



Friends of Green River Reservoir

Spring 2021
Newsletter

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The Near-shore Habitat of the Green River Reservoir

PETER EMERSON, FISHERIES BIOLOGIST,
VT Fish and Wildlife Department, St. Johnsbury Office

Fish habitat in the littoral zone is where aquatic life is at. Spawning, juvenile rearing and nocturnal feeding occurs in this shallow area that supports the richest diversity and biomass of vegetation. Which makes sense ... the *littoral zone* is defined as the shoreline of a flatwater body such as Green River Reservoir (not to be confused with the *riparian zone*, or streambank of a flowing brook or river), and is the portion of a deep lake that is shallow enough for light to penetrate the water column and support vegetation.

Vegetation ... as with terrestrial inhabitants, the food web for aquatic organisms begins with the greens. There is a host of species that make up the vegetation in the littoral zone, and each has its favored place among the fishes, the amphibians, and the macroinvertebrates. But importantly, it is the heterogeneity of the substrate that draws the aquatic organisms to the shoreline. Rocks, dead wood, live trunks and roots, native aquatic plants and the gravel and sands that they are rooted in all have value individu-

ally, but collectively they create a mosaic of hiding places, a plethora of dietary options, and a whole lot of whatever it is that makes it worth the risk to travel into those shallow waters.

For yellow perch (*Perca flavescens*) and sunfish like the pumpkinseed (*Lepomis gibbosus*) the shallow water has the food that their youth require to survive. Small members of the animal kingdom called zooplankton are the primary feed for juvenile fish born in the shallows. The zooplankton, of course, are feeding on tiny plant particles. Thus, the food web draws the adult fish to the shallows where they lay their eggs. For the perch, this means that the eggs are laid in long white strands that are draped over the substrate shortly after the ice is out. For the pumpkinseed, this means making a nest in early June by clearing away a circular patch of gravel and sand that is meticulously cleared of any wood, stone or vegetation which might allow a predator the cover it needs to sneak in and steal eggs. By guarding this "clearing" the sunfish will increase the number of juvenile

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Friends of Green River Reservoir, Inc.

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PO Box 359, Hyde Park, VT 05655

FGRRVT.org

Email: webmaster@fgrrvt.org

Editor: Sally Laughlin

Design: Brian P. Graphic Arts

BOARD OF DIRECTORS:

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MEMBERSHIP RENEWALS

Memberships run for one year from the month that you join.

Volunteers (Board member Sheila Goss) send electronic reminders followed by a snail mail letter a few months before your renewal is due (and again and again, if members don't respond to the first notice). Renewing immediately saves time, energy, and stamps – we thank those that renew on the first notice!

**Please renew as soon as you can!
Thank you for your support!**

Near-shore Habitat

Continued from page 1

fish that hatch from the eggs. Once the perch and sunfish eggs hatch, they are welcomed into an environment rich with food, and rich with shelter from the predators that fatten themselves on the recently hatched fish.

Those perch and sunfish are the base of the forage for larger fish that reside in the Reservoir (yes, there are minnow species too, and those also regular the shallows to spawn, feed, and seek shelter from predation). But they are not the only fish that make the littoral zone their home. Those 20-inch small-mouth bass (*Micropterus dolomieu*) also spawn and feed in the shallows. Ask any angler where the “big ones” are and they will point to a fallen tree lying submerged along the shoreline, or to a steep drop off that is strewn with boulders and broken branches. While a miserable place to try and cast a lure, it is also the place most likely to entice a fish to venture out and bend the rod. The robust population of small-mouth bass at GRR are also shoreline spawners. Like the sunfish, they find a suitable spot in water only a few feet deep or less and clear a (larger) circular clearing which the male fish will guard once the female deposits her eggs. This

territory is jealously guarded and is the main reason why the Fish and Wildlife Department does not encourage or allow fishing for bass during the late spring and early summer (this year bass season opens on June 12). When bass (and their centrarchid cousins, the sunfish) guard a nest they will attack anything that enters the space that they have cleared. That includes any lure you might cast ... while exciting to watch the fish bite it is exactly the distraction an egg predator is waiting for, and a whole ensemble cast of predators is nearby watching for the fish to move out of its defensive position.

So, what makes the littoral zone experience on GRR different from other lakes? For one, it is that continuous, uninterrupted shoreline rich with mature trees and riddled with boulders. That is the template that the larger fish desire. Add to that the vegetation that is allowed to grow without being uprooted by lake shore owners, or daylighted by large drops in water level and you have a magical combination of structural habitat and water conditions that promote a diversity of aquatic organisms that include a bevy of species and age classes. Something that was once common in the Northern Forest, and well worth conserving!



ERIC NUSE



GREEN RIVER RESERVOIR STATE PARK

FPR Update: Conversation with Susan Bulmer and Nick Caputo

Each year Susan Bulmer, Vermont Forests, Parks and Recreation NE Parks Regional Manager, and Nick Caputo, Regional Parks Operations Manager, meet with the FGRR Board to update us on the year past and discuss the coming year. We are very grateful for their time and the personal contact which gives us good information on the Park and what the FGRR Board can do to help. Here are some highlights we thought would particularly interest our members:

2020 Season – last summer

Covid impact and challenges: For over a year (since last March) the Vermont Forests, Parks and Recreation (FPR) staff has been working remotely. As can be imagined, the 2020 season presented some unique challenges. Even though the season started late (not until June 26) there was record attendance!

Use numbers were a record high at 15,791, Day use was 6,086 which is pretty amazing given that the park opened late. Revenue was \$67,207 with \$54,739 from camping and \$8,664 from adult day use. The majority of the expenses for the Park (\$71,000 of the \$77,859 total) were related to staffing.

With the parks not opening until late June, managing the early season cancellations was difficult. People with reservations were frustrated to not be allowed to camp and that other people ignored the rules and used camping sites before the park was open or staffed.

Covid protocols and cleaning: In 2020 staff touch points were reduced. Visitors were good – they followed the

rules. Staff did well with Covid protocols. The Covid “appendix” to the park management procedures explains how everything needs to be cleaned. Outside of the Clivus units (2 full cleanings per day – and 4 sanitizings), the plan is to continue the protocols though there have been some adjustments (at the other parks it was really hard where there were more touch points).

In 2020, overall, the Vermont State Park System realized about \$250k of losses from lost reservations. The State has backfilled with some general fund money and the FPR has been level funded. It’s not anticipated that there will be any Federal money to help with operating costs again in 2021. That said, FPR did receive Federal funds for PPE, trailers for dispersing folks (so they weren’t in close quarters), port-a-lets, cellphones for park managers, etc. The FPR is now working to get approval to spend the remainder of those funds in 2021 for operating costs that are anticipated to be higher because of the continuation of Covid-19 mitigation protocols.

The next fiscal year starting in July will be tough because of the funds which come from ski area leases on state land and go to funding for the State Park system. The staff budget for the coming year is level funded.

This year was the first year that there were designated parking spaces for campers. Reserved overnight parking was appreciated. Day use parking only and camping only parking signs will be added. Parking spaces were striped this year. It was lined four or five times. It helped get cars in in a more orderly fashion.

Nick summarized “Last season was a challenge at most of the parks - Green River did really well.”

A new on-line reservation system, Aspira (Reserve America), started last season. The anticipation is that there will be fewer problems next season.

By the end of the 2020 season, GRRSP staff reported that 59% of the sites were already reserved for 2021.

Visitor Comments: The system for comments in 2020 was only electronic (for 2021 there will be a comment space on the cards as well as an electronic survey). Campers entered 29 comments last season - twenty-five rated the Park excellent, and four rated it good. The most respondents were frequent visitors to the Park. Problems: parking is at the top of the list; racoons are an issue (fortunately not bears). FGRR will contribute to the purchase of more critter proof locker for 2022.

2021 Operations Plan

2021 Staffing: Ross Bryant is returning as GRRSP Manager, along with one previous staff, Ethan Page. Ethan will be the assistant park manager. In 2020, all the staff from the prior year returned.

Opening date should be typical – the weekend before Memorial Day, May 21st.

This year at Zack Woods the Park staff will start registering campers – not charging fees, as there will be no fee increases at State Parks this year.

Plans for 2021 Management: There will be continued public education. Staff will have a presence at the launch. Staff know that they’re not to be the Covid Police – so, it’s a fine line.

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Parking areas were full about 30 days plus this year.

Parking: The Town of Hyde Park, FPR, the Lamoille County Planning Commission and FGRR will be monitoring parking the summer and figuring out what to do. The number of parking slots is set at a level for maintaining the Parks quality. Ultimately, the question is, how do you educate potential visitors that the park is full?

See the article in this issue on Parking at the Reservoir.

The number of parking spaces that the Park can have is in the Town Permit. The town played a strong role in setting the limitations at the Park. Parking is not allowed along the road – it is up to the town to put up No Parking signs.

Note from the Board: At this meeting, we learned that of the GRRSP staff

needs is a tandem kayak, for cleaning campsites, transporting woodchips for the outhouses, and checking the Reservoir. The FGRR Board talked with Park Manager Ross Bryant and has ordered a Wilderness systems Pamlico 135T for the Park. We will post photos on our website and have photos for the Fall newsletter. Keeping staff transport as green as possible is something we know our members support!



RON KELLEY

How Parking Limits Preserve Green River Reservoir

BY MILFORD CUSHMAN – CO-FOUNDER & VICE PRESIDENT OF FGRR BOARD

From the time the State of Vermont purchased 5,110 (+/-) acres including the Green River Reservoir in 1999, the designation and permitting of a specific number of parking spaces for both day and overnight camper use was designed as the primary long range management plan for protecting and preserving both the natural environmental resource and visitor wilderness-like experiences.

Historic records kept from the early 1990's documented a seasonal increase in visitor interest and visits to the GRR. The resulting impact on the natural environmental resource was significant and alarming to those who had previously experienced the GRR as a refuge and sanctuary. Overuse was seriously degrading the area.

Based on the enduring and proven success of long-range management planning strategies of many USA and Canadian State/Provincial Park systems, the permitting of the 75 parking spaces at the GRRSP was designed as a clear method for determining when the GRRSP was "full." When a visitor left the Park by opening up a parking space, then there was room for a new visitor to enter the Park.

The Zoning Permit for the State Park restricts parking to the designated 75 spaces and does not permit parking of vehicles on the Town of Hyde Park's Green River Dam Road (TH#16) travel lanes.

The 2020 GRRSP Park season was a challenge due to the Covid-19 epidemic as many visitors sought relief

by spending time outdoors. This situation challenged the Park's management of visitors wishing to visit the Park. Many did not understand the regulations regarding why parking on the Green River Dam Road was not permissible or why the Park limits parking to preserve and protect the natural resource and visitors' wilderness-like experiences.

This year, the State, the Town of Hyde Park, the Lamoille County Planning Commission and the FGRR are collaborating in the statistical gathering of vehicle traffic counts throughout the summer and off seasons to help plan how to best inform and educate visitors who wish to come to the GRRSP.



Information from Vermont Department of Parks on 2020 Season

Green River Reservoir State Park 2009–2019

Finances

Year	Revenues	Expenses	Expenses Notes	Difference	Difference excluding Infrastructure Expenses
2009	\$33,359.00	\$66,812.47	includes \$14,525.38 infrastructure expenses	\$(33,453.47)	\$(18,928.09)
2010	\$52,561.97	\$88,806.37	includes \$37,015.08 infrastructure expenses	\$(36,244.40)	\$770.68
2011	\$54,193.00	\$63,413.27	no infrastructure expenses	\$(9,220.27)	\$(9,220.27)
2012	\$59,552.00	\$132,105.53	includes \$58,180.46 infrastructure expenses	\$(72,553.53)	\$(14,373.07)
2013	\$63,244.00	\$56,534.05	includes \$1,953.40 infrastructure expenses	\$6,709.95	\$8,663.35
2014	\$69,890.48	\$50,834.58	includes \$883.88 infrastructure expenses	\$19,055.90	\$19,939.78
2015	\$77,723.50	\$64,859.34	no infrastructure expenses	\$12,864.16	\$12,864.16
2016	\$81,974.54	\$74,541.00	no infrastructure expenses	\$7,433.54	\$7,433.54
2017	\$86,534.00	\$85,478.06	includes \$6,921 for generator shed and heat to contact station	\$1,055.94	\$7,976.94
2018	\$88,014.00	\$128,061.50	includes \$41,780.50 infrastructure expenses—foundation of Workshed/Woodshed	\$(40,047.50)	\$1,733.00
2019	\$89,121.00	\$91,475.00	Does not include building construction for Workshed/Woodshed of \$62,500, except \$2313 in electrical supplies, total workshed/woodshed cost=\$106,953	\$(2,354.00)	\$(41.00)
2020	\$67,207.00	\$77,859.00	COVID-19 Operations; June 26–Oct. 11 Season; staff expenses – \$71,165 for total of 4819 staff hours.	\$(10,652.00)	\$(10,652.00)

GRRSP Attendance

Year	Campers	Day Use	Total Users
2009	5,975	5,993	11,968
2010*	6,701	3,946	10,647
2011	7,161	3,273	10,434
2012	7,438	3,492	10,930
2013	6,956	5,028	11,984
2014	7,342	4,978	12,320
2015	7,679	5,039	12,718
2016	7,912	4,824	12,736
2017	8,224	5,089	13,313
2018	8,435	4,842	13,277
2019	9,198	4,932	14,130
2020	9,705	6,086	15,791
TOTALS	92,726	57,522	150,248**

*On July 1, 2010, day use fees started

** 12,521 Average use

Friends of Green River Reservoir Annual Membership Meeting

Thursday, July 29, 2021 • 7:00 pm

Annual Meeting – to elect Board Members, review the accomplishments of the past year, enjoy good conversation, and conduct any necessary business.

Again this year virtual, by Zoom. If you want the link to the Zoom meeting please email us:

webmaster@fgrrvt.org.

Members are invited and encouraged to attend!



Foraging in GRRSP

BY TOM KASTNER



Wild foods can be more nutritious than sprayed produce flown in from around the world. They are also free since you were already in their vicinity. You might be introduced to some new flavors, create some new recipes, and increase your knowledge of the natural world. There is something really satisfying about eating a meal that you have gathered yourself. It's also a great reason to acquire more books. This article is not only about foraging in GRRSP, but anywhere, including your own yard and neighborhood.

The Regulations

When we are talking about State Lands, there are 2 regulations to keep in mind.

1. No plant may be uprooted or cut without a special written permit from the Commissioner of Forests, Parks and Recreation or their designee except wild berries, fruits, seeds, nuts, or mushrooms may be collected only for their personal use at the risk of the collector. (That means no greens, shoots, stalks, or tubers such as ramp, stinging nettle, or fiddlehead collecting on state lands.) Commercial harvesting of

such items for profit is allowed only with a special written permit from the Commissioner of Forests, Parks and Recreation or their designee.

2. Animals, other than species taken legally according to Vermont Department of Fish and Wildlife laws and regulations, may not be collected without a special written permit from the Commissioner of Forests, Parks and Recreation and Fish and Wildlife or their designees and/or the U.S. Fish and Wildlife Service. "Animals" include mammals, birds, reptiles, amphibians, fish, and invertebrates.

The Safety Guidelines

Before deciding to take up foraging, it is important to acknowledge certain safety considerations. Never eat anything that you cannot identify with certainty. There are many edible wild foods around us but there are also numerous poisonous species that can be harmful if accidentally ingested. Head out with an expert forager or consult reputable books, or other resources to help with identification. (See the bibliography below.) Gloves (and long sleeves) can help protect from thorns and prickles, stinging plants like

nettles, or from plants that can cause allergic reactions or photosensitivity.

The Ethics

In addition to considering your own safety when foraging, it is also important to take a long-term view: sustainable foraging means remembering that you are not the only creature which may wish to use a given resource. For example, wild berries play an important role in birds' diets. Whatever you take, leave plenty for other people and for local wildlife which may rely on these wild foods for their survival. Harvest from perennial plants, leaving them able to grow further and continue to produce their edible yield for years to come. Try not to disturb the surrounding ecosystem so you (and others) can continue to benefit from its wild yields in the future.

The Harvest

Although this is not a definitive list, here are some of the items you may find at GRRSP.

- Beechnuts
- Butternut
- Hazelnut
- Basswood nuts
- Black locust seeds

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The Hermit Thrush—Vermont's State Bird

BY RON KELLEY

The Hermit Thrush was selected as the state bird in 1941 but not without some legislative opposition. Some did not consider it a true Vermonter like the blue jay or crow because, like so many snowbirds today, it migrated south for the winter. But largely because of its beautiful sound and the fact that it could be found in all 14 counties, it won out.

I have always considered the Hermit Thrush to be elusive. Even though I've spent much of my life and career in Vermont's forests, I have seldom seen this bird. It is much more commonly heard. I also had no luck in capturing a decent photo of it until spotting a group of them foraging near the reservoir last spring when there was fresh snow on the ground.

The Hermit Thrush can be distinguished from other thrushes by its tail-flicking habit. When it lands on a branch, it often raises and lowers its tail quickly back and forth. Its flute-like song has been described as mournful, beautiful. Haunting and ethereal. Some have called the bird the northern nightingale. Its song begins with a long note, followed by four or five different tunes. According to a native Ameri-

can legend, birds had no song until the Creator gave the Hermit Thrush a beautiful song to sing. Two books about this are: *"Song of the Hermit Thrush—An Iroquois Legend"* by Gloria Dominic, published in 1997 and *"Sacred Song of the Hermit Thrush—a Native American Legend"* by Tehanetorens, published in 2020.

The Hermit Thrush is one of the first woodland birds to return in the spring, arriving in April. The female builds a cup nest out of mud and plant material, on the ground or in

a small tree. It lays three to five pale blue eggs. The male guards the nest by singing from a distant perch. Thrushes are ground foragers, eating mostly earthworms and small insects, although fruit is consumed in the fall, just before and during migration. Its Vermont population is considered stable or possibly increasing. Probably it prefers our abundant mature forests for its habitat and is somewhat tolerant of disturbance. Visitors to GRRSP frequently hear its song, as it is one of the most regular summer residents.



RON KELLEY

Foraging

Continued from previous page

- Red oak acorns
- Staghorn sumac berries
- Serviceberry
- Chokecherry
- Pin cherry
- Blueberry
- Black elderberry
- Highbush cranberry
- Wild rose hips

- Wild grape
- Apple
- Edible mushrooms
- Ground bean

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FGRR Main Accomplishments: The Past 20 Years

SEPTEMBER 2020

- Participated in the establishment of Green River Reservoir State Park (GRRSP).
- Worked with Vermont Department of Forests, Parks, and Recreation (VDFPR) on developing the Master Plan for Green River Reservoir State Park.
- Wrote and instituted with the Town of Hyde Park the viewshed protection of the Green River Reservoir.
- Designed park facilities such as parking areas, contact station, ADA boardwalk, kiosk with display, award winning composting outhouses, and woodshed/ workshop.
- Monitor the ongoing Morrisville Water & Light dam relicensing and litigation, and keep members informed.
- Meet annually with VDFPR GRRSP staff to coordinate support for the Park.
- Coordinate with VDFPR on accessibility to the park for persons with disabilities.
- Provide an annual public lecture on the wildlife & habitat of the region.
- Conduct yearly census routes for the Vermont Center for Ecostudies' Forest Bird Monitoring Program, one of the continent's longest-running studies of forest bird population trends.
- Contributed to the purchase of bearproof lockers at overnight campsites.
- Participate in the VCE/VFWD annual loon count and nest monitoring.
- Sponsored full-time park stewardship position for four years as an educational portion of our mission.
- Publish a biannual newsletter for our members.
- Maintain Friends of Green River Reservoir website, with nature information, past newsletters, and the latest information on the Dam Relicensing issue.



RON KELLEY

Ice Out at Green River Reservoir

Ron Kelley reports 4/12/2021: "The ice finally dropped overnight so I paddled up north this morning. I was surprised by a pair of otters and got this closeup of one of them. I heard the loons calling yesterday and saw them also today!"