

The Dam News by Michael J. Wickenden

Mud Pond – an Intermediate Fen

BY RON KELLEY

he Zack Woods section of Green River Reservoir State Park is best known for Zack Woods Pond and its very successful loon pair that has been nesting on its natural island since 1996. On the opposite side of the access road from it, lies Mud Pond- a very different aquatic environment classified as an intermediate fen. Fens are similar to bogs in that they are peatlands where slow decomposition of dead material allows thick floating mats to develop. Unlike bogs, which receive almost all their water from precipitation, fens receive mineral inputs from groundwater runoff as well as precipitation. Fens are more alkaline than bogs and have a greater diversity of vegetation. Fens are further classified as poor, intermediate or rich depending on their levels of enrichment. Poor fens are most similar to bogs and have thick mats of sphagnum moss while rich fens receive input from calcium-rich bedrock and have the greatest diversity of non-sphagnum mosses and other vegetation. They are quite rare in Vermont. As the name implies, intermediate fens are more enriched than poor fens but less so than rich fens.

Mud Pond is an example of a fen that formed in a pond basin and still contains a

central pond. It's shoreline is relatively flat and is primarily vegetated with tall grasses, sedges and an abundance of small shrubs, primarily sweet gale as well as some small cranberry. Rose pogonia and musk flower are two rare, threatened plants that occur here. Blue and green herons can sometimes be found here as well as American bittern. Canada geese and ducks are commonly seen, especially the common merganser. Loons frequently visit but do not nest here. On a sunny day, painted turtles can often be spotted on floating logs that are abundant in the outlet area. Bald eagles occasionally visit the area, where they are likely to be seen perched on top of one of the many snags.

Mud Pond contains some plants common to bogs such as the carnivorous pitcher plants and sundews. The flared opening of the pitcher plant is bright red in color, with showy veins and sweet nectar glands that beckon hungry insects in. Downward-facing hairs line the interior, making it very hard for the unsuspecting prey to go any direction but further into the water at the base of the pitcher. Trapped insects soon drown and are then dismembered by a resident community of microorganisms. Larvae of the pitcher

Continued next page





plant midge and the pitcher plant flesh fly, insects found only in pitchers, use powerful jaws to break down insects into food for protozoans and tiny animals called rotifers. Bacteria complete the job, decomposing bits of bugs into minerals and nutrients, some of which are taken up by the plant itself.

The beautiful sundew uses its leaves, which have evolved into red, glistening paddles to nab passing insects. Sundews are named for their "sparkle," really tiny red droplets of moisture exuded by this small plant's leaves. This moisture is not benign dew, as the name suggests, but sticky mucus that attracts the attention of passing insects who then approach, usually too close, to investigate. Once the insect makes contact with the mucus, it is trapped,

and the sundew adds cells to the far side of the tentacle-like, modified leaf, causing it to curl inward and smother its prey. It takes roughly 20 minutes for the leaf to enclose live prey but it may take as long as a few weeks for the plant to digest it. Early settlers are said to have extracted the red fluid from sundews to use as ink.





Friends of Green River Reservoir, Inc.

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тор Row: pitcher plant, rose pagonia; MIDDLE ROW: sundew, sweet gale leaves and fruit; воттом: common merganser pair in Mud Pond.

OTOS: RON KELLE



VERMONT FORESTS, PARKS, AND RECREATION

Update on GRRSP

Regional Manager for Vermont State Parks, and Chad Ummel, NE Parks Regional Operations Manager joined our February FGRR Board Meeting, as has been customary, and updated us on the past season.

Visitor and camping use is moving back towards pre-pandemic numbers, with attendance at 11,507 campers (9995 in state and 1512 out of state) plus 6733 day users. Campsites are being booked mostly through website (followed by park phone, walk ins, then call center.)

GRR had a great staff and the best retention of all the state parks; all staff will be returning this next season except for one who is being promoted to Assistant Manager at Elmore State Park. Maps are being updated for both Green River and Zack Woods. ZackWoods sites now all have a compostable toilet. Campsites there will remain first come/first served this season, with park staff registering campers after they arrive. In coming seasons, the sites at Zack Woods will be available for advanced reservation. There are no new Covid restrictions, and it is anticipated that the park will be operating as it was pre-pandemic.

Nick acknowledged the tragic drowning at the Park last season. Law enforcement is still investigating with no resolution as yet. The boulder at the boat launch was removed (that was part of the plan eventually – but it happened a lot quicker so emergency boats could be launched).

Racoons were a nuisance this past year, and USDA will come out to address the issue. Anti critter food lockers are in the works: FPR has a prototype from a local manufacturer and will test the design before putting the design out for an RFP. FGRR will help fund the food lockers.

Parking: signs will go up before the season begins indicating where parking is permitted and not permitted. Parking along the access road is not allowed by the Town of Hyde Park. Staff will continue to tweet when the park is full. The idea of an electronic messaging board is still in the pipeline.



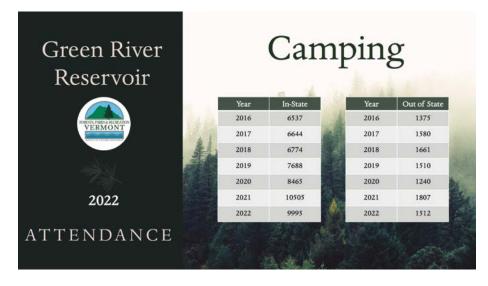
Park Staff Summer 2022





Emergency Rescue Crew





JAPANESE KNOTWEED ALONG DAM ROAD

by Mary Walz

This summer will be the third working season for Knot in Hyde Park, a volunteer-based group in Hyde Park aimed at stopping the spread of Japanese Knotweed in our beautiful town. If you aren't familiar with the plant or how pernicious it can be, please visit our page on the Town's website: https://hydeparkvt.com/knot-in-hyde-park/. We now have about 50 sites under management and hope to expand that this summer.

As a long-time supporter/ member-at-large of the Friends of Green River Reservoir, I am keen to see if we can help do something to contain the few patches of knotweed that exist along the access road. Terri Gregory, FGRR board member, has put her hand up to lead this effort. There is still time before the site is irreparably overcome. What we can achieve will depend on getting enough volunteers to 'adopt the knot' here. It really doesn't take that much time; it just takes persistence, a willingness to keep showing up throughout the growing season. If you have an interest in helping or learning more, please get in touch with Terri.

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A New Project to Protect our Loons and Wildlife

BY SHEILA GOSS

hen folks speak about paddling at the Green River Reservoir, they often mention our iconic loons, birds which enthrall our visitors with their unique calls, nesting habits, and cute little chicks. As board members, we work closely with Eric Hanson of the Vermont Center for Ecostudies to monitor the loons on the reservoir; the annual Loon Watch Day in July involves 6 board members who count and report on the activity of the loons. We are also fortunate to have eagles, hawks, osprey, heron and other wildlife that frequent the reservoir.

One of the risks that can endanger these animals is improperly discarded monofilament fishing line and lead tackle. Eric Hanson's VCE blog often presents stories of loons in Vermont that have been injured by entanglement in, or ingestion of, fishing tackle. Recently Waterbury Reservoir has had instances of bird entanglement, and in 2022 one of Waterbury's resident immature eagles succumbed to lead poisoning. In an effort to protect our loons and other wildlife, and prevent such tragedies from happening here at Green River Reservoir, we are engaging in a monofilament fishing line recycling bin project in 2023.

Thanks to a generous donation from the Friends of Waterbury Reservoir and the cooperation of Vermont State Parks, we will have a new monofilament fishing line and tackle recycling bin installed near the access area. The Friends of Waterbury Reservoir designed these bins to blend in with the environment, provide helpful information, and give anglers an easy access to safe and responsible disposal of fishing tackle. When anglers dispose of discarded line or tackle in such bins, it reduces the likelihood of the dangerous material being left on shorelines or hanging in trees or snags.

In the two years that the program has been in existence at Waterbury Reservoir, a large amount of fishing line and tackle has been recovered and was recycled appropriately. Recycling is important, as fishing tackle that ends up in landfills continues to provide risks to the birds that forage in landfill material. Though the bins were originally designed to collect only monofilament line, folks disposed of various items of fishing tackle in them, which was a plus...Better in the bins than in the birds! People also quickly learned that these are not trash disposal bins, and there was rarely a problem with non-fishing items being placed in them.

Here is a link to a report on the first year of the Water-bury project which provides a bit more background and information. https://www.friendsofwaterburyres.org/single-post/2021-monofilament-fishing-line-recycling-project

So, when you are paddling this year, check out the bin, and place any fishing line or tackle that you may find into the bin. We will be checking and emptying the bin frequently. Thank you for your cooperation in our efforts to protect the loons of the reservoir!





The Dam News – April 2023

BY MICHAEL J. WICKENDEN

he short story is all good news in that there is nothing on the immediate horizon that will negatively affect our 2023 Green River State Park summer paddling or camping. In addition, Morrisville Water and Light (MWL) continues the hard work to preserve this unique and special place for people to enjoy for generations to come.

The decade long legal issues associated with MWL 's re-licensing of the Green River Hydroelectricity facility by the Federal Energy Regulatory Commission (FERC) continues to be a complex spider web yet to be unraveled. There are currently two main issues:

- (1) a dam safety study required of MWL by the Federal Energy Regulatory Commission (FERC)
- (2) a February 2022 MWL application to FERC requesting amendments to MWL's original application for re-licensing. (You can read MWL's request here.)

The FGRR Fall 2022 Newsletter described the State of Vermont's allocation of \$350,000 for a study of the Green River Reservoir Dam to more fully understand the short and longterm benefits and costs of state ownership of the Green River Reservoir dam and dike. That study has been delayed due to the State's difficulty in selecting contractors. MWL plans to work closely with the selected contractor(s) and provide additional study elements to meet the more specific MWL FERC dam safety study requirements. Unfortunately, the timeline for the conclusion of that project now looks to be extended due to the state's difficulty in securing contractor(s). That delay may likely push out the FERC's ability



to review and approve MWL's new 30-year operating condition until 2025.

This projected lengthy delay in the implementation of new water quality standards, due to concerns raised by MWL of the dam's long-term ability to operate safely under those standards, has raised questions for American Whitewater, VT Natural Resource Council, and VT Council of Trout Unlimited – organizations that participated in the legal process that resulted in the newly proposed and approved operating conditions. In a March 7, 2023 joint letter to FERC, they requested a technical conference to discuss altering the interim license conditions to match the 2016 Agency of Natural Resource (ANRC) proposal that was upheld by the State's Environmental Court and the State's Supreme Court. Their letter questions the basis for the implementation delay, citing that MWL management reported that this winter's reservoir limits were kept at full capacity. I am unaware if FERC has responded and scheduled that technical conference. (You can read the letter requesting a technical conference here.)

Lastly, FERC has formally notified MWL that their February 15, 2022 application to amend MWL's original

Hydroelectric Project remains incomplete. (FERC's letter is available here) FERC set a 90-day deadline (May 1, 2023) for supplemental information. The Friends note that MWL's application was filed prior to the hiring of MWL's new General Manager, Scott Johnstone. Thus, it appears likely that MWL's more than year long delay in filing amendment details reflects a change in their strategic planning away from a model that results in decommissioning of the dam to a model that seeks economic partners to accomplish the long-term goals of reservoir preservation and continued clean and renewable hydroelectric energy production.

FGRR Annual Membership Meeting by Zoom

Thursday, July 20, 2023 7:00 PM by Zoom

Annual Meeting by Zoom to elect Board Members, review the accomplishments of the past year, and conduct any necessary business. Please email FGRR at webmaster@fgrrvt.org with subject Join the Annual Meeting for the Zoom link to join the meeting.