LOON PRESERVATION COMMITTEE

NEWSLETTER

FALL 2017

Photo Courtesy of Kittie Wilson

The Loon Preservation Committee
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603-476-LOON (5666); *www.loon.org*

The Loon Preservation Committee (LPC) is a non-profit, self-directed and self-funded organization affiliated with New Hampshire Audubon. Autonomous in membership and fundraising, LPC works to preserve loons and their habitats in New Hampshire through monitoring, research, management, and education.

DIRECTOR'S MESSAGE

Challenge and Resolve

It was a tough year for New Hampshire's loons. The fourth wettest spring in the past 100 years left the ground saturated with water and unable to absorb the rain from powerful storms that swept through the state at the peak of loon nesting. The result was a number of washed out loon nests and many traditional shoreline nesting sites under water, sometimes with few or no good alternatives.

The Loon Preservation Committee (LPC)'s work to support loons ensured that an off year did not become a disastrous one for our loons. Staff and volunteers floated rafts to provide loons with alternate nest sites, protected nesting loons with signs and ropelines, and worked with dam owners to stabilize lake levels during critical loon nesting periods– a challenge indeed this year. Those management activities were augmented by presentations given around the state and extraordinary growth in LPC's outreach to teach people about loons and their needs (please see pages 3 - 17 for a full account of LPC's field efforts this year).

The good news in years like this is that loons, like LPC, are in it for the long haul. One of the benefits of being a long-lived bird is that loons can cope with a challenging year for breeding success–but only if they survive to try again in future years. The eight New Hampshire loons that died from ingested lead sinkers and jigs this year will not have that chance, and that is why lead tackle continues to slow the loon's recovery in New Hampshire. LPC has just published a landmark study detailing exactly that finding (I refer you to the article on pages 9 - 10 of this Newsletter).

As always, it is gratifying to have our research recognized by our peers and appear in a prestigious journal–but that is not the reason we do the work. Even before this paper was published, LPC had communicated its findings to New Hampshire legislators, resulting in our current law to restrict the use and sale of lead sinkers and lead-headed jigs weighing an ounce or less. But, as we are seeing, it's one thing to have a law on the books and another to have people be aware of and follow that law. We will continue our work to get the lead out of old tackle boxes in dusty corners of garages so it can't be used to harm our loons.

If we are successful with all of these efforts there will be more loons to take advantage of better years for loon breeding. If history is any guide we ***will*** be successful in continuing to identify, research, and mitigate these challenges to our loons. That resolve has kept LPC focused on its important mission for the past 43 years, and it will drive our every effort in the future.

2017 Field Survey Summary

Field Season Summary

In close cooperation with hundreds of volunteers, Loon Preservation Committee field biologists had an outstanding season–the 43rd year of LPC's field effort–surveying 360 lakes, including 503 occupied or potential loon territories in 2017. We found pairs of loons on 200 lakes, occupying 296 territories, an increase of three pairs from last year. And we documented nesting for two-thirds of these pairs (202, or 68%), a slight decrease from 2016. One hundred and fifteen of the nesting pairs, or 57%, were successful, hatching 168 loon chicks, of which 126 survived to mid-August, when our routine monitoring ends.

What do these numbers mean? LPC's 2017 monitoring shows a breeding population inching upward by about 1% each year over the last five years, now just shy of 300 pairs. Adding in the 115 unpaired single adult loons we counted this year, the population is still well below estimated carrying capacity for the state. As an indicator of slower population growth this year, we saw only two lakes or ponds with nesting for the first time, and only four newly occupied territories, half the usual rate. Mixed success for New Hampshire's nesting loons in the last decade means that the population is growing, but slowly. Until the next string of good nesting years comes along to provide the needed boost, steady population growth will continue to depend on focused human efforts to increase nesting success and reduce adult mortalities, and on the persistent efforts of the nesting loons.

Because loons are long-lived, adult abundance does not change dramatically in most years. Not so with nesting. Only four other years in the last 43 have been worse for nesting than 2017. The 126 loon chicks that survived to mid-August this year amounted to 0.43 chicks per territorial pair, putting this overall measure of loon productivity well below the long-term average. There were some local exceptions among the nine monitoring regions, with Massabesic, Umbagog, and Winnipesaukee more productive than average, Lakes Region joining the Squam Lakes at the back of the pack, and Sunapee exchanging its usual front-runner status for the middle tier (more on that below). It was another bad black fly year, and that may have reduced nesting propensity in the North Country, especially, where only half of the loon pairs had documented nests (versus 2/3 usually). Black flies may also have driven loons off the nest enough throughout the state that egg viability was reduced, even at successful nests where one of the two eggs hatched. But we can't pin all the blame on black flies. This was a year when increases in several nest failure causes conspired to bring down the overall average. We saw more flooded nests, more nests disturbed by humans, and more nest abandonments as nesting pairs were diverted from incu-

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Results and Highlights for the 2017 Common Loon Breeding Season in New Hampshire

Population and Productivity	2017	Pre-Loon Recovery Plan (2005-2009 ave.)	2017 vs. Pre-Loon Recovery Plan
Territorial Loon Pairs	296	231	28%
Immatures	5	5	0%
Nesting Pairs	202	155	30%
Chicks Hatched	168	138	22%
Chicks Survived to mid-August	126	105	20%
Nest Failures	107	78	37%
Management Activity			
Rafts (including five on Lake Umbagog)	100	56	79%
Signs/Ropes	95	61	56%
Loons Rescued	12	6.4	88%

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bating by rival loons intruding on their territory. The most dramatic single event in the nesting season was the loss of at least five nests to flooding in the severe weather that swept through the Sunapee Region on July 1st (see page 5).

Rescues

As part of LPC's ongoing response to distressed and injured loons, the 2017 season saw several newsworthy do-it-yourself loon rescues. In early June, just a few weeks into her first season with LPC, Monadnock field biologist Emily Gross drew on a past internship handling raptors at the Cincinnati Zoo and successfully took on her first loon rescue unassisted, allowing a rapid response. Although the tangled loon was still mobile enough to elude Emily in her borrowed boat, the bird eventually returned to sitting on an active nest, and she was able to approach and capture him there. A lead test and quick exam at Maria Colby's Wings of Dawn rehabilitation center in Henniker showed no ingested fishing tackle with the line or other injuries, and the loon was released that same afternoon back on Silver Lake in Harrisville. And the nest hatched two chicks a few days later! A month later, LPC field biologists Sarah Cantwell and Lindsay Moulton teamed up with volunteer Dave Merker and local residents along Clay Brook in Lyme for a rare whitewater loon rescue. Kicked off of nearby Post Pond by the resident breeding pair, and forced downstream by the flood waters that followed severe weather on July 1st, this loon was rehabilitated at Wings of Dawn and released in Henniker a few weeks later. Many thanks to Lyme residents, including rehabilitator Catherine Greenleaf of the St. Francis Wild Bird Center, for raising the alarm about this loon. In what turned out to be a busy summer, every LPC field crew member had rescued or attempted to rescue a tangled or injured loon by season's end, and at least a dozen rescues involved close coordination between LPC, cooperating agencies and rehabilitators, and even a few family members and friends. By late October eleven adult loons, two immature loons, and three juveniles had been rescued, covering seven of the nine monitoring regions. Six of the adults and two of the juveniles were successfully released. This relatively high percentage of releases reflects LPC's efforts to continually improve our capture techniques and expand our collaborations with rehabilitators and experienced volunteers.

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Capture Work and Band Resights

To track the survival, behavior, and health of individual loons, LPC continued to capture and sample healthy loons in 2017. Over the course of 14 night-time outings, we banded 21 loons and recaptured and sampled an additional five. Two of the recaptured loons were known to be at least 20 years old, based on the year they were originally banded.

Band resights and recoveries yielded other news: The 1998 Sand Pond male (now at least 23 years old) who was rescued in January 2016 from Sunapee Lake and released in Penobscot Bay that winter, was confirmed back on his recent breeding territory at Millen Pond in Washington this summer. Similarly, the 2000 Martin Meadow Pond male loon rescued in December 2014 and treated for lead poisoning was back again and nested successfully, hatching two chicks for a second straight year. We are now tracking at least 150 individual banded loons, and re-sighted close to 120 of them this year, a new high. Over 10% of these re-sighted loons are more than 20 years old. Ruling the roost for these old-timers, and hatching a chick this year, were the 1993 Sweats Meadow female and the 1994 Magalloway male (banded as a juvenile), who have been paired up on Umbagog for the last decade. At 23 years for the male, and at least 28 years old for the female, these two are some of the oldest known loons in New England!

Protecting Nests

The intensive management of New Hampshire's recovering loon population continued in 2017, with exactly half of the loon chicks hatched around the state coming from nest sites protected by a sign and/or ropeline, or from a nest on a raft floated by LPC volunteers or staff. Eighty-eight nesting pairs were protected by signs and/or ropelines, and 95 rafts were deployed. Raft nests succeeded for the first time at Mascoma Lake, Province Lake, Sunset Lake, and Winona Lake. At Winona, this was the first successful loon nest in over 25 years! Although some rafts sat empty in 2017 without active nesting because it was an off year for the resident loons, other rafts have been supplanted by a viable natural site, or are in a territory that is no longer consistently occupied. In 2018, in addition to evaluating sites where natural nest failures may justify a new raft, LPC will

be working with volunteers to identify and remove rafts that are no longer needed. In addition to rafts, ropes, and signs, LPC staff and volunteers continued outreach to dam owners on over 150 waterbodies, working closely with state and private owners to ensure stable water levels during nesting season. In all, four of five loons hatched in New Hampshire in 2017 benefitted from one or more of these management activities.

Volunteers

Volunteers continued to be at the center of LPC's grassroots monitoring, management, and outreach to preserve a healthy loon population in 2017. Over 900 active field volunteers put in close to 5,000 volunteer hours to help New Hampshire's loons. That's over five hours per volunteer and more than six hours per loon! Coordinated loon watching networks organized by groups like Lake Sunapee Protective Association and the Tin Mountain Birding Society, as well as local lake

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Multiple Nests Destroyed During Severe Weather in the Sunapee Region

On Saturday, July 1, 2017, severe thunderstorms barreled through central New Hampshire, dumping over four inches of rain, washing out roads and flooding campgrounds, then moving on to spawn a tornado in western Maine. In a few short hours at least five loon nests in the path of the storm were flooded and abandoned. This was only a fraction of all the nest failures observed this year, but within the storm's narrow band, the local impact was dramatic. In addition to monitoring the impact of events like these as they happen, LPC's current climate analyses are teasing out the role of weather events like the July 1st storm in shaping loon productivity over the past 40 years and anticipating the consequences of future climate. The following notes come from LPC field surveys of affected nests after the storm:

Goose Pond, Canaan–two separate nests: Flash floods, nests under water. Both birds never returned. Watermarks on bridge showed water was about 12-14 inches higher than it is currently and the nest was only a few inches above water (at the time of the follow-up survey).

Orange Pond, Canaan: Water was currently below nest but high-water lines on shore show it may have been about 8 inches higher, most likely during flash floods on the 1st. There were no shells around to suggest predation.

Lake Tarleton, Piermont: Fail likely due to water level rise (failed after the huge storms that raised lake levels by up to 12 inches in the region).

Cummins Pond, Dorchester: Nest was empty, no shells or eggs. Nest was in ruins and about 8-12 inches above water level (as of 17-Jul). Nearby rocks show high water levels 12-15 inches above current level. Also saw possible mammalian tracks near nest.

~Caroline Hughes

A dramatic encounter between a loon on the nest and a snapping turtle were among the many images captured by LPC's webcams this year. The snapping turtle eventually retreated after being stared down by the loon. See page 17 for a full webcam summary.

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associations, extended our reach, helped train observers, and streamlined communications. LPC also relied on many hundreds of hours from Board members, project consultants (see Spirit of the Loon award profile of Bill Gassman, page 18) and local volunteers who contribute mightily with special events and day-to-day operations. We celebrated these efforts and a successful field season with potluck events in August at the Enfield Shaker Museum and at The Loon Center, where over 50 volunteers turned out!

July Census

This year, 485 observers covered 118 of New Hampshire's lakes during the annual volunteer census on the third Saturday of July, about one third of the lakes that LPC surveys and monitors annually. The census yielded 30 first-time participants, and Enfield Reservoir and Little Island Pond in Pelham were added to our list of census lakes this year. A total of 423 adult loons were tallied, 7 immature (1-2 year old) loons and 47 loon chicks. These numbers complement and are incorporated into LPC field biologist surveys to arrive at final numbers reported on page 3. The 8-9 o'clock hour saw a slight drizzle in some parts of the state and dense fog in others, but that didn't keep many of our volunteers from venturing out. The youngest census participant was 3-year old Addison who joined her 6-year old brother Austin and family on Ossipee Lake. Ossipee was one of 12 volunteer-coordinated local census counts on the state's larger lakes. Many thanks to coordinators and all participants for a great census event. Please save the date for the census next year—July 21, 2018, 8-9 a.m.!

~John H. Cooley

Photo Courtesy of Beth Downs

Loons on the east end of Lovell Lake, where little natural habitat remains, attempted to nest twice among the docks and beach-front activities of humans. These photos show the first nest site, which failed after a few days in spite of the willingness of landowners to avoid the area.

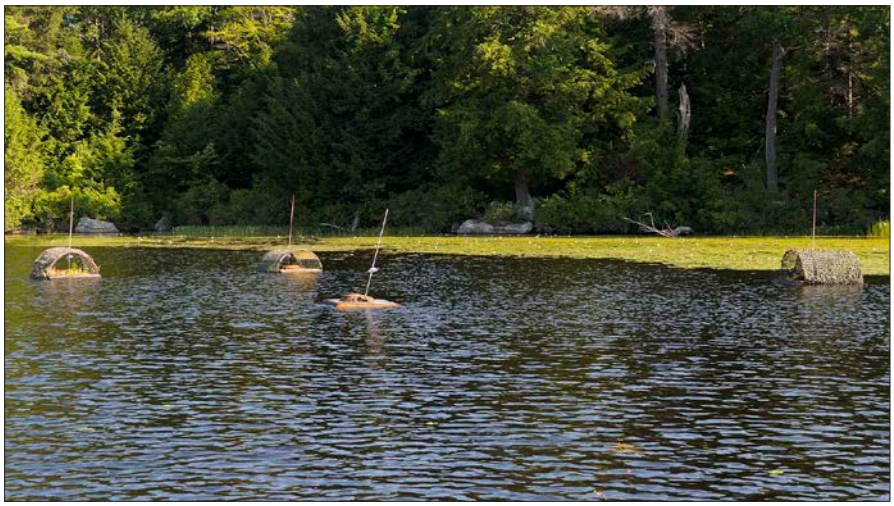
The dramatic increases in LPC's monitoring, research, management and education to recover loons have been funded by donations to LPC's Loon Recovery Plan. For more information about the Loon Recovery Plan, or to make a donation, please contact Harry Vogel, Senior Biologist/Executive Director at 603-476-5666 or hvogel@loon.org.

Photo Courtesy of Kittie Wilson

A molting adult loon on Pleasant Lake. See page 23 for a full description of the fall molt.

Mitigating Climate Change Impacts on Nesting Loons

Visitors to The Loon Center in July and August may have noticed an unusual sight: four additional nest rafts placed in the cove at the end of the Loon Nest Trail. These experimental rafts were part of LPC's ongoing research into the impacts of climate change on loons in New Hampshire. We floated 100 nest rafts in 2017 (including five rafts floated by Umbagog Refuge staff), protecting nests from fluctuating water levels, and shoreline and avian predators. The experimental rafts in the Sanctuary cove were intended to determine whether a modified raft design might help loons cope with an additional stressor: hotter nesting seasons due to a warming climate. If more frequent heat waves and higher average summer temperatures become the norm here in New Hampshire–near the southern limit of the loon's breeding range–our hope is that improved rafts might help loons continue to successfully reproduce on our lakes, even as summer temperatures climb.



Four loon nesting rafts were equipped with a different cover treatment to determine whether a modified raft design might help loons cope with hotter nesting seasons due to climate change. iButton dataloggers were used at each raft to measure ambient temperatures inside the raft, and in a mock egg placed in a constructed nest bowl.

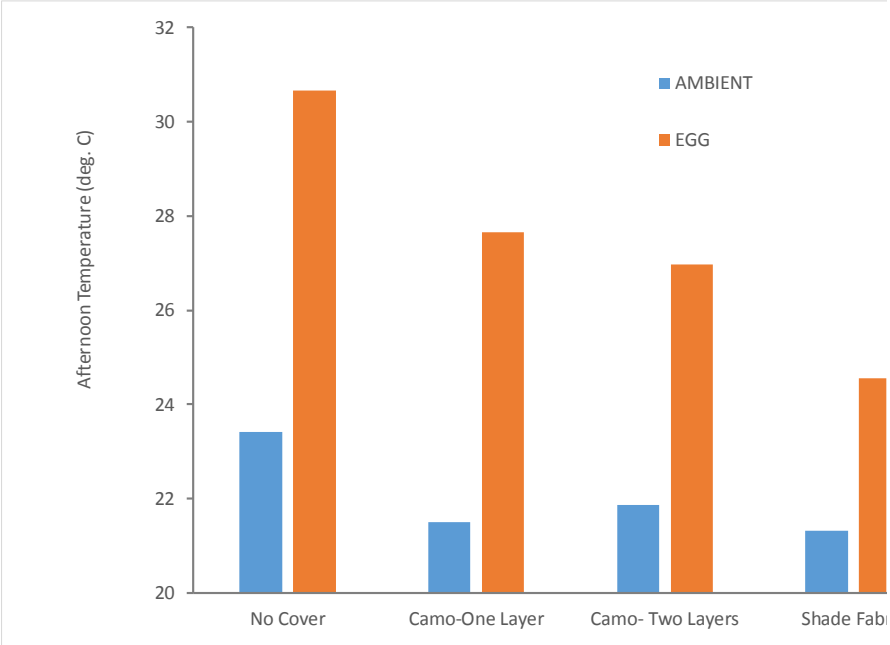


Figure 1: LPC's experimental raft covers produced cooler mock egg (orange) and ambient (blue) temperatures, with eggs under the shade fabric as much as 11° F (6°C) cooler than the raft with no cover. This bar graph shows average temperatures for the hottest part of the day (12-4pm).

We wanted to know whether we could easily create a shadier, cooler version of the usual raft, and how much difference the shade would make. Each of the four rafts used in the experiment was equipped with a different cover treatment. The first raft had no cover at all so that we could simulate the temperatures faced by an unprotected nesting loon. The second raft used our current cover design: one layer of camouflage netting stretched over an arch made of lobster trap mesh. The cover of the third raft consisted of two layers of camouflage netting stretched over the lobster trap mesh, while the fourth raft's cover used one layer of camouflage plus one layer of shade fabric that filtered out 90% of UV light. At each raft we used iButton dataloggers to measure ambient temperatures inside the raft, and in a mock egg placed in a constructed nest bowl. This was done to simulate the temperatures that untended loon eggs may face

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during the incubation period.

The results of this preliminary experiment suggest that the new shade materials worked as hoped (see Figure 1, page 7). The egg and air temperatures were up to 4-10° F (2-6° C) cooler under the shade fabric and second layer of camo netting. The use of these materials is likely to keep nesting loons cooler, and lower the chances that untended eggs will overheat. Based on these results, we look forward to implementing this design on some of our new rafts to test its efficiency and its acceptance by loons in the upcoming field season. If results of this larger trial are good, we will retrofit and actively use nest rafts with shade fabric in the future.

~Caroline Hughes

Among her loon advocacy work last summer on Little Island Pond, Ani Martin gave an educational loon presentation at Camp Runels, and created a "Protect Loons" float for the 4th of July parade (pictured above being pulled behind Ani's kayak). Ani chose loons as the subject of her Girl Scout Silver Award project. We applaud her for her efforts and outreach!

An Anomaly of Adult Loon Dispersal

We were amazed to discover that a loon rescued in early October from Tower Hill Pond in Auburn had dispersed 25 miles (40 km) from the territory where he was originally banded, on Walker Pond in Boscawen. The bird, a male, was originally banded during the summer of 1999 after hatching two chicks. He was re-sighted on Walker Pond annually until 2002, after which he was not seen again until this past summer, when he showed up and successfully hatched one chick at Tower Hill, at the ripe old age of at least 22 years.

Research from Wisconsin and the Northeast suggests that adult loons that are displaced from their breeding lakes typically do not disperse further than a few miles (4 - 5 km) from their previously held territory. This loon, which ended up ten times that distance, is one of only a few known loons to have dispersed such a long way. He has likely inhabited (and been displaced from) multiple territories since he was last seen in 2002, resulting in this cumulatively large relocation. The discovery of his anomalous dispersal highlights the continued importance of banding and tracking loons and measuring individual survival and reproductive performance.

The sad irony for this loon is that lead poisoning was the issue that required his rescue. As a public water supply, Tower Hill Pond is completely undeveloped and is free of many of the most common threats to loons. It is unfortunate that a loon with such a rich history both in terms of dispersal and successful reproduction was able to find its way to this relative safe haven, only to be killed by something as preventable as lead poisoning. In fact, this loon was one of three banded adults, each with a history of successful reproduction, that were removed from the population because of lead poisoning this year, on top of five additional (un-banded) lead mortalities. Maintaining a stable loon population depends heavily on adult survival. Adults with a history of reproductive success are particularly important, so the deaths of these three banded birds highlight the importance of continuing our mission to get the lead out of New Hampshire's lakes and ponds.

~Caroline Hughes

LPC Publishes Groundbreaking Paper on Population-level Effects of Lead Fishing Tackle on Loons

Years of research and hard work to quantify the devastating effects of lead fishing tackle mortality on New Hampshire's loons paid off for loons with the publication of a groundbreaking study in the prestigious peer-reviewed Journal of Wildlife Management.

As LPC worked to enact legislation to protect loons from lead fishing tackle over the years, we had often heard from those seeking to minimize the importance of this issue that the loss of lead-poisoned loons was unfortunate, but of little or no consequence to the overall loon population–it did not rise to the level of a "population-level effect." As LPC staff searched the scientific literature for what constituted a "population-level effect," we found a surprising gap in the literature–researchers often used the term, but we were unable to find a clear definition of what this was. We decided that it was time to provide clarity around this concept and define and then test for a population-level effect. We defined the effect as a statistically-significant difference between New Hampshire's observed population and a modeled population with the effects of lead fishing tackle mortality removed.

It turns out that LPC is uniquely well-suited to study a population-level effect of a mortality stressor on loons: we have a long-term dataset of the New Hampshire loon population, we have been monitoring mortality and collecting carcasses for years, and we have a long-standing partnership to benefit loons with Dr. Mark Pokras of the Cummings School of Veterinary Medicine at Tufts University, who has been necropsying the majority of New Hampshire's loons since 1989. To help us test for a population-level effect, we formed a new collaboration with Dr. Eric Laflamme of the Department of Mathematics at Plymouth State University–a collaboration that, with the publication of this paper, has already paid huge dividends for loons and other wildlife in New Hampshire and beyond.

After reviewing the necropsy data, including archived tackle objects removed from loons and x-rays taken at time of necropsy, and working with Eric to test the results of our population model, we had our results. From 1989-2012, 48.6% of adult loons that were collected died as a result of lead tackle ingestion, reducing the population growth rate by 1.4%. This is a significant reduction for birds like loons, which are a long-lived species with low productivity rates and a naturally low population growth rate. On average during the years of the study, an estimated 1.7% of the population died annually as a result of lead tackle ingestion. Over the 24 years of the study, this reduced the overall loon population by 43%. What does this mean in terms of actual loons? LPC's study estimates that, if the loons that died from lead tackle had survived and bred at average rates, New Hampshire would have had around 900 loons in 2012 instead of the 638 that were counted that year. Estimated carrying capacity for New Hampshire is around 1,100-1,400 loons; without the effects of lead tackle mortality on New Hampshire's loon population, we could be a lot closer to that level, and many more lakes could be echoing to the haunting calls of loons.

Years of research and hard work to quantify the devastating effects of lead fishing tackle mortality on New Hampshire's loons paid off for loons with the publication of a groundbreaking study in the prestigious peer-reviewed Journal of Wildlife Management.

We also found that loons ingested the majority of lead tackle differently than researchers had previously believed. It used to be thought that loons acquired the majority of lead tackle from lake substrates, mistaking a piece of lead tackle for the small pebbles that they normally ingest as grit. Instead, our study found a close correlation of the timing of lead tackle mortalities with the timing of peak fishing activity on New Hampshire's lakes. This, along with the presence of non-lead fishing tackle–such as fishing line, hooks, leaders, etc.–in a majority of the loons that died from lead tackle ingestion suggests that loons acquire the majority of lead tackle from current fishing activity (i.e., ingesting a fish that has ingested lead tackle and broken a line, or striking at tackle or a fish being retrieved by an angler). This is an encouraging finding, in that it suggests that compliance with New Hampshire's laws prohibiting the use of lead fishing sinkers and jigs weighing one ounce or less should have immediate benefits to New Hampshire's loon population.

LPC has worked hard to bring

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the results of our research on the effects of lead tackle on loon populations to the scientific community. Our paper is groundbreaking and has implications for the study of mortality stressors on other wildlife species. It also demonstrates the devastating effects of lead tackle, not just on individual loons but on New Hampshire's loon population as a whole. This has implications for loons throughout their range and for the estimated 75 other North American bird species at risk of lead tackle ingestion. The Journal of Wildlife Management agreed and considered our research especially newsworthy, distributing a press release to over 2,000 news outlets around the world. Apparently, the press release caught people's attention, as people and news outlets as far away as Japan, Sweden, and Liberia have shown interest in our paper!

LPC has worked hard to bring the results of our research on the effects of lead tackle on loon populations to the scientific community.

But, as all else for LPC, it comes back to the loons. Our hope is that publishing our findings in this peer-reviewed journal will result in greater protections for loons and other wildlife from the dangers of lead fishing tackle.

A special "Thank You!" to Dr. Mark Pokras and Dr. Eric Laflamme–their collaboration and work on this paper has brought enormous benefits to loons, and the paper would not have been possible with them.

Please contact LPC if you would like to receive a copy of the full paper.

~Tiffany Grade

The High Costs of Lead Poisoning, and One Loon's Story

Dr. Mark Pokras discovered two jigs in the gizzard of the female loon from the Yard Islands on Squam Lake. Unfortunately one of the jigs was illegal lead tackle which took the bird's life.

The rollercoaster ride that one day in early August brought could not have been more extreme. After years of work, we learned that LPC's paper detailing our research into population-level effects of lead fishing tackle on New Hampshire's loons had been accepted for publication in the Journal of Wildlife Management. You can only imagine the elation as all the hard work to bring our results on the devastating effects of lead on loon populations to the scientific community finally paid off. But the elation came crashing down when, that same evening, we received a call reporting a dead loon on Squam Lake. It turned out to be a loon I had watched during my ten years on the lake with admiration, awe, and a great deal of respect. It also turned out that she was another victim of lead poisoning.

I first met this extraordinary loon in the Yard Islands in 2008, part of the pair that produced the first chick that hatched during my tenure on Squam. She was one of the smallest loons on Squam; but, what she lacked in size, she made up for in energy and fighting spirit and she ruled the lake from the Yards with a great deal of panache–and a bit of attitude! Between 2008 and 2013 she went through three males–of course, this turnover was due to struggles between the males, but I can't help but think they couldn't quite keep up with her!

Her fighting spirit came out in many ways: this is the loon who consistently carried the longest grudge against me after banding. Many loons (especially females) come up to my boat and call in the days after they have been banded, but they generally get over it after a week or so. The Yards female invariably carried her grudge against me for the remainder of the summer. In 2010, unfortunately, an intruding male loon drove out her mate and killed both of her chicks, but she wasn't about to take this sitting down. The day after it happened, I saw her spot the offending male from halfway across the territory, immediately dive, swim like a torpedo below the bow of my

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Loon Preservation Committee

ANNUAL REPORT 2017

APRIL 1, 2016 - MARCH 31, 2017

The Loon Preservation Committee exists to restore and maintain a healthy population of loons throughout New Hampshire; to monitor the health and productivity of loon populations as sentinels of environmental quality; and to promote a greater understanding of loons and the natural world.

A quick visit to The Loon Center in Moultonborough might suggest that the Loon Preservation Committee (LPC) is a small, relatively obscure organization tucked away on a remote dirt road. But don't let that first impression deceive you! What may have begun 42 years ago as a "team of one" has now grown into an impressive organization with a state-wide reach and beyond. This summer our webcam connected us to all 50 states and 140 countries!

A year-round staff of only nine, overseen by a volunteer board of trustees numbering sixteen, utilizes a widespread and multi-talented network of volunteers and professionals to work jointly to protect our state's loons. Our multifaceted program approach involves monitoring, research, management, and outreach.

Monitoring loons reveals trends in their numbers and distribution. Researching those trends identifies threats to the life and/or reproductive success of loons. Research results help direct management efforts to minimize those threats. Outreach and public education spread the word so that each of us becomes part of the "team." We've learned and accomplished much utilizing these processes for the last 42 years but we're far from reaching our goal.

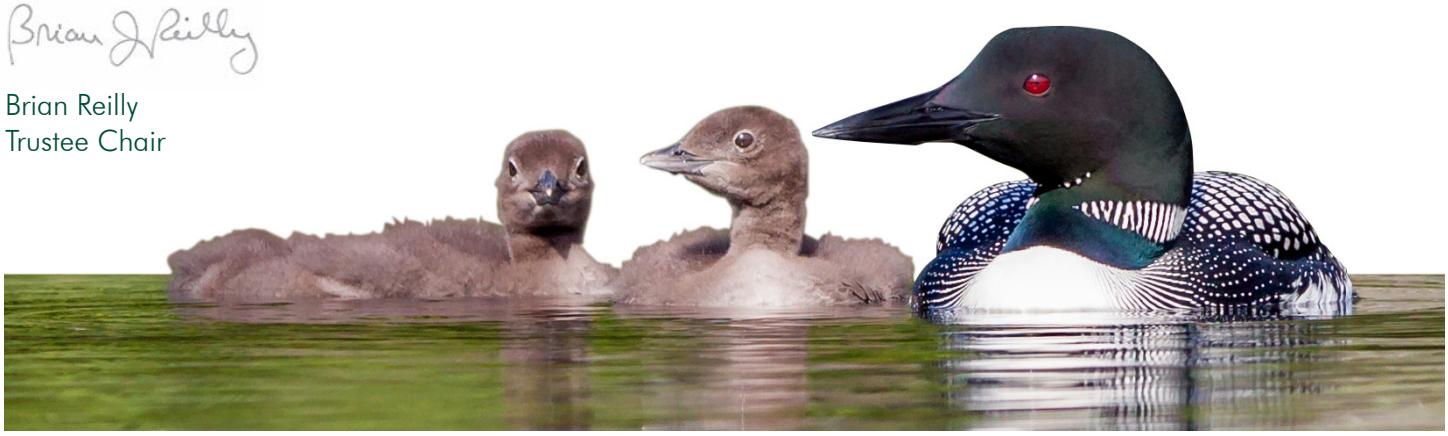
None of this happens without the support of many individuals ranging from major donors to those contributing the change in their pockets. We rely upon and greatly appreciate every contribution towards the continued success of our mission.

Our audited Financial Statements for the fiscal year that ended March 31, 2017 (FY2017) show our revenue exceeded our expenses by $6,107 or 0.87%. The surplus has been applied to work undertaken in the new fiscal year. The accompanying charts and tabulations provide a five-year summary of our financial reports. The full report is available for review at The Loon Center and on the LPC website, http://www.loon.org/financial.php.

This coming year will be my second year as Board Chair and my seventh year as a Trustee. Although I had some appreciation for the work that goes into making LPC successful before becoming Chair, I now better understand just how much time and effort is necessary on the part of so many people to see this organization continue to grow and thrive. To all of you – staff, trustees, members, donors and volunteers – I am most grateful.

Thank you,

Brian Reilly
Trustee Chair



BRIAN REILLY

EXECUTIVE DIRECTOR'S MESSAGE:

The Loon Preservation Committee was created on a wing and a prayer 42 years ago to address serious issues threatening an icon of New Hampshire's waters, a bird that gave wild life and voice to our lakes. LPC began as a grassroots effort and we remain that today. Our budget has grown but there has been no fundamental shift in our mission or our conservation philosophy – both have served loons too well over the years to change. The expenses, and more importantly the relationships, have grown in response to the mounting challenges facing our loons and the increasing need to work together to address them.

The dollars graphed in this report speak to fiscal responsibility and earnest efforts on the part of Board and staff to secure resources and use them effectively to carry out mission, but they don't tell the real story. That story is better reflected by a small but dedicated staff and more than 800 volunteers who contributed over 6,000 hours of volunteer time to ensure that the important numbers – nesting rafts floated (95), nesting pairs protected with signs and ropelines (94), and educational programs (127), among other measureable indicators of conservation effort – came to be. Close to 90% of the loon chicks hatched in New Hampshire in 2016 came from loon pairs that benefitted from LPC's management. And, of course, the most important number is the gratifying response to this work – a record number of loon pairs (294) on New Hampshire's lakes, despite their increasing challenges.

The dollars play a role too, of course – it costs over 3,000 of them to test a single egg for contaminants, for example. This and all of our dramatically expanded monitoring, research, management and education efforts were made possible by donations of one sort or another, including memberships, annual appeal gifts, store sales, and donations to our Loon Recovery Plan and Squam Lake Loon Initiative. That generosity is an important part of LPC's story as well, and I want to sincerely thank all who trusted LPC with their time and effort and funds. I hope you agree that they were put to good use to benefit our loons and assure them of a bright future in New Hampshire.

Sincerely,

Harry Vogel
Senior Biologist/
Executive Director

The Swim, led by volunteer Wendy Van de Poll, celebrated its 10th anniversary supporting the Squam Lake Loon Initiative, an ongoing research, monitoring, management, and outreach effort to investigate and reverse the decline of loons on Squam Lake. Pictured: Richard Chou, Carol Zink, Rose de Mars, Wendy Van de Poll, Rick Van de Poll, Lisa Davy, John Eisner, and Jen Marts.

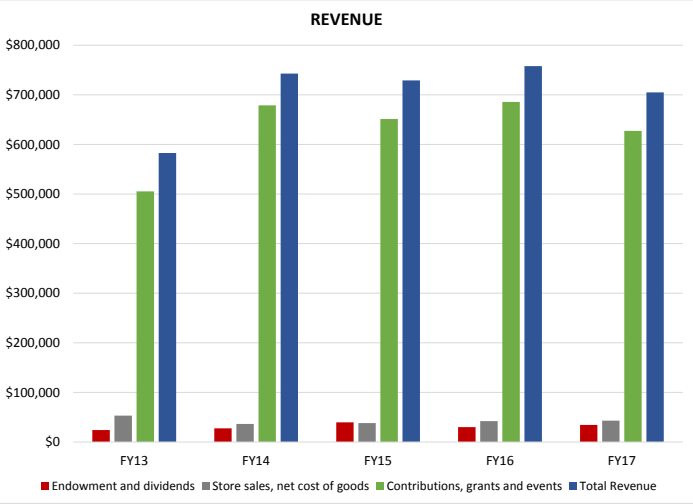
Population and Productivity:

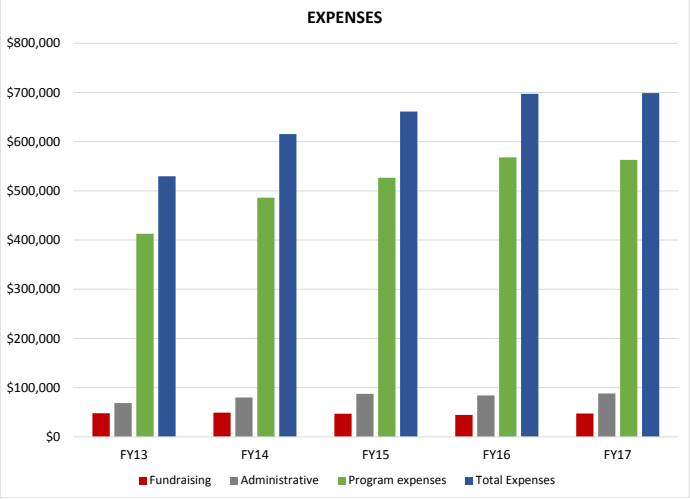
	FY13	FY14	FY15	FY16	FY17
Territorial Loon Pairs	280	284	289	289	294
Nesting Pairs	188	180	208	211	207
Chicks Hatched	170	157	203	234	198
Chicks Surviving to mid-August	134	119	154	174	147

FINANCIAL SUMMARY:

Loon Preservation Committee: Summary of Activities and Changes in Net Assets
Fiscal Year Ending: March 31

	FY13	FY14	FY15	FY16	FY17
Revenue:					
Contributions, Grants and Events	$505,241	$678,699	$651,074	$685,725	$627,291
Store Sales, Net Cost of Goods	$53,134	$36,439	$38,231	$42,188	$43,070
Endowment and Dividends	$24,234	$27,701	$39,616	$29,973	$34,576
Total Revenue	**$582,609**	**$742,839**	**$728,921**	**$757,886**	**$704,937**
Expenses:					
Program Expenses	$412,922	$486,187	$526,666	$568,278	$563,088
Administrative	$68,774	$80,002	$87,403	$84,191	$88,141
Fundraising	$48,030	$49,211	$47,161	$44,697	$47,601
Total Expenses	**$529,726**	**$615,400**	**$661,230**	**$697,166**	**$698,830**
Increase in Net Assets:	**$52,883**	**$127,439**	**$67,691**	**$60,720**	**$6,107**





LPC's financial records are audited by Rowley & Associates, PC of Concord, NH. Copies of the audit and the IRS 990 return are available upon request at The Loon Center.

KITTIE WILSON

Close to 90% of the loon chicks hatched in New Hampshire in 2016 came from loon pairs that were protected by ropes and signs, provided with a nesting raft, or otherwise benefitted from LPC's management last summer.

VOLUNTEERS AT WORK

Volunteers lend LPC Staff a helping hand building rafts and signs to protect loons across the state.

Volunteer Maynard Thompson floats a raft on Loon Lake, one of 95 rafts floated in 2016.

Volunteers Bill Considine and Wayne Adams head out to float a loon sign on Crystal Lake.

Volunteer Bill Gassman prepares equipment for the loon webcam – LPC's third year providing streamed live footage of an active loon nest.

Dr. Mark Pokras retired from Tufts University Cummings School of Veterinary Medicine but continues his volunteer loon conservation work with LPC, a collaboration that began over 30 years ago!

In Fiscal Year 2017, the seventh year of the Loon Recovery Plan's implementation, more than 800 volunteers contributed over 6,000 hours of time to support LPC's field monitoring efforts.

Volunteer Ryan Buchanan hosts the third annual Save the Loon Fishing Derby on Chocurua Lake, promoting lead-free tackle and the safe disposal of fishing line.

continued from page 10

boat, and body slam the male from underneath. He never knew what was coming–one second he was placidly floating, the next second he exploded out of the water. She spent the next two days fighting him. This is the only loon I have ever seen react this way when his/her chicks were killed. You can imagine how disappointed I was when she was evicted from the Yard Islands in mid-summer 2013, but she kept looking for opportunities to change her fortunes. Over the succeeding years, she was involved in several territorial battles, including one where it became evident to me that she was winning, and she knew it too. With her typical flair, she even grabbed a 6" fish and rather casually gulped it down before resuming the fight. Despite several temporary victories over the years, she was never able to hold onto a territory in these last years. It is likely that old age and her small size were finally catching up with her. She was originally banded as a breeding adult in 1999; given that loons do not nest on average until they are at least 6-7 years old, she was at least in her mid-20's when she died. From the time of her banding, she hatched 11 chicks, and 7 of those survived. She was a very attentive and protective parent to her chicks; and her importance to breeding success at the Yard Islands is demonstrated by the fact that, after she was evicted, loons have not nested successfully there. She was an extraordinary bird, with a truly wild spirit.

In the weeks leading up to her death, she was a shadow of her former self as lead poisoning took its terrible toll. LPC staff attempted to rescue her; but, at the sight of the net, one last burst of adrenaline and her fighting spirit took over, and she eluded our best efforts to capture her. At the time of her death, she was suffering from lethal levels of lead, emaciation, and a fungal respiratory infection that often sets in on loons whose health is compromised in other ways. Ironically, two jigs were found in her gizzard at necropsy. One of them was not lead. Had this been the only jig she ingested, she would have been fine. But there was the second jig, made of lead, and it killed her. The actions of one angler were negated by the poor (and illegal) choice of another, and this extraordinary loon paid the ultimate price.

I never would have imagined that the remarkable Yard Islands female would be found dead of lead poisoning on the very day LPC's lead paper was accepted for publication. But it harshly underscores the importance of LPC's work to protect loons from lead tackle, both for individual loons and for the population as a whole.

~Tiffany Grade

This poor (young) loon was rescued by LPC biologists Tiffany Grade and John Cooley in Cotton Cove on Squam Lake in late October, after Squam Boat Livery employees noticed the lure trailing from its bill. It was extremely emaciated, with treble hooks lodged in its mouth and neck, and fishing line tightly wrapped around its neck and gouging its skin. Sadly, it did not survive, in spite of efforts to untangle and treat it at Meadow Pond Animal Hospital in Moultonborough. If we needed one more reminder to reel in around loons and retrieve spent fishing gear – this was it.

Hard Times for Squam's Loons, but Hope for a Bright Future

The idyllic summer of 2003 heard Squam echoing with loon calls, including the begging calls of no fewer than 15 loon chicks around the lake. But threats loomed for Squam's loons, including increasing populations of nest predators, disturbances from boats that approach too closely, and a changing climate and its challenges for loons. On Squam, these threats also included contaminants that peaked up to seven times higher than the levels on other lakes, and the sum of all these stressors seems to have tipped loons over the edge. In 2005, the population crashed. These same stressors and high rates of lead fishing tackle mortality seem to have prevented the population from recovering. Each year, biologists working to recover Squam's loon populations and people who love the loons ask, what will this year bring? Let's take a look at the chapter that was 2017.

The year began with the contaminant story: LPC's research into possible sources of chemical contamination in the Squam watershed brought to light two higher than expected locations. One site, on the outflow from Kusumpe Pond into Squam Lake, was already an area identified as having higher than background levels of PCB's and dioxins/furans during our sampling in the fall of 2015. We re-sampled the site in the fall of 2016 after a beaver dam blowout and resulting culvert repair work threatened to mobilize contaminated sediments. Our results showed exactly that–contaminant levels at this location spiked to 2,900 times the levels found at ten other sampled tributaries around Squam for total PCB's and 140 times for dioxins, furans, and dioxin-like PCB's. Levels topped sediment guideline values for levels that are likely to result in harm to aquatic life for total PCB's and were 90% of the level for combined dioxins, furans, and dioxin-like PCB's. The second location was a previously-unidentified site for DDT that was over 400 times higher than the background levels we had measured at other sampling locations in the Squam watershed. Like another site we had identified with higher-than-background levels of DDT, the chemical profile of the DDT at this new location also showed undegraded DDT, suggesting either the presence of recently mobilized sediments or a recent input of DDT to the system.

LPC submitted a report to New Hampshire Department of Environmental Services detailing the findings of our sediment work. DES is concerned about the situation and, in a meeting with LPC staff and representatives from other state agencies, has generated a list of action items for moving forward to address the problem. LPC will remain involved in the process to ensure good results for loons. (You can read LPC's sediment report on our website at www.loon.org.)

Not long after LPC submitted our sediment report to DES, the loons returned, bringing with them high hopes for a good breeding season on Squam. But, as they returned, another thread of the Squam storyline kicked in: social chaos, the increased levels of territorial fighting we have seen on Squam in recent years. While territorial fighting is part of normal loon behavior, the vacuum apparently created in Squam's social structure by high rates of adult loon mortality–particularly from lead fishing tackle–has destabilized the social structure, resulting in increased levels of fighting that disrupt loon breeding success. This year was an especially bad one for this social chaos–at least one pair was never able to begin nesting due to near-constant pressure from an intruding loon, and four nest failures resulted from loon intrusions that led to the abandonment of nests. Social chaos may have contributed to the death of the Mooney Point female on Squam this year. Although the condition of her carcass was severely compromised and the results of the necropsy were inconclusive, she had been involved in territorial fighting, and her nest was abandoned as a result in the days leading up to her death. This social chaos seems to be such a major factor in Squam's poor productivity in recent years that it bears repeating: although territorial fighting is normal for loons, the degree of fighting on Squam has seemingly risen to unnatural levels influenced, we believe, by unnaturally high rates of human-caused mortality. Which brings us to the third part of Squam's storyline: high rates of adult loon mortality resulting from lead fishing tackle ingestion. The ex-Yard Islands female died this summer from lead tackle ingestion (see page 10). Since 2001, Squam has a population rate of lead tackle mortality that is nearly twice the state-wide rate. Along with the collapse of Squam's loon population in 2005, when 44% of the pairs did not return, ongoing high rates of lead fishing tackle mortality and other sources of human-caused mortality have likely contributed to the social chaos that seems to be a

major reason for the poor breeding success on Squam in recent years.

So how did the 2017 chapter in the story of Squam's loons end? For the first time since LPC began monitoring Squam in 1975, only a single chick hatched on Squam this year. Fortunately, thanks to hard-working parents, LPC's protective measures, and watchful lake residents, the chick is thriving and, at time of writing, is practicing his or her flying skills in preparation for heading to coastal waters for the next several years. This chick's success is a sign of hope. LPC is striving to bring the Squam population to the same point, despite all the challenges facing Squam's loons. By endeavoring to protect loons from the dangers of lead fishing tackle, by identifying and supporting efforts to mitigate chemical contaminants in the Squam watershed, by providing nest rafts and protective signage during critical nesting and chick-rearing periods, by bringing the best research and science to bear on the threats facing loons, and by encouraging a culture of respect that allows loons to thrive alongside their human neighbors, LPC is working to restore a healthy population of loons to Squam Lake and throughout New Hampshire. That is the happy ending for Squam's loons and all New Hampshire's loons that LPC is working to write–and we are confident that, in time, that happy ending will be realized.

LPC has enlisted the support of a broad coalition to investigate contaminants as one of many possible stressors on Squam's loons, and we will remain engaged in the process. Ultimately, the success of efforts to reduce contaminants will be measured by levels of these contaminants in loon eggs, and our success in returning a healthy environment to Squam will be measured by the return of health to Squam's loon population. LPC will be there to make sure that happens.

~Tiffany Grade

THE LOON WEBCAM – A WORLD-WIDE SENSATION!

For the fourth year in a row, LPC shared live footage of nesting loons with viewers in the Granite State and beyond. New this year, however, was the use of YouTube to stream the footage and a camera on a second pair of nesting loons. We did not quite know what to expect, but the loon cams surpassed our wildest expectations this year. These nesting loons became a world-wide sensation, being viewed in all 50 states and 201 countries! The total number of live views for both nests was close to half a million, more than 6 times as many in 2016. Viewers also spent more time watching the live footage this year, averaging just over 17 minutes per view.

Streaming the webcams on YouTube also allowed LPC biologists and our webcam operator to communicate with viewers in live chats and answer questions about loon natural history, share specific information about the nesting pairs, and answer technical questions about the camera itself. In one exchange a woman from Sweden joined the chat to learn more about loons, as she was heading on a loon tour the following weekend. She wondered if the Common Loon was one of the species she might see on her trip or what other species of loons she might come across. After her adventure, she was excited to report back to LPC and even mentioned that her exchanges with LPC staff prior to the trip made her an expert of sorts! While we had to monitor the chat room regularly for internet trolls, it was exciting to create a community of people from all over the world, sharing their love and interest of loons!

The live stream produced many highlights, from black flies pestering the loon on the nest, to a dramatic confrontation with a snapping turtle (see page 5), to a hail storm, and the capture of an amazing moment—the loon chick venturing into the water for the first time. More than 50 of these clips can be viewed on LPC's YouTube channel (https://www.youtube.com/user/LoonCenter). Be sure to check those out if you missed anything this season. You will also find interesting information in the webcam blog posts which can be found on our website (see the "2017 News" tab on the webcam page- http://www.loon.org/looncam.php).

Over the winter, we will be investigating new microphones that may not be as sensitive to background noise, and we will continue to look into other ways to improve the viewing experience. Just imagine if fiber-optic cable was available at these sites!

Thanks, again, to everyone for tuning in. The Loon Webcam reached the top 5 worldwide ranking in the live animals and pet category on YouTube—that's a pretty noteworthy accomplishment for a small non-profit in Moultonborough, New Hampshire!

~Susie Burbidge

LPC Welcomes New Trustee Beverly LaFoley, and Honors Bill Gassman at Annual Meeting

The Loon Preservation Committee held its 11th Annual Meeting at The Loon Center on Thursday, August 24th, as required by the By-laws that accompanied LPC's incorporation as an independent 501(c)(3) organization in 2006. The meeting opened with a warm welcome by LPC Chair Brian Reilly. He thanked no fewer than six retiring Trustees (Ron Baker, Suzy Beach, Peace Conant, Bill Irwin, Renée Speltz, and Eric Taussig) who had ably served their terms to guide LPC's work in support of loons. Trustee Chip Broadhurst outlined changes to clarify and up-date LPC By-laws which were approved unanimously by LPC members in attendance. He then introduced LPC's new Trustee, Beverly LaFoley.

A resident of Squam Lake, Bev LaFoley keeps a close eye on the Sturtevant Cove loon family. She is President/Trustee of the Martin-John LaFoley Foundation, established in memory of her son "M.J.," which distributes yearly scholarships to young people to attend the Junior Squam Lakes Association summer camp. She currently Chairs the NH Charitable Foundation, Lakes Region Board. An avid gardener and lover of the lakes and mountains, she continues to work toward improving the lives of young people through outdoor programs.

Treasurer Glyn Green reported that LPC completed the fiscal year ended March 31st 2017 in the black with a clean audit, and distributed copies of LPC's Annual Report to all present. Interested LPC members or the public may contact us for copies of LPC's audited FY17 Financial Statements or review them on our website.

Following the business meeting, noted loon photographer and videographer John Rockwood enthralled all present with outstanding pictures and videos of loons on and around Massabesic Lake in southern New Hampshire. Senior Biologist/Executive Director Harry Vogel followed John to report on LPC's monitoring, research, management, and educational programs in 2017 and to highlight trends in New Hampshire's loon population (see pages 3-6).

Bill Gassman Honored with "Spirit of The Loon" Award

A highlight of LPC's Annual Meeting was the presentation of the tenth annual "Spirit of The Loon" Award, created to honor LPC's founder Rawson Wood by recognizing an individual who exemplifies outstanding volunteer service to loons and the Loon Preservation Committee.

Loons and LPC benefit from the efforts of hundreds of volunteers every year. This year it seemed appropriate, given our work to educate the public about loons through our Loon Nest Cam and the incredible success of that effort, to recognize the architect of that success, Bill Gassman.

We at LPC had always known that our "looncam," in addition to being a great monitoring and research tool, could be a great vehicle for outreach–and in fact had the potential to reach far more people with a meaningful loon experience than anything else we did. We reached out to Bill in 2016 to enlist his help with some of the many technical issues surrounding streaming live video from remote locations, and he quickly adopted the webcam. He researched equipment, connectivity, resolution, frame rates, buffering, viewership, beaming and streaming and promoted LPC's YouTube channel. In the off season he researched and recommended an upgraded camera, and then helped set up and operate our webcam on two different loon pairs in 2017. He also helped LPC staff to engage and educate webcam viewers.

We have been working hard at LPC to bring an awareness of loons, their challenges, and our work in support of them to residents and visitors of New Hampshire and surrounding states, but this year Bill brought that awareness to the world (see page 17). Bill has been an important partner in our efforts to recover loons in New Hampshire, and we were pleased to present him with the 2017 Spirit of the Loon Award.

~Harry Vogel

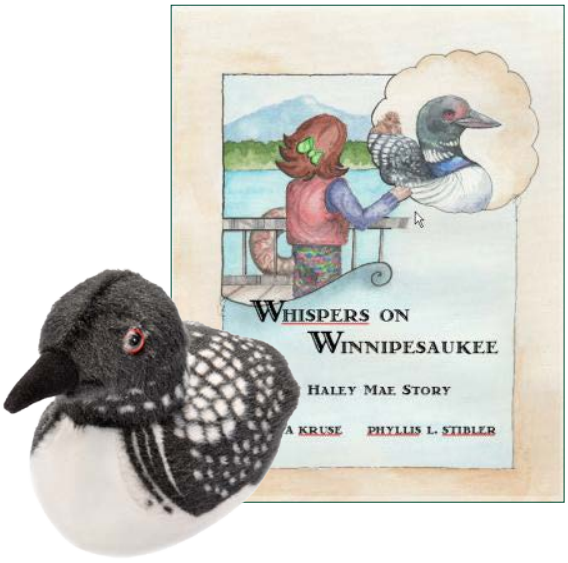
Remembering a Lovely Lady!

We were deeply saddened by the passing of our dear friend, Phyllis Dane Prouty, this past August. She is survived by her husband, Jordan Prouty, himself an LPC icon having served as Chair of the Board of Trustees from 1992-1996, and again from 2003-2005.

Phyllis was instrumental in the advent and success of our Summer Luncheon & Auction, serving as Chair for many years. Her creative themes and attention to detail brought much enjoyment to our guests. She and Jordan were renowned for their pheasant dinners—a much sought after auction item! A regular presence at our Annual Loon Festival (pictured left with her face painted!) and Holiday Open House, she volunteered wherever she was needed—always with a smile and great enthusiasm. A wonderful hostess, she and Jordan opened their hearts and home to LPC staff whether entertaining on the screened porch of their beautiful lakefront home on Kanasatka, or by a warm hearth. Her zest for life was contagious and will forever be etched in our memories!

Jordan remains a dear friend and an LPC Honorary Trustee, continuing to offer his steadfast support and expertise. We are so grateful to have "The Prouty Porch" at The Loon Center as a daily reminder of both Phyllis and Jordan, their friendship, and their devotion to loons in New Hampshire.

~Linda Egli Johnson



Celebrate LOONS this holiday!

Whispers on Winnipesaukee
Follow the adventures of Haley Mae on Winnipesaukee in this new book by local author Martha Kruse and illustrator Phyllis Stibler. Add a calling loon plush toy for a richer reading experience.

Book - $17.95
Calling Loon - $9.45

NEW! Cozy Loon Holiday Cards by Kim Conway
Inside greeting: Season's Greetings
Contains 10 cards with red envelopes. Printed on recycled, acid-free paper in the USA. 4.5 x 6.25 inches.

Cards - $17.95

Visit "The Loon's Feather Gift Shop" at The Loon Center for a wide selection of holiday gifts, or www.loon.org for on-line shopping!

Many LPC Events Spread Loon Awareness

JULY 7: YAKKING FOR LOONS

Yakking for Loons—a kayak-a-thon to support New Hampshire's loons—continues to grow in popularity with over 70 attendees this year! Paddlers met bright and early on July 7 at Lee's Mill Landing in Moultonborough to register and prepare for the official send off at 8:30 a.m. Most participants chose the 4.6 mile Green's Basin course, with the 2.5 mile Ganzy Island course as a second option.

Paddlers were accompanied by LPC Senior Biologist/Executive Director, Harry Vogel, as well as LPC Winnipesaukee Field Biologist, James Demers. Harry and James were able to answer loon questions, as well as point out the newly hatched loon chicks along the course. The chicks, and their parents, were observed from a safe distance through binoculars. After a morning of paddling, participants were treated to a hearty box lunch prepared and donated by Curt's Caterers.

Participants who raised $100 or more received a long-sleeved "Yakking for Loons" t-shirt. Our top fundraiser this year was Curt Chesley who was presented with an LL Bean insulated canvas tote cooler with LPC logo.

We are most grateful to our event Prime Sponsors, Irving Energy and Curt's Caterers. We also wish to thank our event Co-Chairs, Linda Allen and Joanne Chesley; our spotters, John and Taylor Allen, Curt and Elaine Chesley, Ralph Rannacher, and Warren Reynolds; and our friends at Wild Meadow Paddle Sports for discount kayak rentals and help with launching.

Arts and crafts are a big hit at the Annual Loon Festival!

Mark your calendars for July 6, 2018, and join the growing colorful flotilla of kayaks "YAKKING" on behalf of New Hampshire's loons!

JULY 15: LOON FESTIVAL

Mother Nature was kind to us again this year awarding us with a sunny day for the 40th Annual Loon Festival! We were pleased to have LPC Board Chair, Brian Reilly, Vice-Chair, Liz Gabel, and many other Trustees, volunteers, and staff on hand to greet guests and mingle with the crowd.

There was plenty for guests to do from arts and crafts, educational slide shows, and a "test your loon facts" dunk tank. Mo was there with his balloon sculptures, as well as our face painters Caitlyn Dowell, Emily Gross, and Emily Landry. Janet and Phil Sanguedolce of The Sweetbloods set the mood with their acoustic blend of vocals and guitar.

The Meredith Rotary Club was on hand again this year, serving up a picnic lunch of hotdogs, chips, beverages, and ice cream! Offering a helping hand from the Club were Tim Bergquist, Betsey Donovon, Tom Fairbrother, Ted Fodero, Dick Gerken, Vern Goddard, Dean Gulezian, Ron Maher, Mike Pelczar, Ed Touhey, Donna Ulbricht, and Jim Wiedman; and Rotary exchange students See Deans, Tomy DeTolla, Li Frizzel and Franci Palmeri. CG Roxane and Meredith Hannaford donated water, and the Meredith Ben & Jerry's donated the ice cream. We owe a debt of gratitude to all of them for providing refreshments for our guests!

We were pleased to have the Squam Lakes Natural Science Center (SLNSC) with their Discovery Table and live animals; and the NH Lakes Association and its "Watershed Warrior Activity Circuit," teaching participants how to keep our lakes clean. Many thanks to SLNSC volunteers Sophia Baer, Chris Bird, John Egolf, Jeremy Phillips, and Nance Ruhm; and NH Lakes' Krystal Costa and Jon Ballanoff.

THANK YOU
Yakking Sponsors!

Curt's Caterers, LLC

IRVING

THANK YOU
Loon Festival Sponsors!

Thomas & Suzanne Beach

In Memory of Chuck Brox
from Vicky Brox

Clark & Gloria Chandler

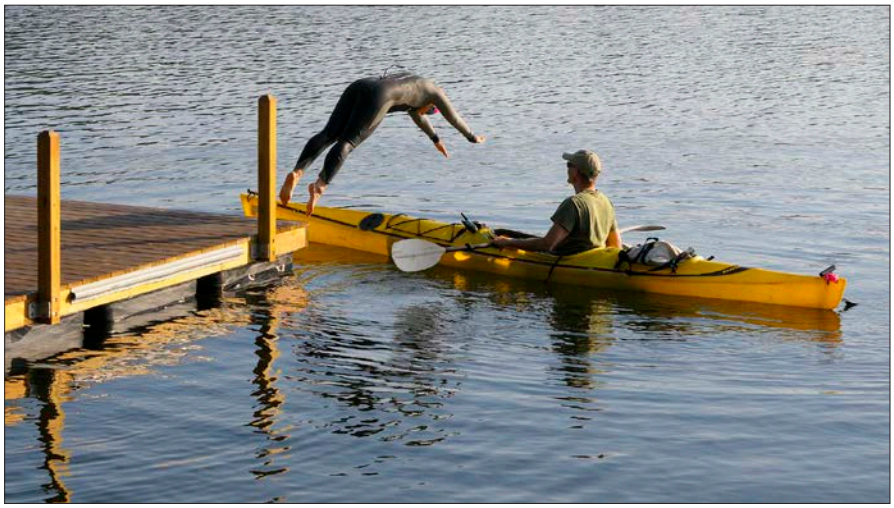
Allan & Judy Fulkerson

Patricia White MacCabe

Sally McGarry & Phyllis Veazey

Jordan & Phyllis Prouty

In Memory of Ken Sorlien
from the Sorlien Family



Lisa Davy takes the plunge into Squam Lake on August 3rd, while fellow swimmer (and spotter) Rick Van de Poll looks on.

It would be impossible to host the Festival without the help of volunteers. Many thanks to Bob and Susan Connolly, Bob and Marilyn Coppo, Beverly Haduck, Mary Lahut, Ken Mahl, Reinette Reilly, Mike Ruyffelaert, John and Sue Scudder, and Rachel Williams for their generosity of time! And, of course, the intrepid LPC field biologists, with John Cooley and Caroline Hughes at the helm, who work tirelessly before, during, and after the Festival to make it run smoothly–Sarah Cantwell, Jesse Carlson, James Demers, Emily Gross, Emily Landry, Maddy Mishael, and Lindsay Moulton!

AUGUST 3: THE SWIM

2017 marked the 11th year that Wendy Van de Poll and her team of Swimmers swam the 7-mile length of Squam Lake to focus attention on Squam's loons and LPC's work to recover them. The 2017 Swim team members–Wendy Van de Poll, Rick Van de Poll, Suzan Ballmer, Vicky Boreyko, Virginia Craig, Lisa Davy, Rose de Mars, Pamela Halsey, Laurie Hoyt, and Jen Marts–have raised over $9,500 to date this year, a fitting tribute to the tremendous feat of this dedicated team!

SWIM donations, along with other donations to the Squam Lake Loon Initiative (SLLI), help LPC continue its research into factors causing poor survival and breeding success of loons on Squam, and LPC's expanded management and outreach to recover Squam's loon population. The knowledge we gain as we work to recover Squam's loon population is being applied to our efforts to preserve loons throughout the state.

Many thanks to the Squam Lake Marketplace, Corner House Inn, and EM Heath Supermarket for their donation of food for the SWIM celebration; to boat captain, Ralph Kirshner, and spotter, Jeff Marts, for supporting the Swimmers along their route; and to the SWIM sponsors–Breakaway Athletic Coaching, Grace Wellness Center, The Lloyd Brothers, Moulton Farm, New Hampshire Mushroom Company, and Sally Wolf–for their financial support. And, of course, a very heartfelt thanks and congratulations to the Swimmers!

THANK YOU
SWIM Sponsors!

Breakaway Athletic Coaching

Grace Wellness Center

Lakes Region Computer

The Lloyd Brothers

Moulton Farm

NH Mushroom Co.

Sally Wolf

AUGUST 14:
CARL JOHNSON MEMORIAL GOLF TOURNAMENT

It is such a treat to reunite with our faithful golfers year after year, and to welcome new attendees to the group! Our prayers were answered for a sunny, dry day, as fifty golfers hit the course at Ridgewood Country Club for an 8:00 a.m. shotgun start.

Everyone regrouped at the Overlook Tavern following an enjoyable morning of golf for lunch and prizes. This year's winning foursome was Mill Falls at the Lake represented by Joe Ouellette,

continued on page 22

continued from page 21

Bob Strand, Mike Burlingame, and Chris Secord. Coming in second were David Boyce, Whitney Gay, and Bob Shirey of Team Winnipesaukee. Kevin, Kory, and Greg Keenan, and Laurie Fox of Paugus Bay Marina were our third place finishers. Winners received an LL Bean insulated canvas tote cooler with LPC logo, and a six pack of "Loon Juice" hard cider shipped all the way from Minnesota! Frank Marinace of Marinace Architects was the winner of this year's putting contest. Prizes were also awarded for men's and women's longest drive and closest to the pin.

This year's winning golf foursome was the team from Mill Falls at the Lake. Pictured: Mike Burlingame, Chris Secord, Bob Strand, and Joe Ouellette.

Many thanks to our event Prime Sponsors–Mill Falls at the Lake and Overhead Door Options–for their generous and long-standing financial support of the tournament. We are also grateful to Kevin Keenan of Paugus Bay Marina for sponsoring the $10,000 hole-in-one prize.

We were pleased to have the support of 29 hole sponsors this year, including Advanced Land Surveying, American Legion/ Meredith, Ameriprise Financial/ Meredith, Broadhurst Family, Ann Brienza/ Nikken Wellness, DAK Financial Group, Greg Egli, Frog Rock Tavern, Mr. and Mrs. Richard Goodby, Hawkeye Appraisals LLC, Ippolito's Furniture, Irwin Automotive Group, JW Electric, Kevin and Lucy Kelly, Lakes Region Visiting Nurse Association, Marinace Architects, Meadow Pond Animal Hospital, Meredith Rotary Club, Mill Falls at the Lake, Moulton Farm, Louise and Sandy McGinnes, NH Environmental Consultants, Noyes Insurance, Overhead Door Options, RE/MAX Bayside, Savings Bank of Walpole, Ambassador Paul W. and Renee Speltz, and Veterans Count. Special thanks to Sherman Saltmarsh of Saltmarsh Insurance Agency of Winchester, MA, for sponsoring the hole signs.

And last, but by no means least, thank you to Carl Johnson, Jr., Tournament Chair, for his role in securing golfers, hole sponsors, and Prime Sponsors. Like his father before him, we would be hard pressed to host this event without him!

~Linda Egli Johnson

LOOKING AT LOONS

A Telephoto Look at the Natural History of New Hampshire's Loons

First signs of the molt to winter plumage.

Adult loon in winter plumage.

Juvenile (right) has pale scalloped edges on feathers.

When autumn leaves change, the plumage of adult loons also changes. The first signs of molt to the winter, or basic, plumage appears at the base of the bill and progresses over the head and down the chin. Light gray and soft brown feathers replace the striking black feathers of the loon's breeding, or alternate, plumage. The beautiful black contour feathers, each with two splashes of white, are replaced by basic gray feathers much like the feathers of juvenile loons, only slightly squared on the ends. By late November, the only obvious feature distinguishing winter adult and juvenile loons is the distinct pale scalloped trailing edges on the contour feathers of the juveniles. Flight feathers are kept so that the loons can migrate to their wintering grounds. Our New Hampshire loons will winter off the New England coast, tucking themselves in bays and coves as well as fishing in the open ocean. They are able to extract salt from ingested sea water and salty prey by using a salt gland that concentrates salt into a solution that is excreted through the upper bill. The molt of flight feathers is delayed until sometime during January through March, when flight feathers are lost all at once. Loons will be flightless for about three weeks as the feathers regenerate. With the approach of spring, the loons will molt once again into their lovely breeding plumage and begin to journey back to their inland lakes.

Although the sequence of these molts has evolved to suit the loon's breeding and migration, the precise timing of the molts varies from loon to loon. Keep an eye out for loons bobbing in a winter harbor on the coast or returning to your lake after ice-out, and you may be able to recognize the nuances in the molt timing for "your" loon.

References:
The Common Loon, Spirit of Northern Lakes
by Judith W. McIntyre
Journey with the Loon
by David C. Evers & Kate M. Taylor

LPC Volunteer Kittie Wilson photographs loons from a safe and respectful distance using a D600 Nikon Camera with a 300mm Prime Lense, or by Digiscoping–attaching a digital camera to a spotting scope. These methods allow her to get good images of loons from over 100 feet away.

Loon Preservation Committee
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Photo Courtesy of Kittie Wilson