



BIODIVERSITY
RESEARCH INSTITUTE

Wildlife Science Changing Our World

BRI'S ADIRONDACK CENTER
FOR LOON CONSERVATION



The Adirondack Tremolo

2010 Spring-Summer Newsletter – Volume 9, Issue 1

IN THIS ISSUE:

- NYSERDA Mercury Report
- *Science on the Fly!*
- About BRI and ACLC
- Biogeography of Mercury Contamination in NY
- Lead and Wildlife
- Adopt an Adk Loon
- Mercury and Immune Function in Adk Loons
- A First Solo
- Loons & People Guidelines
- 2009 Loon Census
- Sign up for 2010 NY Loon Census
- BRI-ACLC Celebration Raffle
- Thank You for Your Support!
- The Loon
- BRI's Webcams
- E-Newsletters

I hope you enjoy this brief summary of many of our education and research efforts concerning loons and other wildlife in the Adirondack Park. As you will see, we have a variety of ongoing conservation projects. We also welcome YOU to join our work —

Donate to BRI or become a volunteer today!

— Have fun watching loons!

*Dr. Nina Schoch, Coordinator
BRI's Adirondack Center
for Loon Conservation*

NYSERDA REPORT: "...METHYLMERCURY IN TERRESTRIAL WILDLIFE..." NOW AVAILABLE!

We are pleased to announce that our report, *An Exploratory Study of Methylmercury Availability in Terrestrial Wildlife of New York and Pennsylvania, 2005-2006*, is now available online at:

www.nyserdera.org/publications/methyl_mercury_availability_terrestrial_wildlife.pdf
www.briloon.org/resources/mercury-and-toxins-information-center.php

We are most grateful to the Wildlife Conservation Society and the New York State Energy Research and Development Authority's Environmental Monitoring, Evaluation, and Protection Program for their support of this project.



SCIENCE ON THE FLY! CONSERVATION THROUGH THE LIVES OF ADIRONDACK LOONS

We are very excited to introduce *"The Ecological Impact of Pollution – Conservation Through the Lives of Adirondack Loons!"* This new interactive unit of our innovative *Science on the Fly!* curriculum builds on the scientific inquiry skills and knowledge that students learned in our *"Loon Migration"* unit of *Science on the Fly!*

The new module is designed primarily for high-school students, the "next generation" responsible for caring for our environment. However, it is readily available to all. The curriculum uses our Adirondack loon mercury research to guide participants through an improved understanding of the critical conservation concern of air pollution, including:

- The chemistry of airborne contaminants, and the interactions of the resulting chemicals in soils and aquatic habitats;
- Impact of environmental pollution to aquatic ecosystems, wildlife, and humans;
- Regional, national, and global efforts to decrease airborne pollutants; and
- Conservation efforts people can do in their own houses and communities.

This new unit provides a variety of resources for participants to design and implement an environmental service learning project in the area where they live, thus inspiring students to become actively involved in conservation in their own communities.

TEACHERS! This unique website enables educators to track the progress of each student as he or she completes the activities on the web pages. Additionally, the curriculum meets both NYS and federal science learning standards.



We would like to recognize the following talented people and organizations for their generous support and input into this project: The Dorr Foundation; The Wild Center; NYSERDA's EMEP Program; WCS's Adirondack Program; Adworkshop, Inc.; A. Sauer; Mountain Lake PBS; and Rick Godin Productions.



To learn more, go to www.scienceonthefly.org, log on as a student, or click *"Just for Fun"*, then pick the *"Acid Rain and Mercury"* or the *"Loon Migration"* unit.

BioDiversity Research Institute is a 501(c)3 non-profit organization whose mission is to assess emerging threats to wildlife and ecosystems through collaborative research, and to use scientific findings to advance environmental awareness and inform decision makers. In 1998, as part of a larger regional study, BRI initiated research in New York's Adirondack Park on the impact of airborne mercury pollution to common loons (*Gavia immer*) and aquatic ecosystems.

BRI's Adirondack Center for Loon Conservation was launched in 2009, evolving from this research and the former Adirondack Cooperative Loon Program. BRI's Adirondack Center for Loon Conservation is dedicated to improving the overall health of the environment, especially air and water quality, through collaborative research and outreach focusing on the natural history of the common loon and conservation issues affecting loon populations and their aquatic habitats. Through the ACLC, BRI provides greater regional, national, and global exposure for loon conservation, while adding increased capacity in and around the Adirondacks.

For more information:

BRI's Adirondack Center for Loon Conservation
P.O. Box 195 Ray Brook, NY 12977
888-749-5666 x145
adkloon@briloon.org
www.briloon.org/science-and-conservation/centers/adirondackloons.php

BioDiversity Research Institute
19 Flaggy Meadow Rd.
Gorham, ME 04038
888-749-5666
www.briloon.org



BIOGEOGRAPHY OF MERCURY CONTAMINATION IN NY

In fulfillment of the NYS Wildlife Grant, *Biogeography of Mercury Contamination in New York*, BioDiversity Research Institute and our collaborators have developed an integrated database of NY biotic mercury data and sites potentially at risk from mercury pollution. The database provides a valuable baseline to evaluate temporal trends in biotic mercury levels, and to document ecosystem change in response to mercury emission reductions in NY and the Northeast. This project also gives a better understanding of the dynamic relationship within terrestrial ecosystems for mercury in wildlife; added value to the identification of biological hotspots; and improved data to identify long-term monitoring locations for a forthcoming national mercury monitoring program. This study is part of a larger regional effort to evaluate the relationship between landscape-level attributes and mercury bioaccumulation in biota using different spatial and taxonomic scales.

We would like to thank our partner, the Wildlife Conservation Society's Adirondack Program, for their extensive support, and the many scientists who contributed to the development of the database, especially Dr. Stefan Hames and Jim Lowe of the Cornell Lab of Ornithology.

UPDATE ON LEAD AND WILDLIFE

Every year, thousands of birds and other wildlife, including loons, suffer a needless, prolonged, and painful death because they have accidentally ingested something that contained lead. Many humans also suffer from low-grade lead poisoning, causing learning disabilities, behavioral changes, and more. Although lead has been banned from gasoline, some paints, and some fishing tackle in the U.S., it is STILL readily available in many, many forms (e.g.: ammunition, wheel weights, fishing tackle, even toys!...), and is an extremely significant threat to wildlife and people throughout the world!

Learn more about this very preventable conservation concern and what you can do at: www.tufts.edu/vet/lead/

EPA is reviewing the Toxic Substances Control Act this year — YOU CAN HELP prevent this very toxic substance from continuing to harm people and wildlife! Let EPA know that you want to ban lead as a whole, instead of by individual item!

Visit www.epa.gov/lawsregs/laws/tsca.html for more about the TSCA. To express your concerns about lead in the environment, contact EPA Administrator Jackson at 202-564-4700 or jackson.lisa@epa.gov or the National Lead Information Center at hotline.lead@epamail.epa.gov and 800-424-LEAD [5323].

ADOPT AN ADIRONDACK LOON!

Follow the life of one of our study loons from year to year! By "adopting" one of our color-banded study birds, you will help support our exciting Adirondack loon conservation research and outreach efforts. Your donation will help us learn more about the impact of environmental contaminants to Adirondack wildlife and their habitats, as well as help increase public awareness of the many conservation threats affecting loon populations.

Adopting a loon is also an excellent and very unique gift for the "loon-lover" in your family! Recipients are sent a description of their loon's personal history; a personalized Adopt-A-Loon Certificate; a fact sheet on loons and they are affected by mercury and lead; a Loon Appreciation poster; and an 8" x 10" color loon photo.

For more information about adopting a loon from one of our Adirondack study lakes, please visit:

www.briloon.org/support/adopt-a-loon.php

MERCURY AND IMMUNE FUNCTION IN ADIRONDACK LOONS

In collaboration with Dr. Grasman from Calvin College, we will conduct our third year of field work in 2010 to investigate how the immune system of Adirondack loons is affected by their body burden of mercury. In the summers of 2008 and 2009, blood samples were collected for immunological analysis from a total of 25 adult loons (14 females and 11 males) and 12 juveniles on 19 Adirondack lakes.

Dr. Grasman and his students have developed immunological assays that can be performed on one avian blood sample, greatly enhancing the ability to evaluate the immunological health of wild birds. By examining the antibody response of the study loons in relation to their mercury levels, this study will provide a direct measure of the impact of mercury pollution to wildlife health, an important gauge for policy-makers to better monitor and regulate this hazardous environmental contaminant.



We are most grateful to the New York State Environmental Research and Development Authority's Environmental Monitoring, Evaluation, and Protection Program (www.nysrerda.org/programs/environment/EMEP/home.asp) and the Wildlife Conservation Society for their support of this project.

A FIRST SOLO Kennebunk Pond, Maine

A pair of loons begat a son, who in dutiful Exercise, spent his childhood learning how to Skewer fish and freshwater clams for food.

As he grew, he began to flex his wings on a Regular basis, eventually being able to propel Himself across the pond.

The pond is a mile long and half a mile wide, So there is wing room. But he didn't have Enough strength

To get up in the air. One early morning as I Was taking my swim, I heard the parents Calling to the son,

But I couldn't see him anywhere. I dove To swim underwater a bit, and then quietly Surfaced

Just in time to be barely missed by the Plummeting son trying to land (or, is it Water?)

After his first solo. He crashed right by my Head, but survived, and we two gazed at One another, I

With a grin, he with a rattle of wet feathers, And a prolonged hoot or so of pride. The Parents

Swam to us, and just sat there, bobbing on the Water, beaming at the son, mutely accepting Me as a tribal member.

Frank A. Halse, Jr.

In memory of Joyce Mason Holcomb Halse

"LOONS AND PEOPLE: GUIDELINES FOR "NESTING" TOGETHER ON ADIRONDACK LAKES" NOW AVAILABLE!

Shoreowners! Do you want to improve your shoreline to provide potential nesting habitat for loons and other wildlife? The publication, *Loons and People: Guidelines for "Nesting" Together on Adirondack Lakes*, is now available!

These guidelines are a valuable educational and management resource to help protect loons, and enhance their breeding habitat throughout their summer range. The publication provides information about loon nesting habitat requirements and territorial breeding behavior, enabling people to minimize disturbance of these unique birds. The *Loons and People: Guidelines for "Nesting" Together on Adirondack Lakes* and accompanying brochure were developed by Amanda Marino, in collaboration with WCS's Adirondack Program, BRI's Adirondack Center for Loon Conservation, and the Adirondack Park Agency. Ms. Marino's work was supported by Wild Gift (www.wildgift.org).



DOWNLOAD THE "LOONS AND PEOPLE" GUIDELINES AND BROCHURE AT:
WWW.BRILOON.ORG/SCIENCE-AND-CONSERVATION/CENTERS/ADIRONDACKLOONS.PHP

~ 2009 NEW YORK ANNUAL LOON CENSUS RESULTS ~

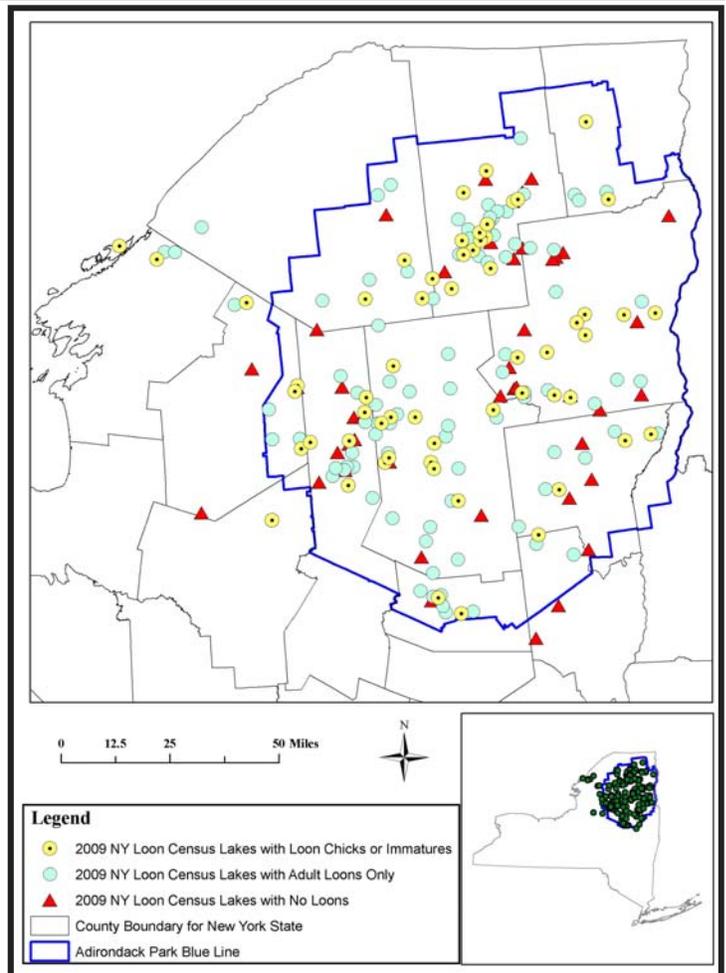
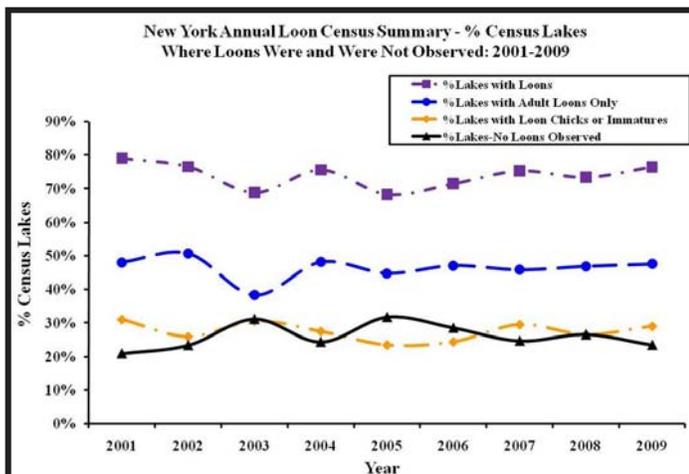
The day of the Ninth Annual Loon Census, July 18, 2009, was the first overcast Census day we've had — it even rained in some areas. However, despite the cloudy skies, over 500 observers had a wonderful morning looking for loons in New York, submitting 276 reports. Only four of the reports were not included in the analysis because they were duplicate reports or the observations were conducted outside the Census hour.

The Annual Loon Census is conducted by the Wildlife Conservation Society's Adirondack Program in collaboration with BRI's Adirondack Center for Loon Conservation. The Census provides valuable data for documenting long-term trends in New York's summer loon population.

The map at right shows the locations and results for the lakes and ponds surveyed during the 2009 Annual Loon Census. 194 (97%) of the 200 Census lakes were in the Adirondack Park. A total of 663 loons were observed on 153 (77%) of the Census lakes. Of the loons observed, 566 (85%) were adults, 83 (13%) were chicks, and 14 (2%) were immature birds.

*"Loons enjoyed a big breakfast...they spent most of the observation period sleeping and "digesting." By 9a.m., they had resumed their "patrol" of the lake."
- Pleasant Lake*

The graph below shows the percentage of Census lakes where loons were observed from 2001-2009. Loons have consistently been seen on ~74% of the Census lakes, while chicks were regularly observed on just over 28% of the lakes, with slight annual fluctuations. In 2009, loon chicks or immature loons were observed on 58 (29%) of the 200 lakes surveyed, while adults without chicks were observed on 95 (48%) lakes. Loons were not observed on 47 (24%) of the 2009 Census lakes. These observations from the lakes without loons are extremely valuable for documenting changes in loon habitat use and population trends over time.



2009 Random Census Lakes

Thirty-five (18%) of the 2009 Loon Census lakes were randomly chosen. These random lakes provide valuable data for statistically estimating summering loon population in New York.

~ Future Observers ~

Please select a random lake for the 2010 New York Loon Census!

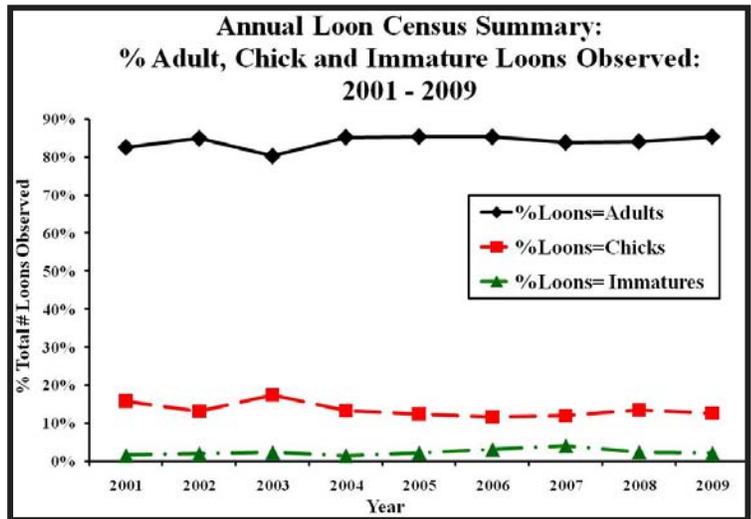
The reproductive rate of New York's summer loon population appears stable based on the graph at right, which shows that the proportion of adult and young loons observed has been quite constant over the nine years of the Loon Census,

"Loons were observed on the lake early in April. They got busy & got the job done before many people were out on the lake...So, luck on the side of the loons, they were out on the water with 2 chicks on Fri, June 12th..." - Echo Lake

We would especially like to acknowledge our Loon Census coordinators on the larger waterbodies, who once again did a fantastic job organizing volunteers to ensure that observations were not duplicated on these lakes:

- ❖ Adirondack League Club
- ❖ Canada Lake
- ❖ Chazy Lake
- ❖ Cranberry Lake
- ❖ Lake George
- ❖ Lake Placid
- ❖ Loon Lake
- ❖ Lows Lake
- ❖ The Northwoods Club
- ❖ Old Forge/Inlet Area
- ❖ Peck Lake
- ❖ Raquette Lake
- ❖ Schroon Lake
- ❖ St. Regis Canoe Area
- ❖ Tawahus Club
- ❖ Thousand Islands region of the St. Lawrence River
- ❖ Upper Saranac Lake
- ❖ Wilmurt Club

*"Immature loon diving short and often...At 8:45, a black bear arrived to tear a log apart...the loon dove, and I was never able to re-find it."
- Bullhead Pond*



"Of the 8 loons observed, one flew out in the first 5 minutes...the remaining 7 loons eventually came together as a group and conducted a "paddle-by" in front of us! Always a fun day." - Canachagala Lake

See more 2009 Annual Loon Census results at:
www.wcsadironacks.org, and
www.briloon.org/science-and-conservation/centers/adirondackloons.php



SIGN UP FOR A 2010 NEW YORK LOON CENSUS LAKE!
~ Join us on Saturday, July 17, 2010, from 8am-9am ~

Sign up for a NY Loon Census lake by contacting adkloon@wcs.org (or leave a message at 518-891-8872).

Please include:

- ❖ Your name, e-mail or phone number, and address
- ❖ The name of the lake you want to survey
- ❖ The Township and County where the pond is located.

If you will be observing the same lake you surveyed in 2009, please confirm this before July 2nd by contacting WCS to sign up for a Census lake to prevent duplicate observations.

Census forms will be sent by e-mail and mail to all observers who sign up for a lake by July 2nd. A list of assigned lakes will be posted to our websites in early June, and will be updated regularly throughout July. **Please check the websites to find out which lakes have already been assigned** (please note - if a lake was surveyed in 2009, it is marked "assigned"). If a lake is not already assigned, it is available for you to survey.

Learn More and Download a
2010 Census Form at
www.wcsadironacks.org and
www.briloon.org/science-and-conservation/centers/adirondackloons.php
Have a great 2010 Loon Census Day!

BRI-ACLC CELEBRATION RAFFLE!

Join us in celebrating the first anniversary of BRI's Adirondack Center for Loon Conservation!

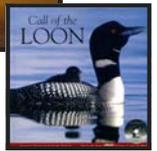
It has been a year since we initiated BRI's Adirondack Center for Loon Conservation, which evolved from the former Adirondack Cooperative Loon Program. We are thrilled about the success of our first year, and are looking forward to many more to come!

To celebrate this exciting milestone, we are holding a raffle, with the Grand Prize of an Adirondack chair with a loon carved by Jeff McLean!

Other special prizes include:



- ❖ A beautiful loon quilt by Debbie McLean,
- ❖ A stunning framed photograph by Larry Master of a loon at sunrise (www.masterimages.org),
- ❖ Kip Taylor's beautiful *Loon* book, which is out of print, and
- ❖ A signed copy of the *Call of the Loon* book by Dr. David Evers and Kate Taylor.



Send in your raffle tickets TODAY!

The drawing will be on July 17, 2010, the day of the 10th Annual New York Loon Census — **GOOD LUCK!**

Enclosed are my raffle tickets (\$5/ticket or 6 tickets for \$25; *need not be present to win*)

Raffle Tickets: _____ Amount Enclosed (*please make check payable to BRI*): \$ _____

Please fill out and send in the raffle tickets below (copy additional tickets if needed) to:

**BRI's Adirondack Center for Loon Conservation
P.O. Box 195, Ray Brook, NY 12977**

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION
RAFFLE TICKET

Name: _____ Phone: _____
Address: _____
City, State, Zip: _____
E-Mail: _____

MANY THANKS FOR YOUR SUPPORT!

We would like to give a special thanks to the many people who have provided valuable financial and volunteer support to BioDiversity Research Institute for our Adirondack Center for Loon Conservation over the last year!

Your generous assistance enables us to continue our scientific research and outreach efforts in the Adirondacks and beyond. With your support, we are able to increase our understanding of conservation concerns affecting loons and other wildlife, as well as providing essential scientific information to enhance the protection of wildlife and the environment.

Although limited space in this newsletter does not permit us to acknowledge each of you individually, please know that we greatly appreciate your most considerate donations and time!

*Gratefully Yours,
Dr. Nina Schoch and Dr. David Evers*

THE LOON

A blackest background lets
The patterned white stand out
In regiments of design,

Crisply stating the majesty of
The not-quite-bird, nor animal,
An ambiguity not given to most,

Which troubles the loon not at
All.

*Frank A. Halse, Jr.
In memory of Joyce Mason Holcomb Halse*



YES! I WOULD LIKE TO SUPPORT BRI'S ADIRONDACK CENTER FOR LOON CONSERVATION'S SCIENTIFIC RESEARCH AND EDUCATION PROJECTS!



Enclosed is my donation of: \$25 \$50 \$100 \$500 \$1000 Other: \$_____

I have enclosed a check payable to *BioDiversity Research Institute*

Please charge my donation to my: Visa MasterCard American Express Discover

Card # _____ Expiration Date: _____

Signature: _____ Billing Zip Code: _____

I would like to make a contribution to the WCS Loon Conservation Fund at the Adirondack Community Trust to support both BRI's and WCS' loon conservation efforts in the Adirondacks. Enclosed is my check in the amount of \$_____, payable to the "WCS Loon Conservation Fund at ACT"

I would like to volunteer with BRI's Adirondack Center for Loon Conservation! I want to help with:

Loon mercury research (e.g.: monitoring banded loons)

Education projects (e.g.: public or school presentations, newsletter)

Name: _____ Street Address: _____

Phone: _____ City, State, Zip: _____

E-Mail: _____

PLEASE CLIP THIS FORM AND RETURN IT TO: BRI's Adirondack Center for Loon Conservation
P.O. Box 195, Ray Brook, NY 12977

*Your tax-deductible donation payable to BioDiversity Research Institute supports our
Adirondack Center for Loon Conservation's exciting and innovative research and education endeavors.*

THANK YOU FOR YOUR SUPPORT!

BRI WEBCAMS

It's summer! And time for birds to be on their nests, incubating eggs, and feeding chicks. Have you ever wondered what a loon does during the night on its nest? Or an eagle, falcon, osprey, or even a house finch?

Well... now you can find out! Visit BRI's live web cameras to see unedited footage of spectacular birds (ok...house finches?) caring for their eggs and chicks. You can keep tabs on our webcam happenings through our online community where photos and videos are posted daily. Learn more about BRI by visiting our website at www.briloon.org, following us on Twitter, and becoming a fan on Facebook.

We invite you to join the BRI family, receive our webcam updates via BRI Webcam Flash, and obtain special thank-you gifts by becoming a member of BRI's webcams at www.briloon.org/support/webcam-membership.php. Your support will enable us to maintain our current cameras, install new ones, and continue this intriguing research into the fascinating lives of nesting birds.

RECEIVE OUR E-NEWSLETTERS!

Help us save paper and cost! If you currently receive a paper copy of *The Adirondack Tremolo*, **please send your e-mail address** to adkloon@briloon.org to be sent our e-newsletter instead. You will receive a color version of the newsletter that you can readily share with your friends.

As an added bonus, you will also receive the *BioDiversity Monitor*, the very informative quarterly newsletter from BioDiversity Research Institute!

If you move or change your e-mail address, please remember to send us your new contact information, so you will continue to receive our e-newsletters, *The Adirondack Tremolo* and the *BioDiversity Monitor*.



Ray Brook, NY 12977
P.O. Box 195
FOR LOON CONSERVATION
BRI'S ADIRONDACK CENTER

