# **LOON CALLER** VERMONT CENTER FOR ECOSTUDIES Vermont Loon Conservation Project

## Lessons Learned from Vermont's Oldest Loon

**BY ERIC HANSON** 

Te banded 32 loons in Vermont from 1998 to 2003, and they have told us more about how loons live than we could have ever asked. Those individuals have provided glimpses into how loons find a territory, where they migrate, how long they can live, and much more. In 2017, I received a report of a loon on Newark Pond with green over orange bands on his left leg and yellow over silver on his right. I banded this breeding male in 1998, and he disappeared sometime after 2005. Twenty years later, he had reclaimed his spot on Newark Pond. We saw him again in 2021, making him around 29 years old.

The Newark Pond male and his cohort have offered valuable insights into how Vermont's loons migrate to the ocean in winter and disperse to their breeding grounds. Our Newark Pond male flies directly to Cape Cod and has traveled an astounding 15,000 miles in his lifetime. (continued on page 2)





A loon family floats next to its nesting raft on Forest Lake.

# Male Loon's Knowledge of Nest Sites Improves Nest Success | BY ERIC HANSON

Vould you let your partner pick your future house without input? Well, that seems to be the pattern in the loon world, where males primarily choose the nest site. When a male loon first occupies a territory, he often selects a lousy nest site prone to flooding or raccoon raids. With experience, he begins to learn how to find a good site. In fact, his nest success rate often improves by 35% over 20 years if he manages to survive that long and hold onto territory. In contrast, a female's nesting success actually depends on her partner's. Dr. Walter Piper and his field staff drew these conclusions based on 30 years of data about thousands of Wisconsin loons.

Piper wondered why a breeding system would evolve where one sex holds all the nest site knowledge. The answer is unclear, but the phenomenon has played out repeatedly. Piper has watched loon pairs' nesting success improve over many years, but when the male disappears or dies and the female re-mates, her nesting success resets to "poor" and only recovers if she stays with her new partner for a long time.

In Vermont, we do not have thousands of banded loons, but we can still observe similar patterns and possibly make some guesses on when a mate change has occurred. For example, when a loon pair nests successfully for many years in a single site, then chooses a predator-prone site the following year and fails, that is a likely sign a mate change took place. This pattern has happened on numerous waterbodies throughout the state, including Holland, Kettle, Osmore, (continued on page 3)





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The Vermont Center for Ecostudies (VCE) advances the conservation of wildlife across the Americas through research, monitoring, and community engagement.

The Vermont Loon Conservation Project (VLCP) is a joint program of VCE and The Vermont Fish & Wildlife Department (VFWD).

The VLCP restores and maintains Vermont's Common Loon population through monitoring, management, education, and research.

Volunteer information and VLCP publications are available on the VCE website: vtecostudies.org Communications about the VLCP and the Loon

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#### MOVEMENTS OF BANDED VERMONT LOONS

Three other banded Vermont loons were recovered, during the time of our study, deceased, between Long Island and Cape Cod, migrating about 300 miles from their breeding territories, as shown on the map above. The U.S. Fish and Wildlife Service used this migration information to guide loon recovery efforts after an oil spill killed over 500 loons off the New England coast in 2003.

After fledging, chicks also journey seaward, usually returning three to five years later and establishing a territory within 20-40 miles of their natal lake. For example, a chick originally from Molly's Falls Reservoir claimed a territory on East Long Pond (8 miles away) after returning from the coast. In total, we have re-observed 13 Vermont loons banded as chicks on lakes other than their natal water bodies. Each was within 12 miles of its original banding site (see above). However, we have also learned that young loons do not always remain close to home. We discovered one long-distance dispersal when we recovered a 15-year-old loon on Stiles Reservoir in Waterford banded as a chick on Azischohos Reservoir in Maine.

Banding has also taught us that loons do not mate for life. Although a Michigan pair has been together for 25 years, loon partnerships typically last four to five years. Over time, birds often do not return because they either were evicted during a territorial dispute or died. Displaced loons must then seek new territories and mates. During our study, four birds settled on new territories that had not existed before, showing us that "experienced" loons are often the birds starting new territories.

Over the next few summers, VCE's loon conservation team plans to band more loons to test for malaria and mercury and continue improving our understanding of population dynamics. If you see a loon preen with its leg exposed out of the water, and see colored bands, I encourage you to determine the colors and note which leg. And, if you're on Newark Pond this summer, drift quietly near the loon pair and look for flashes of green over orange or yellow over silver. Bird 898-09100 might teach you a thing or two about being a good partner, caring for offspring, and never giving up.



Peacham, Great Averill, and Dunmore.

Our nest raft management program provides a boost to newbie males. Many lakes in Vermont do not have good nesting sites because they lack marshes and islands, and loons are forced to nest in locations prone to failure. In 2016, Caspian Lake's new loon pair nested about 15 feet up a hiking trail, while Lake Fairlee's pair nested in the Thetford town picnic area. Raccoons found the eggs within two to three days at both sites. To mitigate future failures, VCE placed nesting rafts within 200 meters of both locations. The male of each territory found its raft, and the pairs successfully hatched chicks.

Vermont loon nesting data shows that average nesting success is around 74% statewide. But the average falls to 48% in new loon pairs. If we assess firsttime nests in Vermont, males often chose poor nest locations in their first year. In 2021, new pairs nested along shorelines on Glen and Sunset lakes in western Vermont; both nests fell victim to predators. The Sunset male had an excuse—marshes are limited, and there are no islands in the lake. However, the Glen Lake male was blind to a perfectly good nesting raft. We placed rafts near both failed sites this past spring in hopes that the males might VEMONT LOON HATCH SUCCESS



catch on. Partners take note.

So, next time you see your loon pair nest on a forested shoreline after years of success in the marsh or on the island, you can blame it on the new young male who showed up this spring. While house sites for people might not translate into any human productivity measures, nest locations for loons are undoubtedly an important reason for nesting success. Having a healthy, stable loon population in Vermont will allow those male loons to gain experience and be more successful over time.

Adapted from a blog post by Dr. Walter Piper, Loonproject.org

## HOW YOU CAN HELP

Please support the Vermont Loon Conservation Project and Vermont's loons through a tax-deductible contribution to the Vermont Center for Ecostudies today.

## YOUR DONATION SUPPORTS:

- Statewide loon monitoring
  Loon nesting platforms and nest warning signs
- Volunteer coordination
- Public outreach programs
- Loon rescues
- Research on threats to loons

Constituents receive the Loon Caller and VCE's biannual Field Notes.

*Mail your donation to:* Vermont Center for Ecostudies PO Box 420, Norwich, VT 05055

Or donate online: vtecostudies.org/give (Please include a note stating the donation is for the VLCP.)

## SHOW YOUR SUPPORT



VLCP is funded in part by the Vermont Fish & Wildlife Department's Nongame Wildlife Fund.

Please support the Nongame Wildlife Fund by purchasing the Conservation License Plate and through the tax check-off on your VT income tax form.

VLCP would like to thank its many volunteers and contributors for their continued support.





# Disaster Provides New Support for Vermont's Loons

**BY ERIC HANSON** 

n 2003, 531 loons and hundreds of seabirds perished during spring migration when the Bouchard-120 heating fuel tanker ran aground off the coast of Massachusetts and Rhode Island. Eighteen years later, the Vermont Center for Ecostudies (VCE) was one of six organizations awarded grants to replace the adult loons killed in that oil spill. VCE is receiving \$446,000 over five years from the settlement between the Bouchard Oil Company, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Association, and the states of Rhode Island and Massachusetts. VCE must match these grant funds with donations and volunteer time.

VCE will use the funds to overhaul our nesting raft and nest warning sign programs, increase volunteer involvement and outreach to lake users, and improve our ability to rescue loons in distress. We will replace more than 20 old nesting rafts over the next five years and swap out environmentally hazardous blue foam with hard, plastic oyster floats that will not deteriorate as fast. We plan to place new rafts in territories with low productivity and regions with lower loon densities, such as western Vermont.

We will also use the funds to implement a new program to reduce

lead fishing gear. Eloise Girard, VCE's assistant loon biologist tasked with overseeing the lead buy-back and collection program, emphasized that seven of Vermont's 350 loons have died from lead poisoning in the past four years. These deaths are preventable. The 2007 law banning small lead sinkers helped reduce lead mortalities by nearly 50%; however, lead gear is still present in many tackle boxes.

VCE will use donations apart from the disaster grant this year to investigate other causes of loon mortality and nest failures. For example, VCE is partnering with the Vermont Institute of Natural Sciences, University of Vermont, University of New Hampshire, Tufts University, and other northeast loon groups. Our collaboration focuses on conducting pathology and toxicology assessments for illnesses like malaria and aspergillosis fungal disease. Ultimately, this regionwide project will help us figure out why loons are dying, as they serve as our canaries in the coal mine for the threats lurking in Vermont's waters, from mercury to PFAS chemicals. Game cameras at nest sites that have repeatedly failed will shed light on the causes, such as predators, disruption by paddlers, or flooding due to large boat wakes.

This grant puts VCE's loon program on solid footing for the near future while allowing us to contribute more to regional and North America-wide research efforts. Hopefully, with the help of these funds, our outstanding volunteer network, and a little hard work, Vermont's loon population will continue to flourish.

