meet regularly on a social basis to host speakers, plan recreational field trips, and organize other events. For more information visit http://www.nswildflora.ca/index.html.

ASFWB MEMBERSHIP APPLICATION / RENEWAL FORM

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