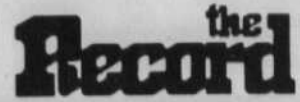


Environment



Beebe Sub: Nature club opts for hiking trail

By Scott Verity Stevenson

SHERBROOKE—The St. Francis Valley Naturalists Club is the latest group to declare itself in the bid to gain rights over the abandoned Canadian Pacific railway line between Lennoxville and Beebe.

In an October meeting the birdwatching group unanimously supported the idea of converting the rails to a recreational trail. Naturalist club members present at the meeting joined the *Sentier Massawippi* group, which is promoting the idea of a non-motorized recreational trail along the old rail bed.

The naturalists also gave *Sentier Massawippi* \$200 toward a proposed feasibility study of the trail plan.

"People don't know how far they

can bicycle when it's level and they're not being pushed into the ditch by cars," said Avery Booth, a St. Francis club director. "The trail would be good for anyone with a remote appreciation of nature."

The \$200 pledged by the naturalists comes from a fund which was originally intended for buying land to make a wildlife reserve, Booth said. But recently the club has stopped making enough money for that to be a realistic project of their own.

\$11 MILLION

A recent evaluation of the railway land between Lennoxville and Beebe owned by Canadian Pacific set the price tag at about \$11 million, making it difficult for any group to aspire to the property. But most of that price is for a strip of prime real estate along Lake Massawippi, which evaluators said is worth \$10.5 million. The other half million is divided up between the stretch from Lennoxville to North Hatley, and from Ayer's Cliff to Beebe.

The chances of a trail from Lennoxville to North Hatley are greater than for the whole length of the tracks because property owners along Lake Massawippi are also trying to purchase the land.

Many landowners don't want a recreational trail running along their property because they say it would be an invasion of their privacy, and increase vandalism.

Collections of residents along the lake have formed groups to represent themselves in the umbrella organization *Massawippi Group*. Each resident pays a \$25 membership fee and/or a \$75 deposit toward the purchase of a section of land adjacent to their own property.

DISPUTES?

The problem that has existed for property owners so far is who is to get what and what will be done with the land. Options range from opening a private pedestrian trail to keeping the land for themselves.

Other property owners are unsure of the umbrella *Massawippi Group*, which is asking them to sign away the final right of decision to the board of directors in the case of a dispute over who is to get

what property. Some residents say they haven't been told who is on the board of directors.

Policy at Canadian Pacific has traditionally been to offer abandoned railbeds to the various levels of government before selling it privately. In the case of the Beebe Subdivision, the federal government has said it's not interested.

No decision has been made at the provincial level, however. Officials from the Ministry of Transport and from the Recreation, Hunting and Fishing Parks and Reserves branch have been meeting to discuss the issue, according to Recreation official Guy Bussière.

GOVERNMENT UNSURE

Bussière said his department is interested in the linear park idea, but it remains to be seen whether the government will be willing to pay for the land. He said any decision would come from a higher government level.

But Bussière said he's not sure whether the land has actually been offered to the provincial government. Canadian Pacific officials have already said they are most interested in selling the land in one

piece rather than breaking it up to sell to various interests.

The Ministry of Transport has asked Canadian Pacific to pos-

tpone dismantling the tracks and bridges until next spring, however.



A foot and cycle trail 'would be good for anyone with a remote appreciation for nature,' says St. Francis Valley Naturalists Club director Avery Booth.



A winner: At last we have received a correct answer about the location of this photograph by Richard Label. Faithful reader Helen Taylor of Eaton Township recognized the spot as 'the railroad tracks near Capleton'.

Thanks for trying to the several readers who sent in wrong answers; congratulations to the winner, and if the RECORD hat fits, wear it in good health.

Join the club to see nature better

LENOXVILLE (SVS)—Swapping wildlife stories is all part of the fun at the St. Francis Valley Naturalists Club.

But birdwatching is just one of the benefits for Avery Booth, one of the club's directors, who simply enjoys the nature outings for what they are.

Booth said a recent hike along the railway tracks between Boynton and Tomifobia proved to be one of the most fruitful wildlife sight-seeing expeditions he's ever been on. He said club members saw a pheasant and a great blue heron among many other birds, two deer and the workings of a beaver.

"You wouldn't see that kind of wildlife walking through the woods," he said. "But going along the tracks it's kind of open."

Booth said they also found an old monument in remembrance of rail men killed in a train crash. An engraving tells of how the monument is the boulder that caused the crash.

Booth said birdwatching is the fastest growing activity in North America. He said he wasn't sure exactly how to define the activity, but that there are certainly a lot of people with birdfeeders nowadays. "All the birds are on welfare," he said, laughing.

WILDLIFE EXPERTS

The naturalists club was formed in 1955 by Doctor Tony Langford. Booth said the big activity of the club then was an annual wildlife night, when Centennial Theatre was filled by the presence of such wildlife experts as Roger Tory Pe-

erson. Today membership has dwindled, as with many other anglophone institutions in the Eastern Townships, Booth said. Membership is about 50, but Booth said only 15 or 20 enthusiasts show up for meetings.

Many of the members don't get out for intensive nature expeditions anymore either, Booth said. But those who do have stories to tell.

UNUSUAL BIRD

Booth said one of his most memorable sightings was a turkey vulture in Bolton Pass, south of Knowlton. He said as his group came to the end of the trail near a cliff he saw the vulture swoop off around a corner just before the others had a chance to see it.

As he was worrying that his fellow watchers wouldn't believe him, the vulture flew back just twenty feet over their heads. At that distance there's no mistaking a headless looking bird with a six-foot wingspan.

The main activity of the naturalists club now is the Audubon Annual Bird Count. The birdwatchers brave December weather to count as many birds in the area as possible, while similar groups all over North America do the same.

Booth complained that at least once in awhile the California-based Audubon group could let Canadians do the count in warmer weather. But as a cross-country skier, he wasn't about to refuse the chance to enjoy the outdoors on another nature expedition.

Lake look: Underwater waves like giant bathtub

By Frank Lowenstein

Lake Champlain Committee

When we think of water movement in Lake Champlain, we tend to think primarily of the lake's surface — of steep-sided chop in squalls and gentle winds rippling calm surfaces.

But it is well beneath the surface that most of the lake's water movement takes place. There, a giant wave that takes four days to roll back and forth through the lake and can reach heights of nearly 100 feet dominates throughout the summer and fall.

Despite its massive size, this wave tips no boats, smashes no lakeshore cottages.

The wave is called the internal seiche of the lake. And while it has few obvious effects on people using the lake, it is critical to aquatic life and water quality. For example, the seiche determines at what depth one should fish for salmon and where pollution from Burlington, Plattsburgh and other sources ends up.

The internal seiche owes its existence to calm, sunny spring and summer days. At such times, the sun warms the surface of the lake, but without wind to stir the waters, the heat can't reach the depths quickly. During just a few days of calm weather, the water near the surface may become a few degrees warmer than the deeper water, setting up a boundary that drives the internal seiche for the rest of the summer. Only now, with cooler fall weather, is the seiche fading, producing a subsurface calming that will mirror the ice-covered surface calming.

WARM WATER FLOATS

Because water's density decreases as it warms up above 39 degrees Fahrenheit (about 4 Celsius), warmer waters tend to float on top of denser, cold water. The effect is much like oil and vinegar in a jar of salad dressing; the lighter oil floats on the surfaces and vigorous shaking is required to

mix the two even temporarily.

Once a temperature and density barrier (called the thermocline) is established in Lake Champlain, wind will do the rest. A few days of Lake Champlain's prevailing south winds will pile surface waters up at the north end of the lake, gradually pushing the thermocline to greater and greater depths, and driving the cold waters below the thermocline south.

Conversely, as warm waters move out of the southern portion of the lake and colder water sneaks in below the thermocline, the position of the thermocline in the water rises. Once the wind stops, the lake is primed for action: the cold water that has piled up at the south end of the lake will rush north, while the warm water piled at the north end rushes south, gradually leveling the thermocline, and then overshooting to make it slant in the other direction.

BATHTUB WAVE

The process resembles the waves created by a child in a bathtub; water piled up at one end of the tub (or the lake) will run toward the other end, overshoot, pile up at the other end, and then slosh back toward the first end. Given an occasional push by a child's hand

or a south wind, the process can continue almost indefinitely.

One way that the internal seiche differs from a child's sloshing, however, is that its effect can hardly be perceived at the surface. On the surface, daily shifts in the wind dominate waves and currents, but beneath the surface the seiche prevails. "It's the dominant transport mechanism in the lake," notes Roger Binkerd, vice-president of the Environmental Division at Aquatec, Inc. and a long-time student of Lake Champlain's seiche. "It explains the chemistry and the biology."

FISHING

As an example, Binkerd notes that a fisherman may go out one day and find salmon, which prefer cold water, at a depth of only 25 feet. A few days later, temperatures at the same location and depth may be ten degrees warmer, and the salmon dozens of feet deeper.

The difference is that the seiche will have rolled through, driving the thermocline, and the cooler water below it, deeper into the lake.

Typically in Lake Champlain the seiche takes about four days to oscillate from one end of the Main Lake back down to the other, with smaller and independent seiche systems taking hold in Malletts Bay and the Inland Sea. Depending on its magnitude and variations in the depth of the lake, the vagaries of the seiche can produce situations where water temperatures at a depth of 100 feet are only a few degrees cooler than surface temperatures, or it can bring 50 degree

water to the surface in mid-summer.

SEPARATE POOLS

Essentially, the thermocline divides the lake biologically in two, with separate pools of nutrients and oxygen in the surface and deep waters. This puts nutrients in the deep waters out of reach, thus limiting the growth of algae.

The internal seiche counteracts this effect to some extent, as when it brings deep, nutrient rich waters to the surface. In part because of its large internal seiche, Lake Champlain's thermocline is a less effective barrier to transport than that of many lakes. For example, mixing between the deep and shallow waters of Lake Champlain takes place at a rate almost four times that of Lake George.

The oscillations of the seiche also move water rapidly around the lake. This means that even though the lake drains from its northern end, and the prevailing winds are from the south, pollutants can still move south from such urban centres as Plattsburgh and Burlington. "It's a huge mixer," notes Binkerd.

FADES IN FALL

Only in autumn, as the lake gradually cools, do the temperature differences that drove the establishment of the thermocline and give the seiche its power gradually fade. This year, by late October the surface waters had cooled to the point where the thermocline vanished, and the internal seiche went into hiding until next spring. Now

when the wind blows, the lake is no longer a giant's bathtub.

Lake Look is a monthly natural history column by the Lake Champlain Committee, 14 South Williams Street, Burlington, Vermont, 05401, (802) 658-1414.

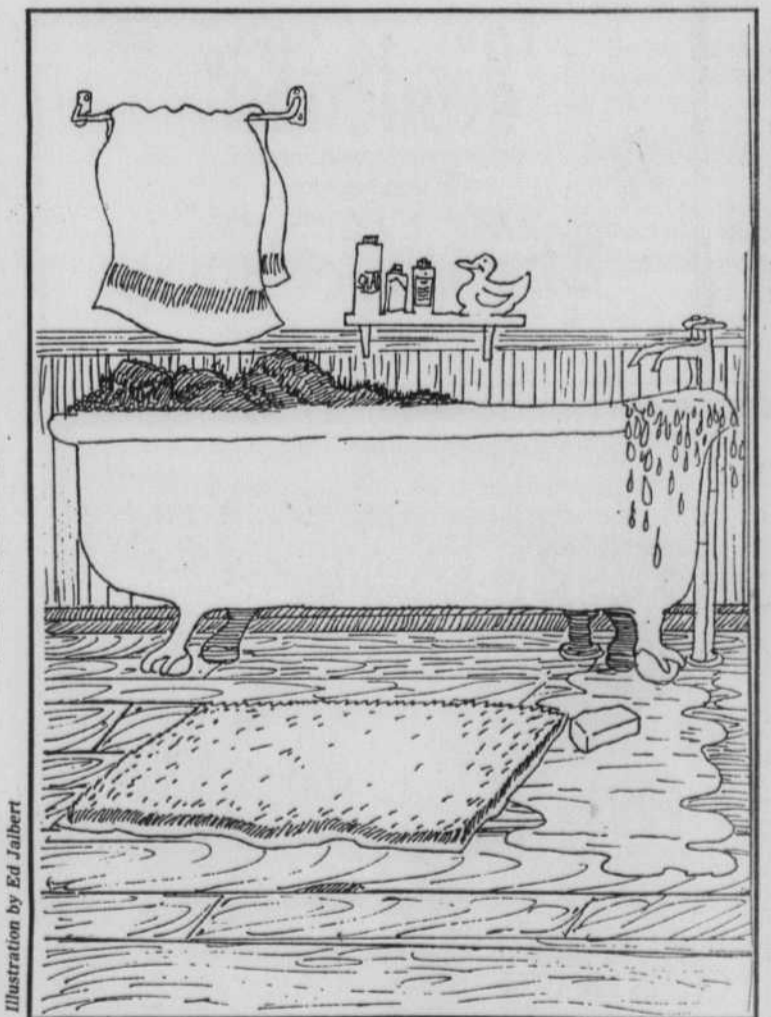


Illustration by Ed Joubert

Lyme: Tick-bite disease can stay hidden for years

BOSTON (AP)—Some victims of Lyme disease may suffer memory loss, mood changes, tingling sensations, shooting pains and other signs of nerve damage that strike years after the initial tick bite, scientists have found.

Antibiotic therapy can often relieve these lingering symptoms, although recovery is seldom complete.

"This is similar to syphilis," said Dr. Allen Steere. "Although the

neurological symptoms and consequences are different, in both diseases there are long periods of latent infection in the brain followed by a variety of neurological disorders."

The doctors cautioned that only a few Lyme patients suffer this lingering nerve disorder, and most can be cured with antibiotics given early in their infections.

Lyme disease is a bacterial infection transmitted by tiny ticks

that are usually carried by deer and mice. It is common throughout the northeastern and midwestern United States and California.

Usually the first sign of Lyme disease is a red circular rash around the tick bite. It is often accompanied by fever, fatigue, aches and other flu-like miseries. In more advanced stages, the disease can cause arthritis as well as the neurological problems.

SAVE OUR SOIL

