

LOON CALLER

VERMONT CENTER FOR ECOSTUDIES



Vermont Loon Conservation Project



© LORNA KANE-ROHLOFF

A territorial battle on Long Pond in Westmore, VT.

Male Loons Fight to the Death

BY DR. WALTER PIPER, CHAPMAN UNIVERSITY

In the course of our work on territory takeover in Wisconsin, we came upon another interesting behavioral pattern: fatal battles among males. Although it took many years of data collection to confirm the pattern statistically, we have learned that about 1/3 of all male takeovers – when an intruder seizes an owner's territory – result in the death of the former owner. We do not yet fully understand this behavior pattern.

Both females and males battle viciously for territories. To watch contestants grab each others' heads with their bills and whack each other repeatedly with their wings, you would expect that both sexes are endangered by the fights. But females almost never fight to the death; somehow a female owner that is being beaten up by an intruder is able to slink off to a protected spot in the lake, rest, and ultimately fly off to another lake nearby to lick her wounds. Not so with many male owners, who become so

weakened by repeated beatings that they lose the capacity to defend themselves, cannot find refuge and end up dying on the lake they used to own.

We are puzzled at the inability of male owners to recognize that a battle is going poorly for them and escape a victorious intruder, but we have a clue about why males might fight harder for their territories than females.

After combining information from nest locations, nesting success and identities of breeding pair members, we have learned that male loons, not females, decide where to place the nest. We know this because breeding pairs that consist of a male that has never bred on a territory and a female that has bred there before fail to reuse nest locations where they hatched chicks successfully. In contrast, pairs made up of an experienced male and a new female do "remember" successful nesting sites.

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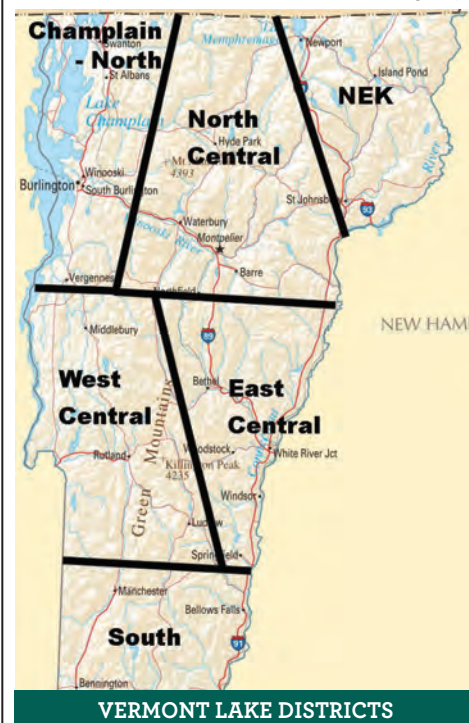
Loon Populations Vary By Region

BY ERIC HANSON

Vermont's Common Loon population recovery is truly impressive: between 1983 – 2017, the number of nesting pairs rose from seven to 97, and the number of adult loons climbed from 29 to 308. For the past four decades, the Vermont Loon Conservation Project's (VLCP) dedicated citizen scientists have been the driving force behind this statewide monitoring project. On the third Saturday of July, VLCP's annual LoonWatch Day, volunteers take to the shorelines and water to count loons. This perennial count provides insight into how Vermont's loon population has changed, over both time and space.

Loons prefer "lake districts," or groups of lakes within a few miles of each other. Districts comprised of lakes

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The Vermont Center for Ecostudies (VCE) is a nonprofit organization whose mission is to advance the conservation of wildlife across the Americas through research, monitoring, and citizen engagement.

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

The VLCP's mission is to restore and maintain Vermont's Common Loon population through monitoring, management, education, and research.

The Vermont Fish and Wildlife Department's mission is to protect and conserve our fish, wildlife, plants, and their habitats for the people of Vermont.

Volunteer information and VLCP publications are available on the VCE website: www.vtecostudies.org

Communications about the VLCP and the *Loon Caller* may be addressed to:

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Loon Populations *continued from page 1*



Loon chicks swimming on Lake Dunmore. The loon parents stashed these two chicks near volunteer Mike Korkuc's pontoon boat while they escorted an intruder loon away from the area.

© MIKE KORKUC

located farther apart tend to host fewer loons, probably because it takes more energy to fly 10 or more miles between lakes compared to two- to three-mile jaunts. Young loons often return to within 30 miles of their natal lakes, reinforcing this lake district concept. On average, it will take two to four years for young birds to claim their territory in a district.

Vermont's highest concentration of lake districts, where you will most likely find loons flying between adjacent lakes, is in the state's northern region. The loon population in north-central and northeastern Vermont grew substantially through 2011, but it appears that overall adult numbers leveled off in 2012-13, especially in the Northeast Kingdom (NEK) (see graphs on page 3). Loons continued to find new territories in the north-central region, even though the overall adult loon population increased more slowly—an indication that a high percentage of the region's overall population is now breeding there. Northwestern Vermont lakes are separated by long distances. This relative isolation precludes loons from easily moving between lakes. To date, Lake Champlain is not known to host nesting loons, but non-breeding birds use the lake for summer habitat.

The rest of the state has fewer lakes and therefore supports fewer loons. However, increasing population growth in these districts is a sure sign of success for the VLCP. For example, Somerset Reservoir hosted over half of southern Vermont's loons until around 2010. The recent uptick in southern nesting pairs is due to two additional pairs taking up residence on Somerset, and new pairs occu-

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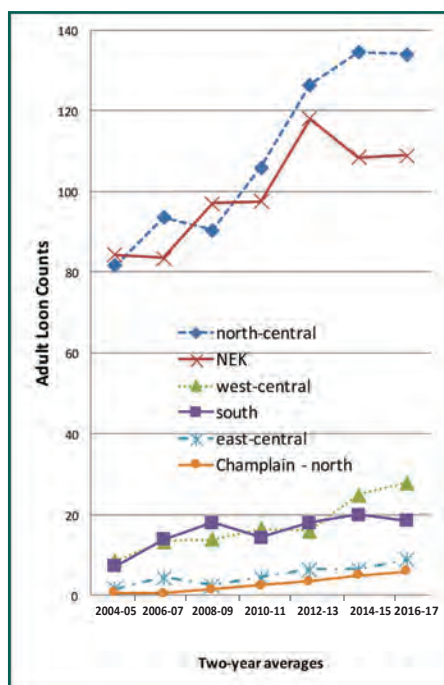
pying nearby smaller lakes in the district. We see a similar trend in west-central Vermont, where LoonWatch counts have shown a steady increase in the past six years. Currently, most west-central Vermont loons are breeding in the lakes and reservoirs in or next to the Green Mountains, but not in the Lake St. Catherine/Lake Bomoseen/Lake Horton corridor.

Historically, LoonWatch volunteers were considered lucky to find one or two

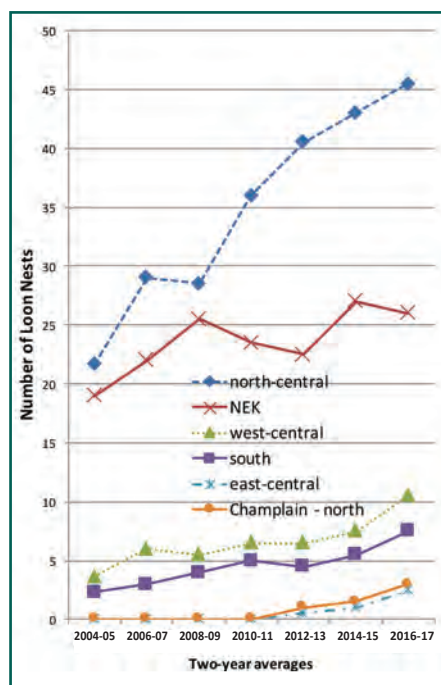
loons on the handful of lakes in the eastern Vermont and northern Lake Champlain districts; but for the past decade, LoonWatchers have found up to 10 loons in each region. An even more exciting development is that several of these loons have paired up and nested in the past six to seven years. The timing of this development corresponds to the fact that adult loons wait several years before initiating nesting

on a newly-acquired territory.

The VLCP wishes to thank all the boaters, lake residents, birders, and committed volunteers who helped to gather loon population data over the last 40 years. The basic but important act of reporting where loons are present has been critical to informing our conservation efforts, and instrumental in the continued, remarkable recovery of Vermont's Common Loons.



Vermont Loonwatch Adult Population by Region 2004-2017



Vermont Loon Nest Numbers by Region 2004-2017

We do not know why males should be in charge of selecting the site for the nest, but since they are in charge, we can see that this makes their territory uniquely valuable to them. A male who allows himself to be kicked off his territory loses both the territory and his knowledge of where to nest on the territory. If lucky enough to find a new territory and mate, he must start from scratch in building his knowledge of a new territory. A female that gets evicted from a territory is not so bad off, providing she can resettle on a new territory with a male who knows where to nest on the territory.

Originally printed as a blog at www.northernwisconsin.com.

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Editor note: *In Vermont, we have many territories where a pair has used the same nest site or island for 10-30 years, despite likely changes in the male partner. I think suitable nesting habitat may be more limited in Vermont than in Wisconsin (fewer marsh sites), thus loons have to utilize some nest sites more consistently. This is just a hunch. — Eric Hanson*

THE LOON PROJECT

Dr. Walter Piper's loon behavior website www.loonproject.org

Since 1993, Dr. Walter Piper has led a multi-decade study on the territorial behavior, reproduction, and habitat selection of Common Loons in Oneida County in northern Wisconsin. He and his team have captured and individually marked adults and chicks on about 200 lakes that form a natural cluster, and they have examined the behavior of these marked individuals over time. The focus of their research has been territorial behavior, but they have revealed many more insights into a loon's life. At this website, you can find general loon information, scientific and popular articles, and numerous fascinating observations shared on Dr. Piper's blog. VLCP biologist, Eric Hanson, spent two years banding loons with Dr. Piper in the early stages of this long-term work.



Adult feeds loon chicks on Bean Pond in Sutton, VT.

© ELLEN VALLEY TRIM

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

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VLCP is funded in part by the Vermont Fish and 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.



Loon wondering if that sign pertains to him (or her?) on Lake Raponda in Wilmington, VT.

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LAKE PROFILE

Somerset Reservoir

The Common Loon Hub of Southern Vermont

BY ERIC HANSON

Somerset Reservoir is a gorgeous, undeveloped lake surrounded by U.S. Forest Service lands and stunning views of Stratton Mountain to the north and Mount Snow to the south. The reservoir's large bays and numerous islands provide quality habitat for Common Loons.

From 1982–2002, this 1,534-acre reservoir hosted a single loon pair. It is unusual for a lone pair to remain isolated for so long on a large lake, but that finally changed in 2003, when a second pair formed, followed by a third in 2010. The oldest loon territory on the reservoir (we call it Dandeneau Cove) has hosted a nesting pair in 36 of 39 years. To date, 33 chicks have fledged at this site. The North Islands territory has hosted a pair in 10 of 16 years and produced 11 chicks. The most recently-established loon pair in The Narrows territory has managed to fledge only one chick in five nest attempts. This pair historically nested on a shallow, sandy island prone to flooding, but relocated to a safer site in 2016.

With their shoreline nests, breeding loons require stable water levels. Rising waters can flood nests, while falling water levels can strand nests, leaving them unreachable by parents and exposed to predators. The current owner of Somerset Dam, Great River Hydro, has supported VCE's efforts by maintaining stable water levels for nesting loons from mid-May through the

end of nesting season, and by providing financial support to the Vermont Loon Conservation Project (VLCP). We are tremendously grateful to Great River Hydro for its continued partnership.

Another partnership for which we are truly indebted is with Henry Dandeneau, a former Somerset Dam engineer and now VLCP volunteer. Henry bought a motorboat upon retirement and uses it to oversee all monitoring on the reservoir, notably the crucial job of checking loon nests every 10–14 days. Henry also conducts our annual LoonWatch survey, and usually counts between six to 10 adults, which account for over half of the adult loons in southern Vermont.

Many of the adults Henry counts were likely hatched on Somerset or nearby waterbodies in the district, as southern Vermont's loon population has increased. Loons first nested on Bourn Pond in 1999, Sunset Lake in 2009, South Pond in 2014, and Lake Raponda in 2016. Loons are occasionally spotted on Harriman Reservoir (2,040 acres), located just under 10 miles (as the loon flies) to the south, but it does not host nesting pairs, possibly because of unpredictable water level fluctuations. In contrast, the stable waters of Somerset Reservoir provide space to host several additional pairs, which we hope will provide for a robust southern Vermont loon population far into the future.