

Lunch and Learn talk reveals historic role of beavers in flood control

BY GUS STEEVES
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SOUTHBRIIDGE — Look through Southbridge history, and you'll see regular references to what our ancestors called "freshets" — the springtime floods of the Quinebaug River and its tributaries. During the 1800s, they routinely left Main Street and other downtown areas underwater until the river was dammed and the brooks canalized or put underground. Parts of today's downtown literally sit on top of Nuisance Brook, and that's a common feature of older New England mill towns.

According to ecologist and engineer Denise Burchsted, what we now try to control to reduce flooding were heavily influenced by beaver dams in the pre-Colonial era. The Native Americans were also often involved.

"As soon as the glaciers melted, people have been here ... and have been manipulating the landscape," she told statewide Conservation Commissioners at a recent online "Lunch and Learn" talk. But, she noted, there's been a lot of "intentional and unintentional erasure" of the

Native presence, so we don't know a lot about how they influenced the ecosystem in many places.

One potential difference, she thinks, is that the fact they "held the beavers as sacred" and had a "very deep and very complex" relationship with beavers (and many other species), even though they hunted them. That worldview very likely influenced how they dealt with beaver dams in ways that are significantly different from what we now do.

Ecologically, beavers are "the agents that make the valley wet from one end to the other ... and that's very incompatible with what we're doing today," Burchsted said. While modern civilization tries very hard to control river and stream flows in relatively narrow areas, beaver dams routinely spread them out into wide marshes. She noted it's common for people trying to follow streamflow to lose it in such areas, where many small dams abound.

Some of them are beavers' work, but others are logjams and other blockages caused by storms, previous floods and other aspects of natural process-

es. A major difference between them and modern dams, she noted, is this: they're leaky and relatively short-lived (a couple months). Fish can usually swim through them, and they create complex habitats within the resulting pond and downstream that provide refuges for various species, balance water temperatures across the year, and help control nutrient flow. But the streams themselves "do not stay in one channel; there's multiple threads," she said.

Modern dams, by contrast, are "walls that prevent organism passage," she said. "They're very, very destructive." Among other things, she noted, the ponds tend to be kept at a consistent depth and area and have very little biological material in them. Meanwhile, other parts of dammed rivers tend to erode more because they're forced into one channel, so the water level is far lower than in pre-Colonial times, she said.

As an example, she emphasized the Ashuelot River and Town Brook in her hometown of Keene, NH. In the 1750s, local documents show Main Street was a frequently-flooded causeway

"several feet below the present [road] surface." When it flooded, "it abounded in fish, especially hornpout," and required boats or swimming to cross. The brook was largely forced underground by 1899 and what remains on the surface is mostly in deep mini-canyons several feet below the land level.

She noted her town's DPW routinely destroys beaver dams using "an incredible amount of fossil fuels" and lots of labor, which she described as a "continuous process" that creates "an entirely artificial condition."

Despite that, she noted, there are many places beavers can be encouraged "and many places they cannot." The key to balancing them and setting river restoration or dam removal targets is "a value judgment" that demands paying "more attention to how we are ourselves dependent on the ecosystem." One thing that would help, she observed, is to manage infrastructure "to act more like natural dams."

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QCC student honored in 29 Who Shine ceremony



Fatima Mohammed

WORCESTER — On May 13 at the 10th Annual "29 Who Shine" Ceremony, Quinsigamond Community College Phi Theta Kappa (PTK) student Fatima Mohammed, of Worcester, joined 28 other public college and university graduates, to be honored virtually by Gov. Charlie Baker and higher education leaders in a Live YouTube ceremony at 2 p.m.

Each year, these awards are given to one student from each of the Commonwealth's 29 public campuses, including the 15 community colleges, nine state universities and five campuses of the University of Massachusetts. This year, the 29 graduates are being honored for their resilience in the face of pandemic-related challenges and their willingness to pitch in and support COVID-19 relief efforts, while working to earn their degrees.

Ms. Mohammed played an essential role with QCC's COVID-19 health team, assisting with student surveil-

lance testing during the Spring 2021 semester, working multiple volunteer shifts each week, and acting as a mentor and advisor to new volunteers.

"Fatima has been volunteering her time during the COVID-19 pandemic, helping to keep our college community safe. Her dedication to her fellow students, while maintaining the highest academic standards is inspiring. We are honored to have her as a member of our QCC community," said QCC President Luis G. Pedraja, Ph.D.

Currently majoring in Liberal Arts, Ms. Mohammed will be graduating from QCC later this month with an Associate Degree in Liberal Arts. She plans to continue her education at the Mass College of Pharmacy and Health Sciences (MCPHS) in fall 2021. She has received a \$10,000 merit scholarship from MCPHS, based on her academic qualifications, for the entire 16 consecutive months of the program. After earning her Bachelor of Science in Dental Hygiene, she plans

to continue her education to earn a Doctor of Medicine in Dentistry. Ms. Mohammed said she hopes to continue helping others in her future career in dentistry, caring for and educating low-income families about dental care.

"Ten years from now, the letter grades of the '29 Who Shine' won't matter. What we will remember is their commitment to their communities in a time of crisis," said Gov. Charlie Baker. "Our public colleges and universities educate homegrown Massachusetts natives — people who are here to learn, and here to stay. They have shown how much they care about where they come from, how much they care about us, and how much they will contribute to the civic and economic future of our Commonwealth."

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Nannette Gunderson unearths a corner of Omer Gallipeau's stone barehanded before

eral other Canadians from this village held places of honor." Gatineau lists them, including Gallipeau, but says nothing else about them.

When Gunderson first unearthed a corner of his stone, she said, "I feel like I'm treasure hunting. There are so many of them that are so buried. ... It's heartbreaking to know there's somebody under here somewhere."

Gallipeau's stone was the largest we unearthed at the time. Most of the other buried ones were about the size of this laptop when closed, but marked graves of adults — people like Pierre Dumas, who died in 1907 at age 30; Amede Cote, 1877-1934; and Exilda Gauthier, who passed in 1924. One that was only partly obscured was that of World War I veteran Arthur Lescarbeau (1897-1965), who is also commemorated on a family stone elsewhere in the cemetery.

Two messages left for Robert Ackerman, cemetery director for the Worcester Diocese, which has owned St. George's since about 2000, were not returned. But the woman who transferred me to his line noted the diocese does record who's buried in its 14 cemeteries by plot number, name and plot ownership. If people call with reports that stones need to be raised, they'll send a crew out to do so, but otherwise "perpetual care" is just mowing. I did not get her name.

Gunderson, however, said, "there's no map; I already asked." She doubts



A closeup of Omer Gallipeau's stone.

there's actually a clear record "of who's where," although details may be buried in old files somewhere.

To Veteran's Council President David Adams, the issue shows "It is important for communities to maintain their cemeteries and a list of those buried there, not only out of respect to them and their families, but to provide an historical source for future generations."

Gunderson's quest goes beyond the visible graveyard into the area beyond the mound of dirt, overgrown debris, tangled oriental bittersweet and other invasive plants. Barely visible amid the tangled vines in one area is what seems to be the crumbling crypt they would've stored children's coffins in until the soil became soft enough to bury them.

Neighbor Pat Sullivan said she has seen homeless people camping behind the cemetery, graves at its edges, and "three or four trucks come down here to dump their crap." Over the course of many years, such dumping has turned the cemetery's far side into a treacherous slope of chunks of concrete, TVs, a gazebo frame, pipes, toilet parts, plastic pails and various other junk.

A brief reconnaissance beyond it didn't find many obvious gravesites, but Gunderson believes "the stones back there go into the 1800s." A few exist near the south wall, but there are many semi-flat areas that might hold graves, particularly near some of the trees. There's also a part of that wall that seems to be an entryway, now



The grass has been slowly claiming Arthur Lescarbeau's gravestone.



Amede Cote's very small stone sees the light of day for the first time in who knows how long.

thoroughly overgrown.

Gunderson noted that when her relatives were buried, most of those trees didn't exist. The land had been donated to the church by a neighbor, who had previously farmed it and kept the surrounding land, which is still in his family.

She said she has been working with Ackerman, who hauls away the junk she pulls up, and plans to visit when

she can to keep unearthing graves.

"I didn't know about [these other stones], but it feels like it's mine still, digging up all these people we should know about," she said.

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