

OSSIPEE LAKE REPORT

Key Dates:

- **Wednesday, July 6th:** Tales of Ossipee Lake presents “Mysterious Islands, Vanishing Peat Mats.” Calumet Conference Center, Freedom, 7:30 PM.
- **Saturday, July 23rd:** GMCG’s annual Watershed Weekend. Calumet Conference Center, Freedom. Info @ 603-539-1859.
- **Saturday, August 6th:** Tales of Ossipee Lake presents “Among the Bears” for Freedom Old Home Week. Calumet Conference Center, Freedom, 8 PM.
- **Wednesday, August 10th:** Tales of Ossipee Lake presents “Ancient Residents.” Calumet Conference Center, 7:30 PM.

Contact Us:

Ossipee Lake Alliance
P.O. Box 173
Freedom, NH 03836
E-mail:
info@ossipeelake.org
Phone: 914-588-3280
Fax: 509-271-3838

Ossipee Lake, Broad Bay, Leavitt Bay, Berry Bay, and Danforth Pond.

David Smith, Executive Director
Susan Marks, Development Director
June D’Andrea, Program Coordinator

ALLIANCE SCORES TWO STATE PILOT PROGRAMS FOR LAKE

Ossipee Lake Alliance is working with boat ramp owners and monitoring milfoil divers in two pilot programs that have important implications for how lake communities address invasive weed prevention and control.

The goal of the Exotic Species Prevention program (ESP for short) is to keep new milfoil out of the lake by increasing the number of boaters who voluntarily inspect their boat for weeds before launching.

This spring ESP program director Susan Marks enlisted volunteers to contact the owners of the lake’s 32 boat ramps and invite them to a workshop where they received help devising site-specific plans to increase milfoil awareness among the boaters using their ramps.

So far the Department of Environmental Ser-



Nancy and Wayne Killam of Lakefront Landing Marina and Campground, formerly Lord’s Landing, are among the boat ramp owners participating in the Alliance’s new milfoil prevention program. *Alliance Photo*

vices-funded program is off to a strong start with a majority of the ramp owners on board. From marinas to campgrounds to condominium developments, milfoil prevention plans are now being implemented around the lake.

(Continued on page 3)

LEGENDARY BARRY BARRACUDA STILL RIDING THE WAVES

“Are you Barry Barracuda?” It’s a question retired biologist and educator Barre (pronounced “Barry”) Hellquist has gotten used to hearing when the subject of boats comes up.

To set the record straight, the answer is yes, and the reason for his nickname is tied to his dock this summer after a long spell in storage. It’s a newly restored 1965 Correct Craft Barracuda, its powerful 210 HP Plymouth Fury en-

gine finely tuned and its deep burgundy color painstakingly buffed back to bright. It’s a boat that looks fast while standing still, seemingly eager for a run up the lake with three or four water-skiers in tow.

Forty years ago this summer Hellquist was working at Deer Cove Lodge resort as second cook and first Bingo-caller, commuting daily across the big

(Continued on page 2)



Correct Craft Barracudas in a 1965 catalogue, at top, and Barre Hellquist with the real thing.

RETURN OF VINTAGE BOAT SPARKS MEMORIES

(Continued from page 1)

lake from his High Banks cottage until the family's boat caught fire and was destroyed.

With the insurance money and a lot of help from his parents he set his sights on an unusual new boat that had just arrived at Bayview Marina on Broad Bay. A boat based on the popular Barracuda muscle cars of the time.

A less crowded era on the water, it was possible in the mid-

1960s to know almost all of the lake's boats and operators, making your boat your identity. After closing the deal for Ossipee Lake's first Barracuda, Barre Hellquist logically became Barry Barracuda.

Officially retired after a long career in academe, Hellquist still spends much of his time conducting research and teaching workshops. Just back from a winter studying rare plants in Australia, he and his wife, Marion, have prepped their cottage for some downtime on the lake. The Barracuda is part of those plans.

From the house it's 80 steps down a steep walkway to the boat, which sits gleaming in the water. The restoration process took nine months, Hellquist says.

"Mike Davis of Effingham did the body work," he explains. "and his handiwork speaks for itself."

In addition to adjusting the carburetion and prop pitch, the restoration work includes new seats, side walls and flooring. Now Hellquist is on the hunt for gauges to replace several that no longer work.

By most accounts, 1965 Barracudas are rare. In addition to being the first fiberglass inboard, at 16.5' it's almost two feet shorter



Forty Years Famous: Effingham boat restorer Mike Davis puts the finishing touches on Barre Hellquist's vintage 1965 Correct Craft Barracuda, the Ossipee Lake classic he helped bring back to life. Photo: Barre Hellquist

than Barracudas produced just one year later. Plus, it's Ossipee Lake's first such boat.

"Reg Clancy at Bayview took care of all our boats, and when this one came in he knew I'd be interested. It just happened to coincide with the fire that put us in the market."

For a time it was the only such boat on the lake, but by 1966 there were other Barracudas and Mustangs, also based on a popular performance car of the era. Over time, almost all of them have disappeared from the lake.

Hellquist is also associated with another legendary boat: Deer Cove Lodge's massive 21' wooden inboard Chris Craft. Piloting the resort's guests around the lake was another of his jobs in the summer of '65.

"The guests paid \$1.50 for the ride and my boss told me to just take them down to Broad Bay and back. Instead, I'd go all the way to Berry Bay. They got a better deal and I got to spend more time in the boat."

Memories of that long-ago summer still hanging in the air, Hellquist and his wife crank up the Barracuda, ease out into the lake, and are off in a burgundy blur.



TO OUR READERS

- **Ossipee Lake Report** is available in color on the web at: www.ossipeelake.org.
- **Ossipee Lake News** delivers free up to the minute information about the lake by e-mail, as events warrant. Contact: subscribe@ossipeelake.org.
- Report mail address changes to: mail@ossipeelake.org, or send to P.O. Box 173, Freedom, NH 03836.



The Alliance is a member of the New Hampshire Lakes Association.

MILFOIL PILOT PROGRAMS CHART NEW DIRECTIONS

(Continued from page 1)

For Wayne Killam, keeping milfoil in check is a matter of common sense. The Deer Cove resident and his wife Nancy are the new owners of Lakefront Landing Marina on the channel. They've posted signs at their ramp and are distributing the Alliance's milfoil prevention pamphlet to boaters who launch there as well as those who stop for gas and supplies.

"We're concerned about anything that can harm the lake," Killam says. "This business is our life now and we'll do whatever we can to help the program succeed."

Reaching All Boaters

Elsewhere on the lake many boat ramps are unattended, creating a different set of challenges. To reach boaters at the big lake's Totem Pole Park, which has a large unattended ramp for its residents, homeowner association president Paul Corbin made milfoil prevention part of his annual board of directors meeting. Signs have been posted and pamphlets are being distributed to lot owners and renters.

On the Ossipee River just off Berry Bay, Freedom Village Condominium Association boat ramp manager John Hancock implemented a similar strategy for the boaters who use his organization's private unattended ramp. Signs went up at that location in June.

How ambitious is the ESP effort? Marks says "As far as we know we're the first in the state to create a volunteer milfoil prevention program of this size. The cooperation we've received from ramp owners and local officials has been very encouraging."

Diving vs. Chemicals

In a parallel effort to control the lake's existing milfoil, professional divers have been working in several locations to demonstrate that hand-harvesting can be more effective than using chemicals.



Richard Griffin, a familiar presence on the lake, makes milfoil awareness part of his work as a Marine Patrol officer by keeping DES pictures of invasive weeds in his boat. *Alliance Photo*

In May, Danforth Bay Camping Resort hired divers to remove invasive weeds in a continuation of last year's clean-up of an adjacent area that was funded by the campground and the town of Freedom, Ossipee Lake Marina, Mountview Property Owners Association, Wabanaki Campground, and a number of private contributors.

Meanwhile, divers in Phillips Brook and Leavitt Bay removed more than six tons of milfoil in the first major State-sponsored test of diving's effectiveness. As Department of Environmental Services official Ken Warren looked on, divers marked the newly harvested area with PVC stakes so that it can be monitored to determine how much milfoil returns and when.

While hand-harvesting is not uncommon, it is usually only used for small patches, according to the Alliance's program coordinator June D'Andrea, who says similar efforts in Maine have been highly successful. The Phillips Brook-Leavitt Bay effort is being cofunded by the state and the town of Ossipee.

D'Andrea also notes that the Ossipee Lake Weed Watchers program has returned in full force for the summer, and volunteers are still needed for various parts of the lake to keep an eye open for new infestations. For information, contact her at 603-539-1643.

"This business is our life now. We'll do whatever we can to help with milfoil prevention."

*Wayne Killam,
Lakefront Landing
Marina & Campground*

MORE STUDIES NEEDED ON IMPACT OF WATER LEVELS

By Ned Hatfield

In a previous article in the "Ossipee Lake Report," Bob Smart explained how the water level of Ossipee Lake is lowered each fall to reduce overflow at winter's end due to ice melt and spring rains. Otherwise greater amounts of damage due to extreme high water would take place to shorelines and property.

These are practical reasons for managing the water level, but governing lake levels through dam control is unnatural and begs the question of what effects there might be on the lake's plants and animals? The purpose of this article is to consider the potential ecological effects and review available information.

Impact of Drawdowns

Limnological studies have shown that predictable associations of interacting plants and animals (ecosystems) develop in lakes under different physical and chemical conditions. With natural water levels, sediment types, temperatures and other properties, species adapted to these conditions survive.

When conditions are changed, such as by manual control of water levels, species more tolerant of this stress are favored with detrimental ecological effects to the natural communities. Species intolerant of desiccation, for example, are reduced or eliminated in those areas which are uncovered.

Aquatic ecosystems are disrupted and many of the lost natural species produce more food than the species which take over. Their absence thereby eliminates or reduces the number of dependent microorganisms, invertebrates, fishes and wildlife. Reduced interconnecting food webs can affect fisheries in open and deep water as well.

Drawdowns directly affect the littoral, or



Water empties from the lake this spring after the dam gates were opened to alleviate flooding. More studies are needed to help determine how best to manage the level of the lake. *Alliance Photo*

shallow water, plant communities in a lake. Freezing or drying out of roots and the resulting compaction of the sediment kill most aquatic plants. The reduced plant productivity and number of niches (fewer plant species means decreased cover and food supplies) results in a decrease in the number of microorganisms and invertebrates. Release of nutrients from sediments can reduce future shallow water plant (macrophyte) growth.

As phosphorus is a nutrient in limited supply in most freshwater lakes, when it is released into the water it could cause phytoplankton overgrowth (blooms). This would reduce water clarity and, although temporarily increase oxygen supply through photosynthesis, the death and accumulation of these organisms could reduce oxygen levels through their decay. Although Ossipee Lake has a "healthy" flushing rate, this could result in low oxygen levels at depth, and affect cold water fish populations (trout) and invertebrates.

An exception to most macrophytes dying as the result of lowering the water level below the littoral zone, is the situation where the exposed sediments remain wet due to

(Continued on page 5)

HIGH WATER LEVELS VS. LOWER LEVELS DESERVE STUDY

(Continued from page 4)

groundwater or other seepage, or excessive precipitation. In such a case, more plants might survive than expected and there would be less change to the littoral communities. It would seem that this would be an exception in a northern latitude like New Hampshire, where normal precipitation would not keep shallow soils wet and freezing temperatures last long enough to solidify sediments to a depth where roots would be damaged.

Mussels and insect larvae living in the littoral zone would be exposed to drying or freezing and to excessive wildlife predation. Decreased invertebrates means less fish food (small fish have been shown to feed on these and invertebrates on the microorganisms).

Larger fish feed on smaller fish and therefore the biological productivity of the lake as a whole is decreased. This in turn affects wildlife. Whether these effects would be long term or if productivity would return to levels prior to drawdown is not known. Other possible effects of winter drawdowns include reduction of brood-rearing cover for ducks or fishes, exposure of muskrat houses, or destruction of their food supply.

Amphibians and reptiles from these shallow areas could be preyed upon, freeze, or be killed on roads while leaving their habitat. Natural aquatic food supplies for birds and wildlife might also be reduced. On a positive note, these could also help reduce cattail communities which could increase the eutrophication of the lake.

Vermont Study

Over the winter of 1988-89, a drawdown was conducted in Lake Bomoseen, Vermont. The legislature required a study of effects on fish, wildlife and aquatic plants. The number of exposed watermilfoil plants was decreased by 88% but there was no effect in deeper waters where most watermilfoil plants grew. (It seems this would also be the case in Ossipee Lake.)

Five out of ten abundant native plant species decreased, but others remained stable or even increased. These resulting plant communities tend to become less productive monocultures and decrease cover for inverte-

brates and fish. Plant diversity decreased in the exposed areas by 44%, but lake-wide plant diversity did not change.

Frequent drawdowns result in a decrease in plant diversity, and species which tolerate the repeated drying out tend to become dominant. Therefore it is possible that ecosystems could change to less productive and structurally simple habitats for extended periods of time and cause a decrease in species diversity of ecological or recreational (economic) concern (1).

Timing of Drawdowns

One consideration is the early versus late fall timing of the drawdown. Although higher water for the summer and early fall means more boating, is this the best thing for the lake?

Persons around Ossipee Lake in the 1950s remember low lake levels, even during some summer periods. The channel near Spindle Point has been known to be wadable at times. These naturally lower levels resulted in less shoreline damage from wave action due to boats or wind and, in addition, protected shoreline plant communities along the big lake's southeastern shore peat layer, known to include unique plant species (2).

Unnaturally high water results in shoreline erosion above the normal water line (3). Keeping the level too high during the fall could increase this process, especially in the parts of the lake most exposed to strong autumn winds.

Another reason to initiate drawdown earlier is to prevent lake trout from spawning in shallow water which otherwise later would be exposed. These fish need stable water levels from the time of spawning (possibly late October in Ossipee Lake) through the winter so their eggs will remain covered (4). An even later drawdown, such as in late November, would expose already buried invertebrates and amphibians (5).

A contrasting view suggests that if a drawdown "is conducted late in the season, especially after initial ice and snow cover, that usually provides insulating qualities to protect the near-shore habitat" (6). It might be

(Continued on page 7)

"Persons around Ossipee Lake in the 1950s remember low lake levels...These naturally lower levels resulted in less shoreline damage from wave action due to boats or wind."

LAKE SNAPS



Alliance program coordinator June D'Andrea with Cliff Cabral and his divers.



DES official Ken Warren at the milfoil diving site on Phillips Brook-Leavitt Bay.



Broad Bay reflections in very high water during Memorial Day weekend.



Close-up of the interior of Barre Hellquist's restored 1965 Correct Craft Barracuda.



Stopping for a rest at a Long Sands Road cottage, on the big lake.



Divers, tenders, and volunteers harvesting milfoil at Portsmouth Cove.

MORE STUDIES NEEDED ON IMPACT OF WATER LEVELS

(Continued from page 5)

predicted, however, that dropping the water level after ice formation would cause shoreline damage with sediments and vegetation sticking to the ice as it tore away.

Slow drawdown seems favored by all the persons I spoke with in preparing this article. It provides plants with water for a longer period of time and a less sudden change with time do adjust physiologically to a state similar to dormancy. Mobile invertebrates would at least have the chance to “follow the water down,” but in at least one study mussels proved ineffective at doing this. “Most mussels moved in circles, with no specific orientation. Consequently they did not move with the receding water” (7).

What’s Needed

With all these considerations in mind, how should the annual drawdowns of Ossipee Lake be managed? This article is a preliminary collection of ideas and information. It would be additionally worthwhile to review the status of Ossipee Lake from recreational, economic and ecological points of view.

Studies could be carried out to document the make-up of the lake’s littoral zone and the condition of recreational fish populations. Among the questions that could be addressed are: How do the ecological aspects in the literature pertain to Ossipee Lake? How do the preferences of land or boat owners interact with the lake’s ecology? What is the best blend of management decisions to protect the majority of interests of all the stakeholders as well as the sustained health of the lake?

Freedom resident Ned Hatfield is a retired teacher.

Persons from NH Fish & Game, NHDES, US Fish & Wildlife, and USGS contributed suggestions and information for the preparation of this article.

Notes:

- (1) The Lake Bomoseen Drawdown, Vt. Agency of Nat. Res., Waterbury, Vt.
- (2) Hellquist, C.B. 1972. Vascular flora of Ossipee Lake, NH and its shoreline. *Rhodora* 74: 445-452.
- (3) DES Env. Fact Sheet DB-16.
- (4) Pers. com. Don Miller, NH Fish & Game.
- (5) Pers. com. Jody Connor, NHDES
- (6) Pers. com. Dave Courtemanch, MEDEP
- (7) Samad F. & Stanley J.. 1986. Loss of Freshwater Shellfish After Water Drawdown in Lake Sebasticook, Maine. *J. Freshwater Ecology*, v. 3, No. 4, p 519 – 523.

SUMMER NIGHTS, SUMMER TALES

Islands that move, rocks that float, and the year you could walk the channel to Broad Bay are among Ossipee Lake’s natural and unnatural phenomena that noted educator Barre Hellquist will discuss at Calumet Conference Center at 7:30 p.m. on **Wednesday, July 6th** to launch this year’s Tales of Ossipee Lake series.

The series, now in its third year, was created by Ossipee Lake Alliance to increase awareness of the lake’s unique human and natural history through entertaining free public events. Past presentations have ranged from lake ghosts to rare plants to vanished communities.

Hellquist’s presentation, “Mysterious Islands, Vanishing Peat Mats,” will feature some of the most unusual phenomena that the long-time lake resident has collected from the 1940s through the 1960s. “It’s an opportunity to learn more about what the lake was like in a time when it was quite different than it is today,” Hellquist says.

The Alliance is also bringing “Among the Bears” author Ben Kilham to the lake for Freedom Old Home Week on **Saturday, August 6th** at 8 p.m. Profiled in National Geographic and TV specials, Kilham will talk about his work rescuing and raising orphaned bear cubs.

Two other events round out the season. Exotic weed specialist Amy Smagula’s “Alien Invaders!” presentation on **Wednesday, July 13th** will highlight invasive plants that can destroy boating and recreation on the lake. Then on **Wednesday, August 10th** State Archeologist Dick Boisvert will discuss prehistoric times on the lake in his presentation entitled “Ancient Residents.” Both events are co-sponsored by the Calumet Nature Series and start at 7:30 p.m.

This year’s events will be outdoors under a tent at Calumet in Freedom. Directions are at www.calumet.org, and a list of events is at www.ossipeelake.org/tales.

“Islands that move, rocks that float, and the year you could walk the channel to Broad Bay...”

Tales of Ossipee Lake

Ossipee Lake Alliance
P.O. Box 173
Freedom, NH 03836

NONPROFIT ORG
U.S. POSTAGE PAID
WHITE PLAINS, NY
PERMIT NO. 346

OSSIPEE LAKE REPORT - SUMMER, 2005

INSIDE:

- Barry Barracuda Still Rides the Waves
- Pilot Programs Set New Directions on Lake
- Aliens, Floating Rocks, and Bears!
- Research On the Lake's Water Level

Preserve. Protect. Educate.

It's New Hampshire's best north country lake for fishing, boating, and swimming. Home of the state's finest remaining examples of unique habitats. The location of one of your most important real estate investments. It's Ossipee Lake, and there's only one organization dedicated to preserving and protecting it: Ossipee Lake Alliance. Please invest today in the future of your lake by joining us.

Donor Level

- | | | | |
|------------------------------------|-----------|--------------------------------------|------------|
| <input type="checkbox"/> \$10 - 19 | Friend | <input type="checkbox"/> \$100 - 249 | Patron |
| <input type="checkbox"/> \$20 - 49 | Supporter | <input type="checkbox"/> \$250 - 499 | Guardian |
| <input type="checkbox"/> \$50 - 99 | Sponsor | <input type="checkbox"/> \$500 - 999 | Benefactor |
| | | <input type="checkbox"/> \$1,000 + | Champion |

Name _____

Permanent Address _____

Lake Address (if any) _____

E-Mail: _____



www.ossipeelake.org
webmaster: host@taylorsmith.net

SEND TO OSSIPEE LAKE ALLIANCE; P.O. BOX 173; FREEDOM, NH 03836