



# Chocorua Lake Conservancy

SPRING/SUMMER 2023 NEWSLETTER



In February a group of community members/artists gathered to paint *The Ossipee Aquifer: A Story of Water* crankie—thirty feet of beautiful paintings! The aim of this project—a collaboration with Cook Memorial Library, Green Mountain Conservation Group, and Yeoman’s Fund for the Arts—is to help us visualize the Ossipee Aquifer. We can’t see the aquifer with our eyes, but it’s there, in the ground below us, and our lives are interwoven in so many ways with the water the aquifer holds. Visit [bit.ly/aquifer-crankie](http://bit.ly/aquifer-crankie) to see a film and “graphic novel” version of the crankie. | *The Ossipee Aquifer: A Story of Water crankie painters*

## LETTER FROM THE BOARD PRESIDENT

# Dear CLC members and friends,

The term “community” has many meanings. It can refer to a family unit in all its various constellations; to a group in a neighborhood or town; or to people drawn together by a shared interest, goal, location, or purpose. In the ecological sense, a community is a group of organisms or species growing or living together in a shared habitat. Throughout my almost 55 years, I’ve been part of the Chocorua and CLC community in all these various ways. As I come to the end of my term as CLC President and service on the CLC board, the importance of community to the CLC and of the CLC to the community is more apparent to me than ever.

The CLC—and its predecessor organizations—were formed by members of the Chocorua area community to protect the natural beauty and ecological health of this special area. Over the years, the CLC has engaged in efforts to preserve and restore habitat for wildlife including loons, ducks, trout, and

others by protecting water quality through a historic period of monitoring and action and through a series of smaller but critical partnerships with local landowners. Through committed group action, the CLC and its partners continue to protect our natural and ecological community.

Often it is a special ecological community that brings together the human community. This is clearly the case with the CLC. Bound together with the common purpose of protecting and preserving this special natural community, the people who join together with the CLC to do this work, and to celebrate our ongoing success, have formed a very special community. Our amazing cadre of dedicated volunteers, the large number of attendees at CLC events, the hundreds of people who visit our properties, our extraordinary staff, and the hundreds of committed large and small donors: all are evidence of the human community centered around the Basin and the CLC.



Penny Wheeler on Chocorua Lake in 1973. | *Courtesy of Penny Wheeler-Abbott*

In February, I attended the CLC/Tamworth Outing Club Winter Fest at The Preserve at Chocorua. On what turned out to be the coldest day of the winter, the barn was filled with the warmth and laughter of a community enjoying being together for a shared purpose. While I was initially struck by the number of faces that were new to me, I quickly felt the comfort of knowing that CLC is really and truly a vibrant community of its own with extraordinary ties to the natural and human communities of the Basin.

As I prepare to step off the board

this summer, I will be forever grateful to be part of a family who has modeled care for the natural and human communities in which we live, and to have been, and continue to be, a member of the CLC community that has done, and continues to do, so much to preserve the natural (and human) beauty of this area.



**Penny Wheeler-Abbott**  
President, CLC Board of Directors

#### LETTER FROM THE EXECUTIVE DIRECTOR

## Thank you, Bob, Penny, & Steve

*Dear CLC members & friends,*

**T**he past decade has seen significant growth, lots of change, and important transitions for the Chocorua Lake Conservancy.

In 2016, we hired Lynne Flaccus as Stewardship Director, the first full-time employee in our 50-year history. In 2018, we completed a successful *Timeless Chocorua* campaign, which enabled us to protect the Basin View Lot and provided continued funding for a Stewardship Director. In 2018, Juno Lamb joined us as Director of Programming & Outreach and has impressively expanded our educational programming and transformed the quality and frequency of our communications with our members and the local community. Last year, Lynne Flaccus departed after six years of tremendous service, my role flipped from a board member to Executive Director, and Deb Marnich joined as our new Stewardship Director.

**2023 will also be a year of significant change and transitions.** In August, we are sadly losing three important, longtime board members due to term limits: Penny Wheeler-Abbott, Board President; Bob Seston, Treasurer; and Steve Lanou. Penny and Steve have lifetime connections with the Chocorua Lake Basin and are each concluding their 15th year on the board. Bob has lived in Chocorua since 2009

and will be completing his 12th year of board service.

Penny has been an invaluable partner to me in her role as Board President and has made my work much easier. She previously served as Board Secretary for many years and remains an important contributor on the Governance Committee. Penny was a key member of the *Timeless Chocorua* steering committee and an integral member of the task force that merged two predecessor organizations to create the Chocorua Lake Conservancy. I will miss Penny's positive spirit, unflappable demeanor, and willingness to take on important tasks.

Steve has been a steadying presence on the board and a key member of our Development & Outreach Committee. For over a decade, he has been organizing, hosting and grilling at our annual members' cookout in August, feeding 70 to 80 people in his family's field next to Chocorua Lake. I will miss Steve's wisdom, humor, and smile at board meetings.

Bob has been a dedicated steward of the CLC's financial affairs for a dozen years. There's not enough space here to describe Bob's many contributions because his work goes far beyond what a nonprofit Treasurer typically does. He serves as our bookkeeper, financial controller, investment manager,

### BOARD OF DIRECTORS

**Penny Wheeler-Abbott**  
President

**Melissa Baldwin**  
Vice President

**Robert Seston**  
Treasurer

**Ruth Weld**  
Secretary

**Steven Lanou**

**William Mayer**

**Jean McKinney**

**Sheldon Perry**

**Michael Rich**

**Geoff Gill**  
Chair, Audit Committee

**Kit Morgan**  
Chair, Land Conservation  
Committee

### STAFF

**Alex Moot**  
Executive Director

**Debra Marnich**  
Stewardship Director

**Juno Lamb**  
Programming  
& Outreach Director

**Troy Emerson**  
Lake Patrol (May to October)

and business manager. Bob is also a longtime, important member of our Lake & Property Management Committee. I will miss his selfless dedication to his job, attention to detail, and helpful reminders of our fiduciary duties.

I would like to offer many thanks to Bob, Penny, and Steve for their countless contributions to the CLC, immeasurable hours of time, and dedication to our mission over many years. I will miss working with each of them, and hope they will find other ways to remain involved with the CLC and our work.

Regards,



**Alex Moot**  
Executive Director



## SUMMER EVENTS

Please visit [chocorualake.org](http://chocorualake.org) for up-to-date program information, including additional programs or scheduling changes.

### MAY

**Thursday, May 18, 9–11AM**

*Stewardship Morning*, C.C. Browne Woods

**Saturday, May 20, 7:30-9:30AM**

*Bird Walk* with Debra Marnich, C.C. Browne Woods

### JUNE

**Wednesday, June 7, 9-11AM**

*Stewardship Morning*, Brown Lot

**Saturday, June 10, 10AM-12:30PM**

*Ecology Walk* with Debra Marnich, Scott & Bolles Reserves

**Thursday, June 22, 5:30-7:30PM**

*Volunteer Night*, location TBA

**Saturday, June 24, 9AM-12PM**

(rain date 6/25)

*Geology Walk* with Rick Allmendinger, Clark Reserve

**June TBA**

*Kestrel Banding Workshop* with Debra Marnich and Steve Wheeler, Conway

### JULY

**Saturday, July 1, 9AM-12PM**

*CLC at the Farmers' Market*

**Sunday, July 2, 8:45-10:30AM**

*Summer Adopt-a-Highway Trash Pickup* with Troy Emerson, the Grove, Chocorua Lake

**Thursday, July 6, 7:30-10AM**

*Little Lake Ecology Paddle* with Debra Marnich, the Grove, Chocorua Lake

**Tuesday, July 11, 8:30-10:30AM**

*Stewardship Morning*, Moose Meadows

**Saturday, July 15, 12PM (rain date 7/16)**

*Member Cookout*, Chocorua Park, Chocorua

**Tuesday, July 18, 7-8:30PM**

*Meet the Friendly Flies* with Linda Graetz, via Zoom, with Cook Library

**Wednesday, July 19, 8:30-10:30AM**

*Stewardship Morning*, Brown Lot

**Saturday, July 22, 10AM-12PM**

*Why Fly When You Can Walk with Flies?* with Linda Graetz, location TBA

**Saturday, July 29, 10AM-2PM**

CLC at Chocorua Day

### AUGUST

**Wednesday, August 2, 7PM**

*Responsible Forestry and Carbon Sequestration* with Wendy Scribner, UNHCE, via Zoom—a Climate & Community program with Cook Library

**Saturday, August 5, 9-11:30AM**

*Responsible Forestry and Carbon*

## Meet The Friendly Flies

Stay that hand before you swat one of these two-winged wonders!

We humans harbor too many fears and misconceptions about our friends the flies. Sure, some of them can cause trouble, but can you think of one creature on earth that can't? Like our fellow humans, there are thousands of flies out there ready to help us thrive on this beautiful planet. And, like our fellow humans, there are flies whose wild diversity of appearance and food preferences, fascinating lives, and sheer beauty will fill you with awe. Learn more this July, when Linda Graetz joins us again for a Zoom presentation on July 18 and a walk on July 22—because why fly when you can walk with flies!



**Hover Fly:** Pollinator jewels in your garden!



**Snipe Fly:** This long-legged beauty feeds on aphids!



**Feather-legged Fly:** While these adults feed on nectar, making them useful as pollinators, their babies eat meat, and they help control the stink bug population!



**Robber Fly:** Apex predators in the insect world, they are fascinating to watch!

*Text and photos by Linda Graetz*

*Sequestration Site Walk* with Wendy Scribner, UNHCE, location TBA—a Climate & Community program with Cook Library

**Saturday, August 5, 12PM (rain date 8/6)**

*Member Cookout*, Wheeler Field, Chocorua

**Saturday, August 12, 2PM & 3PM**

(two sessions)

*Build Bird Boxes for CLC conservation use and YOUR land* with Debra Marnich and Matt Griffin of Stoney Brooke Sawyers, Chocorua

**Wednesday, August 16, 7:30-10AM**

*Chocorua Lake Ecology Paddle* with Debra Marnich, the Island, Chocorua Lake

**Saturday, August 19, 9AM-12PM**

*CLC at the Farmers' Market*

**Saturday, August 19, 9AM-12PM**

(rain date 8/20)

*Geology Hike* with Rick Allmendinger, Clark Reserve

**Saturday, August 19, 4PM**

*Annual Meeting & Social Hour*, Runnells Hall, Chocorua

**Saturday, August 26, 9-11AM**

*Stewardship Morning*, Burt Lot

**Saturday, August 26, 10-11:15AM**

*All About Insects!* for kids 3-9 with naturalist Hillary Behr, C.C. Browne Woods

### SEPTEMBER

**Saturday, September 2, 5:30PM**

*Member & Volunteer Appreciation Party*, location TBA

**Sunday, September 3, 6PM**

*Annual Picnic & Parade of Lights*, the Grove, Chocorua Lake

**Saturday, September 16, 10AM-12PM**

(alt. Date 10/14)

*Mushroom Walk* with Eric Milligan of NH Mushroom Company, C.C. Browne Woods

# Stewarding the Grove as a Family

BY MELISSA POIRIER

We are the Poirier family. Together as a family, we—myself, Melissa, my husband, Jason, and our four children, JJ (12), Elzie (10), Jonah (4), and Raymond (2)—are property stewards at the Grove public access area on the shore of Chocorua Lake. We were recently asked why we wanted to become stewards and it got us thinking: it's been a long time—generations!—in the making.

I spent my childhood vacationing in New Hampshire, just as my mother had before me. She recalls, back in the 1940s, stopping at Chocorua Lake on every trip to swim and fill up their water jugs at the water trough across the road before continuing further north. I, too, recall stopping there each trip, taking the obligatory family photo on the bridge, and spending my remaining car ride drawing the lake and mountain in the back seat of the station wagon. Eventually, my parents bought a cottage in Tamworth, which allowed us to come more frequently, straight into adulthood.

Shortly after introducing my husband to the area, we both knew we wanted to relocate and make this place home—we just needed the right timing. That came in August of 2020. We packed up a U-Haul, with our four kids in tow, and arrived at our 1830s farmhouse, sitting, amazingly, on the edge of the Chocorua River as it exits the lake and heads for the dam.

We can now take part in all the joys that the lake has to offer throughout the year. As our daughter, Elzie, pointed out, her favorite thing about Chocorua Lake is that each season is special in its own way.

Summer is a time for us to picnic and swim and float in the shallow waters, watching clouds cast shadows on the treetops as they make their way over Mount Chocorua. You truly feel you are out in nature without houses lining the shores, without motor boats in the water, without even a visible telephone pole. Time seems to stop



Clockwise from top left: Jonah and Raymond at the lake; JJ's catch from the Narrows Bridge; Elzie and JJ swimming in October! | *Melissa Poirier*

while we are there.

In fall, while the leaves change color, our oldest two like braving the cool water for the last swim before winter. Our first winter, we went ice fishing for the first time and discovered that we love it. We even got to see people kite skating out on the ice.

The coming spring brings fishing, hiking, exploring, and identifying plants and bugs. JJ can't wait to get out there in his new kayak. The little boys are excited to play "I Spy" in the woods and search for litter to pick up. It always makes JoJo and Ray proud to find a wrapper or soda can and clean it up.

Though everyone has their favorite thing to do, we all agree that the best part about the lake is that, going back generations, it has remained seemingly unchanged. Not because it has been left untouched, but because it has been cared for, protected, and stewarded by dedicated people. We decided that, as a family, we wanted to become stewards and do our part to ensure that our children and theirs will enjoy the same simple pleasures that we have.

As parents, we hope to instill in our kids a love of nature and outdoor activities, to foster a



sense of responsibility to care for our surroundings and community, and to help them discover the importance of volunteering instead of hoping someone else will step up to the plate. We are glad to be able to pass this love of nature and the wild down to our children, giving them an appreciation for what the planet can be if we take care of it.

As a homeschooling family, we look forward to incorporating learning through our stewardship as well. You couldn't find a prettier classroom. The learning opportunities are endless, from studying the watershed and its ecology to the invasive plants we will be looking out for...and it's all in our own backyard.



# Soil—the Skin of the Earth



BY HELEN STEELE  
*Chemistry Teacher and Farmer*

It's not just dirt. Soil is indeed king. It is the most undervalued ecosystem on earth. We dig it up and throw it away or sell it. We poison it. We cultivate it and dry it out. We make deserts of it. Opinion: to take all the trees and then strip the soil from a plot of land is burglary of the worst sort.

Soil filters most of our water. Soil grows most of our food. Plants make most of our oxygen. Clean water, oxygen, food; what is more valuable? The roots that populate soil absorb water and may prevent flooding. Healthy developed soil allows the aquifers underneath to fill. It should be hard to ignore what soil does for all living things and our home, but we have.

It takes 500 years to make one inch of topsoil by nature. Soil is a complex system of minerals of various sizes, clay, silt, water, air, and organic

Arthur Walden deep tilling at Wonalancet Farm, Oct. 1914. | *Courtesy of Helen Steele*

materials. One cubic inch of soil contains more organisms than there are people on the earth.

I have had my soil at the former Steele Farm in Wonalancet tested and characterized by the Green Mountain USDA team that established a perpetual easement here. It's called Duane fine sandy loam, one of 70,000 types of soil in the U.S. The soil at the farm is the result of glaciation that rounded Mount Whiteface and headed for Tamworth. The flattened mountain valley then sported a lake which died, leaving many feet of topsoil. The header of this article is a photo of Arthur Walden with a one bottom plow pulled by an ox. This photo was taken in 1914 and the area beside the plow shows the impossibly deep soil turning.

These days we would not promote deep plowing. We know more and

we know better. This written offering does not implicate our ancestors in a nefarious plot. Time and shared knowledge allow us to do better. Eight billion is many people, and even a little greed is a strong assault on this precious habitat. Our better natures will prevail.

Soil requires nurturing. In a soil course in the fall of 2022, we looked at a number of soils under a simple microscope. So many roots, rootlets, air, tiny crystals, clay, silt, water, and much of it in motion. We are learning now about the role of fungi in the soil and how they can communicate conditions across many miles of forest and field. I have 600 words to offer here, a primer at best. But now that we know so much more about soils than we did in the 20th century, let's endeavor to learn as much as possible and make good soil decisions as a matter of course—for our survival and the survival of our shipmates.

# EXECUTIVE DIRECTOR'S REPORT

## » FINANCIAL RESULTS

CLC had total operating revenues of \$260,379 in 2022. This included \$80,015 drawn from our Stewardship Fund and Chocorua Lake & Land Access Fund, board-designated funds created in 2018 from contributions to the *Timeless Chocorua* campaign. CLC incurred total operating expenses of \$245,183, so we ended 2022 with a modest operating profit.

During 2022, CLC received donations from 667 households and businesses across 72 NH towns and 31 states. We received \$157,893 in annual fund donations from households and \$6,026 from 19 local business partners. Cash donations from visitors to our public access areas in the Grove and Island totaled \$831. In April, the CLC received a \$127,500 bequest from the estate of Silence "Encie" Triplett, which was transferred to CLC's long-term investment portfolio. We were delighted to receive financial support last year from 111 new donors. Eighty-seven percent of our repeat donors generously renewed their financial support for the CLC and our work.

## » VOLUNTEERS

The CLC board and staff depend upon many dedicated volunteers to fulfill our dual missions of protecting the Chocorua Lake Basin and providing convenient, attractive lake access to all visitors. Last year, 149 volunteers donated over 1,400 hours spreading wood chips, pulling invasive plants, mulching plants, cutting saplings, planting daylilies, monitoring CLC properties, maintaining trails, stuffing envelopes at mailing parties, planning and helping with CLC events, contributing articles and photos to CLC newsletters, helping manage our finances, attending board and committee meetings, and more. Thank you for your many contributions!

## » DAM REPAIRS

An engineering firm has completed its design for repairs to the dam at the outflow of the Little Lake. We appreciate the Tamworth Foundation's generous support of this work. We have engaged a wetlands scientist and will be filing the necessary DES permits necessary to begin work on the repairs. We plan to solicit construction bids in late 2023 and for the repairs to be made in 2024 or 2025.

## » LAND PROTECTION

We are working with a family to add additional protections on a 20+ acre parcel of land located in the Chocorua Lake Basin. We hope to have a Conservation Easement agreed upon, signed, and announced by the end of the year.

## » VISITOR PARKING

We are working on creating a dedicated parking area at our Charlotte C. Browne Woods on Washington Hill so that visitors will no longer have to park along the side of the road. This parking area will be wonderful in the winter when snow piles along the roadside make on-street parking difficult.

## » ROUTE 16 SAFETY & NOISE

The CLC has been communicating with the Lakes Region Planning Commission and NH Department of Transportation to identify ways to lower the risk of vehicles being rear-ended while waiting to take a left off Route 16 onto Chocorua Lake Road at the Grove or at one of our three other public access areas (the Island, the Tamworth Residents' Area, the Basin View Lot). We also hope to find ways to reduce the level of highway noise from Route 16 so that visitors can enjoy more peaceful experiences at CLC public access properties and while swimming and boating on Chocorua Lake.

## » EVENTS

2022 was a busy year! Last year, over 1,400 people attended over 50 CLC events: 207 people helped out at Stewardship Mornings; 307 people went on educational walks on our conservation lands; 456 people listened to talks and Zoom presentations; 331 people attended member events; and 90 people participated in outreach events. More recently, CLC partnered with the Tamworth Outing Club and held a wonderful Winter Fest at The Preserve at Chocorua in February 2023. Over 140 people braved sub-zero temperatures to attend our first-ever Winter Fest, making it the largest event in our 55-year history. Twenty dedicated volunteers helped organize Winter Fest, and another 20 volunteers helped out at the event.

## » OUR TEAM

Debra Marnich, who joined in September as our new Stewardship Director, has responsibility for our land stewardship program. Deb manages 800 acres of conservation land across 17 CLC properties and monitors the ongoing protection of 2,500 additional acres across 94 properties preserved by perpetual covenants, conservation easements, and deed restrictions. Juno Lamb, who joined five years ago as Director of Programming & Outreach, is in charge of communications and educational programs. Troy Emerson is back with us for his 10th year as our part-time Lake Patrol Officer. From late May through October, twice a day and seven days a week, Troy patrols the CLC's four public access areas, picking up trash and ensuring that visitors are aware of the rules for these sites. Our small team is supported by six board committees and many dedicated volunteers.



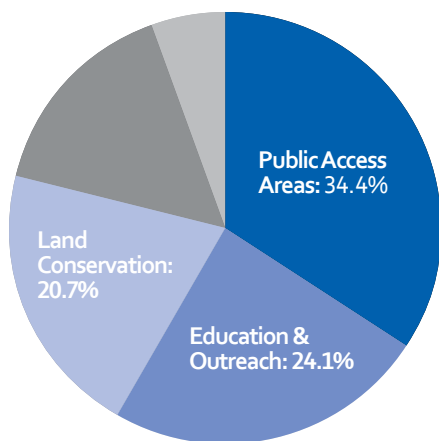
# Leave a Legacy for Future Generations

**Would you like to make a lasting impact on the conservation and stewardship of the natural beauty of the Chocorua Lake Basin?**

Including the Chocorua Lake Conservancy in your will or estate plans will have a sustained effect on the Chocorua Lake Basin—a legacy of conservation for your family, your community, and future generations.

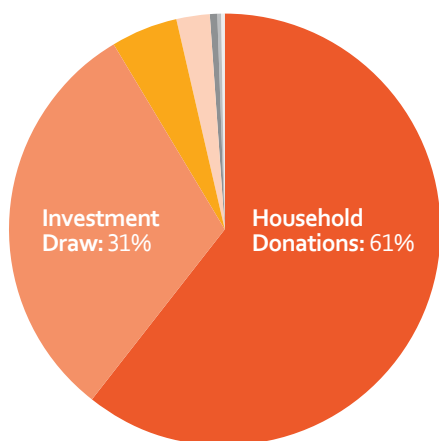
Through a planned gift to CLC, you are contributing to a pristine lake, welcoming public access areas, and a timeless vista for our children and grandchildren. Planned gifts come in all shapes and sizes, and each is an expression of a person’s desire to make a difference long into the future. Because land stewardship is forever, land trusts and legacy giving are a natural fit.

To include the CLC in your estate plans, talk to the attorney who drew up your will. If including a bequest is the only modification you are making, this can usually be accomplished by adding a codicil (amendment) to your will.



## EXPENSES: \$245,183

- Public Access Areas: 34.4%
- Education & Outreach: 24.1%
- Land Conservation: 20.7%
- Membership & Development: 15.5%
- Administration & Governance: 5.4%



## OPERATING INCOME: \$260,379

- Household Donations: 61%
- Investment Draw: 31%
- Grants: 5.1%
- Business Partner Donations: 2.3%
- Event Donations: 0.7%
- Lakeside Cash Donations: 0.3%
- Merchandise Sales: 0.1%

*Thank you so much to all of our 2023 Business Partners for your generous support of our mission!*

### Mount Chocorua Partners

Gordon Moore Electrical Contractor, Inc.  
The Preserve at Chocorua  
Stoney Brooke Sawyers, LLC  
White Mountain Endurance Races

### Chocorua Lake Partners

New Hampshire Mushroom Company  
Thirst Productions

### Heron Pond Partners

Ammonoosuc Survey Co., Inc.  
Gamwell, Caputo, Kelsch & Co., PLLC

### Narrows Bridge Partners

Conway Daily Sun  
Cooper Cargill Chant

Cormack Construction Management Inc.

Exit Realty Leaders  
Farm to Table Market  
The Farmstand  
Forest Land Improvement  
Mac Hill Electric

Minuteman Press  
Paul L. King Land Surveying  
Whippletree Winery  
White Mountain Oil & Propane

Winnepesaukee Chocolates  
Yankee Smokehouse

**If you would like to support our work through a donation via your business, please visit [chocorualake.org/partners](https://chocorualake.org/partners).**

# THANK YOU!

Enormous gratitude to the 149 people who generously volunteered their time last year to spread wood chips to protect the shoreline of Chocorua Lake, water new plantings, contain invasive plants, steward particular properties or trails, share their expertise, serve on our board and committees, help with mailings and events, offer educational programs, write articles, draw pictures, and take photographs—and more. Our work is not possible without you, dear volunteers. Thank you for your care of this place and your good company.

*We made every effort to ensure the accuracy of this list; please notify us of any errors or omissions.*

If you would like to volunteer for the CLC, please contact [info@chocorualake.org](mailto:info@chocorualake.org) or fill out the form on the Volunteer page at [chocorualake.org/volunteer](http://chocorualake.org/volunteer).

## 2022 Volunteer Hours By Activity

**459**  
Stewardship Events

**300**  
Admin & Finance

**299**  
Board Meetings

**160**  
Committee Meetings

**133**  
Outreach Events

**58**  
Fundraising Events

**28**  
Education Events

**TOTAL: 1,437 hours!**

## Volunteers

Lydia Abbott	Joe Fay	David Kunhardt	Michael Rich
Dylan Alden	Ian Ferguson	Greg Lanou	Sandra Ringelstein
Rick Allmendinger	Kat Ferguson	Kate Lanou	Todd Ringelstein
Debra Baker	Sandra Finn	Neely Lanou	Michael Robbins
Addie Baldwin	Andy Fisher	Sofie Lanou	Nancy Roosa
Arthur Baldwin	Lynne Flaccus	Steve Lanou	Sonia Schloemann
Barbara Baldwin	Kristina Folcik	Bruce Larson	Bob Seston
Dwight Baldwin	Anne Foley	Mary Lawless	Eileen Shelly
Melissa Baldwin	Bill Foley	Mike Lawless	Lydia Shrier
Alexis Ballo	Tia Gagnon	Pete Lewis	Norm Sizemore
Cyrus Ballo	Lucy Gatchell	Faye Lowrey	Jacob Skillin-Lanou
Charles Barth	Drew Gentile	Madison Martin	Tracey Skillin-Lanou
Bruce Berquist	Jennifer Gentile	George Mathews	Courtney Spalding-Mayer
Kathy Bird	Geoff Gill	Sheryl Mathews	Chris Spychalski
Barb Bloomberg	Peter Gill	Bill Mayer	Jack Starmer
Bruce Bowditch	Linda Graetz	Tisha McIlwraith	Rem Stone
Mark Bowditch	Sumac Grant-Johnson	Jean McKinney	Ruth Stuart
Mason Browne	Matt Griffin	Barry Memishian	Amanda Swinchoski
Fred Bruney	Miriam Habert	Betsy Memishian	Louisa Swinchoski
Kae Buchanan	Sarah Lloyd Hall	Eric Memishian	Katy Thompson
Geoff Burke	Rebecca Hanson	Amey Moot	Sally Tipton
Chris Canfield	Dexter Harding	Ellis Moot	Peaco Todd
Willa Canfield	Ken Hodges	Kaly Moot	Julie Twomey
Lee Cannon	Harriet Hofheinz	Kit Morgan	Mieke van der Wansem
Rich Collins	Jean Houghton	Sharon Morrison	Shawn Warren
Lora Colten	Peter Houghton	Larry Nickerson	Gabrielle Watson
Rich Comer	Dmytro Hryckowian	Sharon Nothnagle	Jack Waylett
Chris Costello	Jim Humphrey	Ryan O'Connor	Linda Weld
Geoffrey Cunningham	Brian Johnson	Tanner Pelletier	Ruth Weld
Becky Dean	Peggy Johnson	Nina Perry	Steve Weld
Robin DeJong	Sandy Johnson	Sheldon Perry	John Wheeler
Andrew DeVore	Susan Johnson	Andrea Pi-Sunyer	Peg Wheeler
Cameron DeVore	Bob Jolley	Joanna Pi-Sunyer	Penny Wheeler-Abbott
Owen DeVore	Cheryl Jolley	Olivia Pi-Sunyer	Dan Wierenga
Jim Diamond	Joanne Kelly	Penny Pi-Sunyer	Will Zehring
Maureen Diamond	Susan Kelley	Jason Poirier	
Melissa Emerson	Shann Kerner	Melissa Poirier	
Dave Evans	John Kumm	Annie Provenzano	

## Property Stewards & Monitors

Rick Allmendinger	Rich Comer	Lucy Gatchell	Bruce Larson
Kathy Bird	Jim Diamond	Sumac Grant-Johnson	Kit Morgan
Mark Bowditch	Maureen Diamond	Dexter Harding	Melissa Poirier
Kae Buchanan	Ian Ferguson	Rebecca Hanson	Shawn Warren
Rich Collins	Kat Ferguson	Brian Johnson	

## Trail Stewards

Tanner Pelletier  
Julie Twomey



SCANTO  
DONATE!





**Above:** This gorgeous collage full of winter fun was created by attendees at CLC and Tamworth Outing Club's first Winter Fest. Thank you to Lucy Gatchell and Dexter Harding for guiding the project. Save the date—February 10, 2024—for next year's Winter Fest!  
**Left:** Some of the AMAZING volunteers whose planning, preparation, and presence made Winter Fest fabulous. | Ruth Weld

## Chocorua Lake Public Access Areas & Rules

The CLC maintains three free public access areas on CLC conservation land on the shores of Chocorua Lake: the Grove, the Island, and the Tamworth Residents' Area. All are welcome to share the beauty and serenity of clean lake water and lakeside habitat with the trees, plants, animals, birds, insects, macroinvertebrates, and other aquatic species who live in and around the lake. Donations to support the care of these places are welcome!

### PLEASE BE AWARE:

- A Tamworth Facilities Permit is required to park at the Tamworth Residents' Area, and along the road—old Rt. 16—that runs from just beyond the Island parking area southward to Rt. 16. Everyone is welcome to park at the Island parking area and in the parking lot at the Grove. The Island also has a drop-off area near the kiosk for people or kayaks. Please park only in designated areas.
- Seasonal toilet facilities are available at all three public access areas.
- No trash receptacles are provided; please carry out whatever you bring in.
- These areas are dog-friendly, provided dogs are kept on leash. Please carry out dog waste; dog feces is a risk factor for toxic cyanobacteria blooms in lakes, dangerous for dogs as well as people.
- All types of outboard motor are prohibited by NH state law.
- All boats must be hand-carried to the water; boat trailers are not permitted because of the risk of milfoil transmission. Please be certain your boats are dry and free of any plant material.
- Grills of any kind, fires, and fireworks are prohibited. Fireworks especially create risk for forest fire, disturb wildlife, and contain chemicals that increase the risk of cyanobacteria blooms in the lake.
- No amplified music, please. It makes it hard to hear the loons calling across the lake.



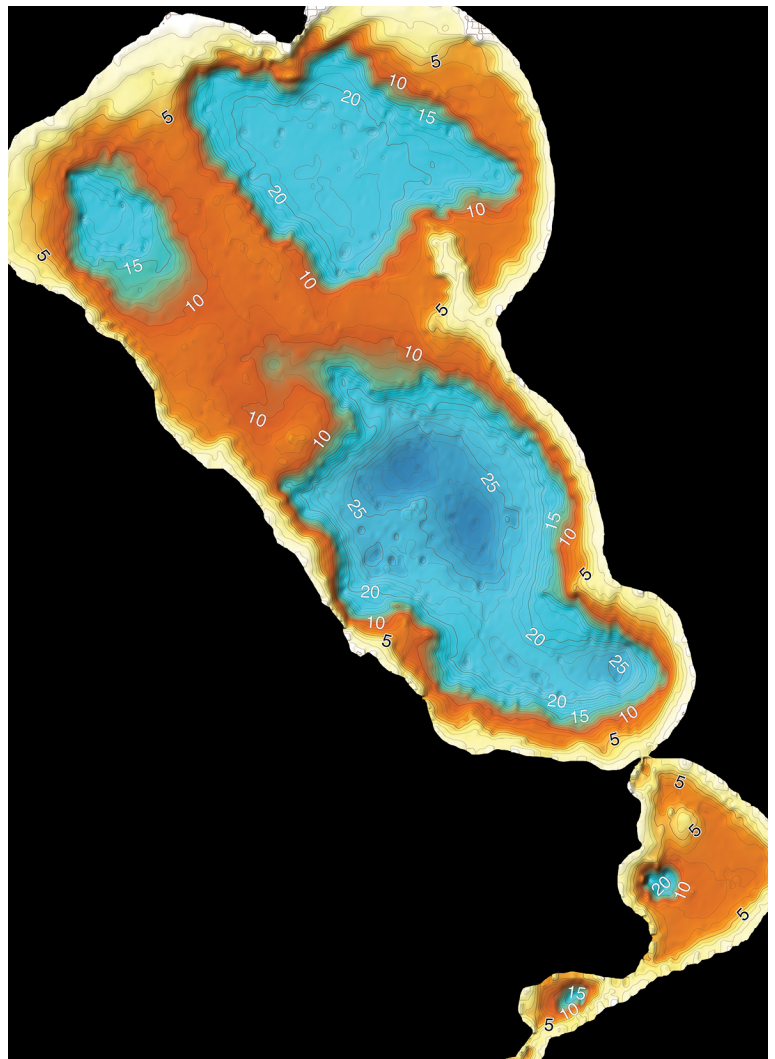
# Chocorua's Bottom

BY RICK ALLMENDINGER

**G**liding along the surface of Chocorua Lake in a kayak, our attention is drawn to the magnificent scenery, the breeze on our face, and the pristine shoreline with the occasional boathouse visible among the trees. Swimming is a more intimate experience: the silky feel of the water, our toes touching the stony, sandy, or mucky lake bottom, suddenly realizing that we share the water with an astonishing variety of living things. Though we admire the topography surrounding the lake, we seldom think about the fact that the lake bottom has its own topography, referred to as “bathymetry.” The shape of the land surface, above or below water, tells a story of the natural forces and processes that shaped the earth—how mountains and lakes came to be.

I've long been fascinated by the surface features that give the Chocorua basin its distinctive character: the eskers, kettle holes, kame terraces, and moraines that record the advance and retreat of the ice sheet over this region during the last few tens of thousands of years. But that picture was incomplete without knowing what went on beneath the water. In 2022, a sonar device no bigger than a billiard ball allowed me to explore the bottom of the lake with a level of detail no one has seen before. The device recorded the water depth beneath my kayak every second and sent it wirelessly to my phone, which used GPS to record the position on the lake to within 5-10 meters (~15 to 30 feet). All I needed to do was paddle... a lot!

Nearly 50 miles of paddling and 70,000 latitude, longitude, and depth points later, I had the data necessary. But that many numbers are hard to grasp, so the next step was to devise a way to visualize the results. Because kayak tracks are irregular, the data needs to be converted into a regular grid that can be imaged with color and shaded relief. That grid was constructed on a one meter spacing, which meant that the resulting 5.5 million points included a whole lot of interpolation. It is impossible to know the shape of the land perfectly, though LiDAR data provide a good approximation of the topography above water. Though the gridding procedure samples the lake at the same interval as LiDAR, the actual resolution is much worse. The sonar occasionally spits out artifacts related to incorrect depths; interpolation and smoothing is used to suppress those bad data points. Nonetheless, this new image of the lakes, from the dam to the north end of the



From top: Bathymetry of Chocorua Lake; Rick's kayak setup with sonar device affixed to the side; Rick's kayak routes. | Images courtesy of Rick Allmendinger.



Big Lake, is vastly better than anything we've had before. The deepest point is about 30 feet, located in the middle of the Big Lake about one third of the distance from the Narrows northward.

The resulting map provides some surprises: The Big Lake is composed of three sub-basins, each more than 20 feet deep separated by shallows less than 10 feet deep. The basins are remarkably flat-bottomed with steep sides. The southern and deepest sub-basin, whose outline reminds me of a bunch of grapes, has a curious, stem-like feature at its northern end. It appears to be a small, submarine paleo-channel oriented off to the northwest. Although the Little Lake is mostly less than 10 feet deep, there is a small "hole" on the western side that exceeds 20 feet. Finally, the central part of the Third Lake is also surprisingly deep at nearly 20 feet.

The map has practical value in that it shows us what the natural lake system might have looked like before the dam was constructed, raising the lake level by three to four feet. The pale yellow on the map would have been land. Water may have trickled through the Narrows, but no boat would be able to pass under the bridge. The shallows between the Little Lake and Third Lake would have been wading depth only—if that! Unsuspecting sailors have long caught their centerboards in the shallows just north of the Island; this would have been a peninsula before the damming of the lake. Drop the water level by just ten feet and you would have three separate lakes where the Big Lake now sits and two very small ponds



A swimmer in Chocorua Lake last September saw, to his amazement, that he was swimming among freshwater jellyfish. Scan the QR code or visit [bit.ly/CLC-jellyfish](http://bit.ly/CLC-jellyfish) to read more about this elusive aquatic species. | *Debra Marnich*



south of the Narrows.

We can only speculate about what the shape of Chocorua's bottom tells us geologically. My interpretation is that the steep-side and flat-bottomed nature of the three sub-basins in the Big Lake suggest three stagnant, remnant blocks of ice, with the area in between, perhaps originally formed by crevasses between the blocks, filled in with debris. The paleo-channel-like feature at the north end of the southern sub-basin remains enigmatic, but is generally aligned with paleo-drainages on the west and northwest side of the basin. The holes in the Little and Third Lakes may also have been formed by smaller stagnant ice blocks, or perhaps these holes and sub-basins were separate lakes prior to the arrival of the ice cap.

Take these interpretations with a grain of salt: a different geologist

looking at the same data might come to very different conclusions! The view of the bathymetry inspires one's imagination as the topography surrounding the lake does. To know more about our natural surroundings increases our perception of the wonder and beauty that we are privileged to enjoy, and also of the fragility of those surroundings. The lakes are not ordained to be unchanging. Indeed, the map emphasizes how profound small natural or human-made changes could be. Shallow lakes are vulnerable to changes in drainage patterns, sediment supply, and eutrophication (an excess of nutrients that can overstimulate plant growth and harm animal life from a lack of oxygen) as a result of climate change or well-intentioned but poorly planned engineering projects.

Just when you think that there is nothing left to discover, you're one of the first people to see the shape of Chocorua's bottom. To learn something new about a place for which we care so deeply is magical. All it took was a little bit of paddling!

Note: Visit [bit.ly/CLC-lake-geology](http://bit.ly/CLC-lake-geology) to see these images close up.

*New Hampshire native Rick Allmendinger has a lifelong relationship with the Chocorua Lake Basin. Professor Emeritus at Cornell University, where he taught structural geology, regional geology, and energy and climate change, Rick is the creator of the Chocorua Map app. Explore the geology of the Chocorua Lake Basin with him on June 24 and August 19.*

## Help us find great board and committee members!

The CLC Board of Directors and its committees are made up of people with diverse skills, viewpoints, and interests who share a love of this region and its human and other-than-human inhabitants. Some enjoy outdoor stewardship work, some

focus on land protection projects, some enjoy building relationships with donors and community members.

Do you know someone who would make a good Board or committee candidate? Think about your family members, friends, neighbors and colleagues in the community, and share your ideas by **July 20** with Melissa Baldwin, Chair of the Governance and Nominating Committee, [mbaldwin@chocorualake.org](mailto:mbaldwin@chocorualake.org).

The Nominating Committee will consider all suggestions and present a recommended slate to the Board, and the Board will present its recommended slate for action by the CLC membership at the **Annual Meeting & Social Hour on Saturday, August 19, from 4-6PM** at Runnells Hall, in Chocorua Village. We are excited to meet people who want to help guide the CLC through the next seasons!

—*Melissa Baldwin*



From left: Smooth-edged poison ivy leaves in midsummer; a hairy poison ivy vine scaling a tree; jewelweed, a natural antidote to PI. | Debra Marnich

NATURE NOTES

# The many identities of poison ivy, *Toxicodendron radicans*

BY DEBRA MARNICH  
Stewardship Director

Spring is the perfect time to talk about poison ivy, *Toxicodendron radicans*.

Poison ivy (PI) is a native plant of the United States and Canada found on the edges of roadsides, forests, and fields, in floodplains along rivers, and even in open fields. The plant is found throughout New Hampshire, and as mean temperatures rise in the region and land is increasingly disturbed, it moves northward and becomes more abundant.

At a closer glance—not too close!—the PI plant can be a master of disguise, appearing in different forms, shapes, and colors. Proper identification of the plant, in all stages, seasons, and on all sites, is necessary.

You may have heard the phrase, “Leaves of three, let it be.” The leaves of the PI plant are in clusters of three, arranged alternately on the stem; the stem of the center leaf is longest. In spring, leaves emerge red or light green in color. As the season progresses, the leaves can be shiny or dull, usually dark green in color. In fall, the leaves may turn red, orange, or yellow. Leaf edges may be lobed or smooth. The berries are green in spring, then turn a waxy tan in the fall.

PI can adopt multiple forms of growth depending on the site location. Three are typical: plant, shrub, and vine. The plant form of PI is usually found growing low to the ground—one to two feet high—often in the understory of a forest, whereas the shrub form can grow to five or six feet in a sunny

site in the mid-story. The vine of PI grows thick around the trunks of trees and is covered in tiny hairs, giving it an overall fuzzy or hairy appearance. These hairs are the plant’s aerial rootlets and they are also poisonous at all times of the year.

Many plants in New England are PI look-alikes, such as wild sarsaparilla, *Aralia nudicaulis* and poison sumac, *Toxicodendron vernix* (also very toxic—avoid!). Vines that grow in New England such as Virginia creeper, *Parthenocissus quinquefolia*; Asiatic bittersweet, *Celastrus orbiculatus*; and wild grape vines, *Vitis labrusca* or *Vitis riparia*, may sometimes be mistaken for PI.

The toxin urushiol is found in the roots, leaves, vines, and stems of PI plants. Urushiol is the same toxin found in poison oak and poison sumac. Humans and a few other primates are the only species that are affected by urushiol oil. In fact, PI is an important source of food for most wildlife. Many mammals, birds, amphibians, and insects eat the plant and use it as shelter. Pollinators visit PI flowers. Common wildlife species from black bears to cedar waxwings and squirrels feed on the white berries that emerge in the fall. Many resident birds rely on PI berries long into the cooler season when most other plants have lost their leaves and berries. Crows and wild turkeys are known to feed on PI berries in the winter. Deer, black bears, and raccoons all use the leaves as a food source. The vines create vertical diversity in the forest structure that mice and frogs

and toads can use for shelter and as a thruway to climb trees.

If you find you have an allergic reaction to urushiol (not all people do), there are safe, non-chemical ways to remove PI. Before experimenting with any of these methods, be sure to wear protective attire: a long shirt and pants, disposable gloves, and protective eye equipment. Urushiol will remain on clothing, boots, tools, and dogs until they are washed properly, and can be transferred to humans that way. You can dig the entire plant and roots up, pour boiling water over the plant with a tea kettle, smother it with a heavy piece of cardboard (weighted down), use a salt, soap, and water spray, spray white vinegar on the plant, cut it back and repeat, or let a goat or sheep do the work for you. Yes, goats and sheep will eat poison ivy.

Please note: burning PI in a fire is never a recommended form of removal, as the smoke from the fire contains urushiol and can affect your lungs. Composting PI is also not recommended: urushiol oil is very slow to degrade.

A natural remedy for PI is Spotted Touch-me-not—or jewelweed—*Impatiens capensis*, which often grows in the same areas as PI. The juice of the leaves and stems of jewelweed seems to nullify the effect of the oil and can prevent rash. Also, most pharmacies carry preventive over-the-counter blockers that create a barrier on your skin to protect from poison ivy, oak, and sumac. Those who are highly allergic can investigate lowering sensitivity with homeopathic treatment starting in the winter before the plants emerge.

Note: Visit [bit.ly/CLC-poison-ivy](https://bit.ly/CLC-poison-ivy) for photos of and links to images of plants not shown here.



Scan to learn more



The Chocorua Lake Conservancy publishes and distributes an educational newsletter twice a year, in the Spring/Summer and Fall/Winter. Current and past issues are posted online at [chocorualake.org](http://chocorualake.org).

**Have an idea for a newsletter article? Let us know!**

**Editor:** Juno Lamb

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*The Chocorua Lake Conservancy is a nonprofit land trust dedicated to protecting the natural beauty of the Chocorua Lake Basin and providing public access for present and future visitors.*



Summer is coming! | *The Ossipee Aquifer: A Story of Water* crankie painters (see p.1)



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Find us online and become a member at [chocorualake.org](http://chocorualake.org) or visit us on Facebook or Instagram.