



LOON MIGRATION – LINKING PEOPLE AND THE ENVIRONMENT

Adirondack Cooperative Loon Program's Loon Migration Satellite Telemetry Project

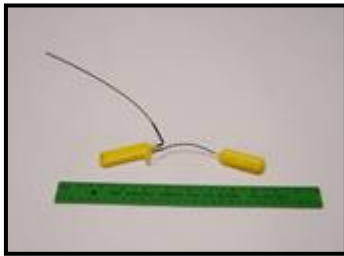
WHY STUDY LOON MIGRATION?

Recent advances in satellite telemetry technology have enabled scientists to finally begin to answer the question “*Where do Adirondack loons go in the winter?*” Until now, the migration routes and wintering grounds of this loon population have been virtually unknown. Identification of common loon (*Gavia immer*) seasonal migratory patterns and habitat selection provides indispensable information about their year-round habitat use and requirements that is valuable for the development of statewide, regional, and national loon conservation strategies. Thus, wildlife managers will be better able to focus conservation efforts for this species based on the human-related and natural risks these birds are exposed to throughout their range.



WHAT IS SATELLITE TELEMETRY?

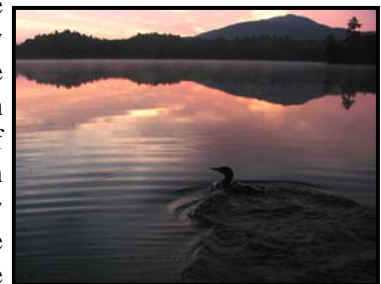
Recent advances in technology have enabled scientists at the United States Geological Survey (USGS) to utilize miniature satellite transmitters to successfully monitor migrations of loons and other waterbirds, providing much previously unknown information about the seasonal movements of these species. The transmitters are designed to send data about the bird's location to the Argos Data Collection and Location System aboard National Oceanic and Atmospheric Administration weather satellites over a period of approximately one year. The satellites transmit the data to Argos' processing centers in France and Maryland, which then send the information via computers back to the scientists for interpretation.



ACLP'S LOON MIGRATION RESEARCH

Research conducted by the Adirondack Cooperative Loon Program (ACLP) and the U.S. Geological Survey will contribute toward a broader understanding of the year-round distribution of Northeastern common loon populations. This research will also provide information to better assess the impact of environmental factors, such as mercury pollution, acid rain, or oil spills, affecting loons and their habitats throughout their range. In 2003, the ACLP, in collaboration with the USGS's Upper Midwest Environmental Sciences Center, initiated a loon migration study in the Adirondack Park by fitting two birds with satellite transmitters. For the first time, ACLP and USGS scientists, as well as the general public, are able to follow Adirondack loons year-round. In 2004, an additional six birds were equipped with transmitters, increasing our knowledge of the habitat utilization and the environmental factors impacting the Adirondack loon population throughout its range.

ACLP's loon migration research will complement research conducted by the USGS, BioDiversity Research Institute, and Florida Power and Light Energy Maine Hydro in the Midwest and New Hampshire-Maine to determine migration, staging, and wintering areas significant to North American loon populations. This project is funded by the New York State Department of Environmental Conservation, including federal funding from the U.S. Fish and Wildlife Service's State Wildlife Grants Program, grants from the New York State Biodiversity Research Institute and the G.E. Foundation to the Natural History Museum of the Adirondacks (NHMA), and the USGS. The Wildlife Conservation Society's veterinary staff provided assistance with transmitter implantation. Satellite transmitters were manufactured for this project by Microwave Telemetry, Inc.



SCIENCE ON THE FLY! ACLP'S LOON MIGRATION EDUCATION PROJECT

The charismatic nature of this species enables the ACLP to readily involve the general public in this innovative scientific inquiry. Educators, students, and citizens now have the ability to participate in learning about these exciting advances in our knowledge of loon natural history, in real time, and with real data. In addition, the public is able to acquire a better understanding of the links between loon breeding, migratory, and wintering areas, as well as how environmental concerns in one area have the potential to affect wildlife species, such as the loon, throughout their range. This knowledge enables students and the general public to make sound decisions about their use of environmental resources and better appreciate how people affect the environment and its wild inhabitants on a local, regional, and national scale.



ACLP's newest curriculum, "*Science on the Fly*", brings this cutting-edge research directly to middle school classes in the Adirondack Park, as well as throughout the world via the Internet. A variety of classroom activities, an interactive portion of ACLP's website, and a unique training video, enable students to actively learn to design and conduct their own scientific studies using ACLP's loon migration project as an example.

Teachers! Please visit www.adkscience.org/loons to learn more about this exciting new curriculum! ACLP's "*Science on the Fly*" curriculum and teacher training materials are available beginning in the fall of 2004. ACLP's *Science on the Fly* curriculum is supported by funding to NHMA from the Dorr Foundation, NYS Biodiversity Research Institute, and the Environmental Protection Agency.

FOLLOW ADIRONDACK LOON MIGRATION ON ACLP'S WEBSITE, WWW.ADKSCIENCE.ORG/LOONS/



Join ACLP and USGS scientists in following the satellite-marked Adirondack and NH loons through their migration to their wintering areas and back again in the spring when they return to their breeding lakes for the summer! Check the ACLP website, www.adkscience.org/loons, to learn more, and see maps tracking these birds through their migration. Updates about this project are also available at ACLP's public presentations and in the biannual newsletter.

ABOUT THE ADIRONDACK COOPERATIVE LOON PROGRAM:

The Adirondack Cooperative Loon Program is a collaborative research and education effort focusing on the natural history of Common Loons, and the effects of contaminants and human interactions on the loon population in the Adirondack Park of New York State. ACLP is a partnership of the Wildlife Conservation Society, Natural History Museum of the Adirondacks, New York State Department of Environmental Conservation, BioDiversity Research Institute, and the Audubon Society of New York. ACLP was initiated in 2001, and merges the worlds of field research, public participation, outreach, and education. The program is a strong partnership of organizations with a mutual commitment to the fate of the loon and other species dependent on healthy aquatic systems for their survival.



YOU CAN HELP SUPPORT THIS RESEARCH!

You can help ACLP find out where Adirondack loons go in the winter! Your tax-deductible donations to the Wildlife Conservation Society and the Natural History Museum of the Adirondacks support the Adirondack Cooperative Loon Program's exciting and innovative research and education projects.

For more information on supporting ACLP's scientific research and education projects, please contact:

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