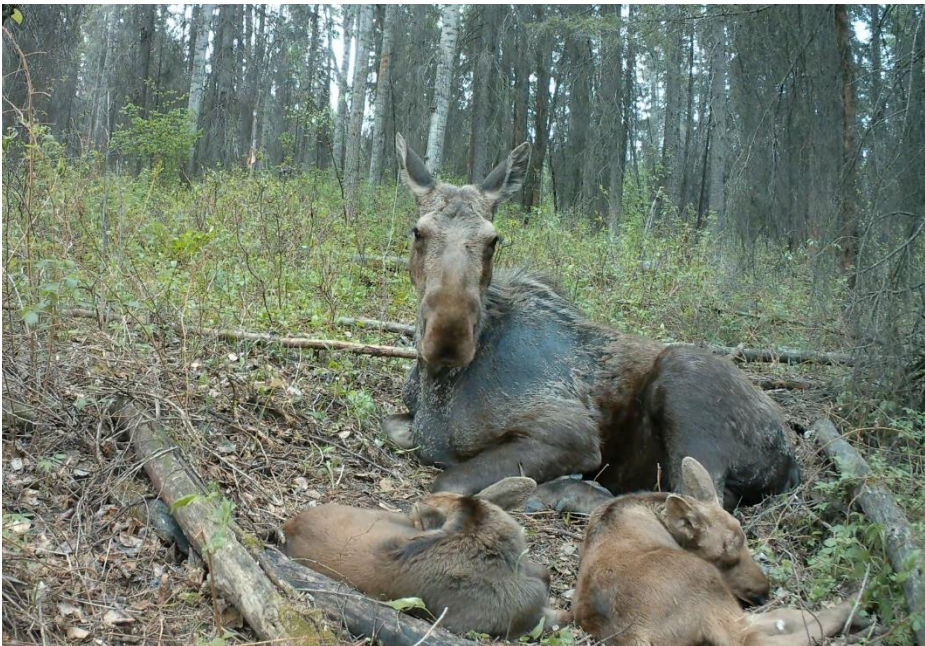




OUR MISSION

“To ensure the preservation of the character and biological biodiversity of Wagner Natural Area for Educational, Scientific and Research purposes.”

Friends of the Fen



Mother moose and her calves resting in front of our wildlife camera!

We were lucky enough to capture moments like this for 8 hours! We were able to register her parental care and the calves behaviour.

More will be discussed on pages 8-12 and you can watch the recordings at <https://wagnerfen.ca/wildlife-cameras/>

Photo courtesy of: Isabela Bernsdorf

WAGNER NATURAL AREA SOCIETY NEWSLETTER

Upcoming Event August Weed Pulls

What: Join us in helping control the spread of weeds in the natural area! Our methods include pulling weeds and tree management.

When: August 3rd and 4th from 9 a.m. to 2 p.m. (Saturday & Sunday)

Where: Meet at the Wagner Natural Area Parking Lot

Why pulling weeds is so important?

Invasive weeds can outcompete native plants, reducing biodiversity. Removing them helps restore balance and protect native species! Your help is very important to us. Let’s make a difference in conservation!

Gloves and boots are recommended. Gardening tools will be available for those who don’t bring their own. Dress for the weather. Snacks and water provided. Let us know you are coming out by sending an email to info@wagnerfen.ca

NCC Weed Pull

By Isabela Bernsdorf

On July 8th, we held our annual weed pull in collaboration with Nature Conservancy Canada at the eastern section of Wagner Natural Area, near Morgan Creek. This year, our efforts were focused on pulling pale-yellow iris and European mountain ash. Volunteers and the NCC team were divided into two groups: one group targeted the pale-yellow irises previously identified by Chris, Andy, and me, while the other group assisted Dave in managing the European mountain ash. Together, we collected six large garbage bags filled with pale yellow irises and European mountain ash berries.

We want to thank Eagle Willier and the NCC team for organizing and mobilizing support for preserving our natural area. We extend our gratitude to the dedicated volunteers who persevered through the heat wave, contributing their time and effort until the task was done! Great job everyone!

Toad and Moth Walk

By Isabela Bernsdorf

On July 26th, despite windy and rainy weather, around 30 people participated in the Toad and Moth Walk, organized in collaboration with Alberta Amphibian and Reptile Conservancy and Butterfly Wings n' Wishes Ltd. The recent rain was a refreshing change after the heat wave, and it brought the amphibians out in full force along the Marl Pond Trail. In total, we spotted 22 boreal toads (*Anaxyrus boreas*) and one wood frog (*Lithobates sylvaticus*)!

Four moth traps (white sheets) were placed in Wagner's trails to observe the moth diversity in our natural area. The traps were a success, capturing many moths, including the four-spotted ghost moth (*Sthenopis purpurascens*) and the semirelict underwing (*Catocala semirelictica*).

Thanks to everyone who participated and helped make this event a success!

Support Us!



Yellow lady's-slipper

Photo courtesy of: Isabela Bernsdorf

The Wagner Natural Area Society welcomes new supporters, volunteers, and all people interested in natural history and the preservation of the ecological integrity of this delightful natural area.

VOLUNTEERS / MEMBERS

People of all talents and interests are desired and welcomed to become more closely involved with the Natural Area and the Society.

Email: info@wagnerfen.ca

DONATIONS

All donations help maintain the integrity of the Natural Area and its surroundings, provide educational material, enhance visitor experiences, and support on-going research studies and surveys.

Please see page 13 for the donation/volunteer form.

Slow down!

The impact of Access Rd on Wagner's toads

By Isabela Bernsdorf

The idea of writing this article came up in May when I was monitoring the fence at Access Road and observed a dead toad on the ground. As I continued to search, I found more and more road-killed toads, triggering me to monitor road-killed amphibians and possibly other animals throughout the summer as a side project.

While roads are known to be a significant cause of amphibian mortality, they are often under-studied in the field of road ecology, which tends to focus more on large mammals. Vehicle-induced wildlife mortality removes healthy individuals from nature, which can significantly impact population density. Moreover, roads act as barriers that fragment habitats, decrease genetic diversity, and increase the chances of inbreeding, particularly in small mammals and amphibians.

On May 15th, I found seven road-killed boreal toads (*Anaxyrus boreas*) along the Access Road. Six were on the right side (closer to Wagner), and one on the left (closer to Highway 16), suggesting that most were killed as people were heading to Wagner. However, it was unclear how long it took to accumulate these seven specimens— one week, one month, six months? This uncertainty made it challenging to predict trends or calculate a road mortality rate. To conduct a more systematic study, I removed all carcasses from the road and checked the road every 15 days for six weeks.

After six weeks of surveys (May 15th to July 27th), only the first and last surveys had carcasses: seven and one, respectively. From a conservation perspective, it was positive that no road-killed toads were found for four weeks, but from a monitoring standpoint, I began to worry that they might be having a bad year. This made me realize that perhaps I was not paying attention to the environmental variables and the natural history of these toads.

Amphibian roadkill is typically associated with daytime and nighttime temperatures, humidity/precipitation, and traffic volume. Amphibians are more active on cooler, wet days and during the night. A few days before the first survey on May 15th, it had been a rainy week with temperatures varying between 8°C and 24°C. June experienced variable conditions of rain and heat, while July was dry and hot, with heat warning days. Two days prior to the last survey, we finally had rain and a temperature drop. Also, spring and summer months are when Wagner experiences higher visitor traffic.

Besides the environmental variables, amphibians have unique behavioural characteristics such as seasonal migrations, relatively slow movement, and the tendency to remain still in response to approaching vehicles, making them more susceptible to being killed. Boreal toads can migrate several kilometres from winter burrows to breeding ponds. My theory is that they were possibly crossing the Access Road to get into

Wagner after the winter months, as their breeding season typically occurs from May to July. Another important factor is that their coloration can easily camouflage with the road, making them less visible to drivers.

In addition to boreal toads, I observed that snowshoe hares, white-tailed deer, birds, and ground squirrels frequently cross the Access Road and are vulnerable to collisions. My objective in writing this article is not to discourage people from visiting Wagner but to encourage them to drive slowly and carefully when visiting our natural area. Understanding animal patterns and threats

helps us create management plans to preserve the wildlife in Wagner.

For future studies, I suggest starting road monitoring earlier than May to determine when the toads begin to appear and stretch to fall months. Extending the monitoring could provide a better understanding of their road-crossing patterns and help establish critical months for road mortality, leading to more effective conservation strategies.

Surveys Summary

Week Number	Date	Temperature (°C)	Road Status	Number of road-killed Boreal Toads
1	May 15, 2024	14	Muddy/Wet	7
2	May 29, 2024	16	Dry	0
3	June 15, 2024	12	Dry	0
4	June 29, 2024	19	Dry	0
5	July 16, 2024	27	Dry	0
6	July 27, 2024	15	Muddy/Wet	1



Sorry for the unpleasant photo...

Boreal toads can reach up to four inches and are characterized by their mid-dorsal stripe and bumpy skin.

Photo courtesy of: Isabela Bernsdorf

WEED OF THE MONTH

Canada Thistle (*Cirsium arvense*)

By: Isabela Bernsdorf

Overview: Canada thistle (*Cirsium arvense*), also known as creeping thistle, is a noxious perennial weed that spreads quickly and can replace native plants. The name Canada Thistle suggests that it naturally occurs in our country. However, it is originally from the eastern Mediterranean of Europe and is believed to be one of the first weeds established in North America. The name “Canada” thistle came from the New England settlers who blamed its emergence on French traders from Canada. However, they arrived in both countries at the same time.

Habitat: Canada thistle commonly grows in open areas and thrives under direct sunlight. They can be found in pastures, cultivated fields, logged forests, riverbanks, roadsides and gardens throughout Canada, except for Nunavut.

Life cycle: They reproduce by seed germination and vegetatively through their root system. Once germinated, they develop into a spiny rosette in the first year. In the second year, they develop pink flowers that produce numerous wind-dispersed seeds. The seeds can be viable for years until suitable conditions.

Invasiveness: They form dense patches that make management challenging and quickly spread to other areas. They spread by developing roots from which new shoots emerge and through wind-dispersed seeds over long distances.

Origin in WNA: Canada thistle is assumed to have been brought to our natural area long ago, even before the Wagner family acquired the land. It is believed that the wind carried the seeds into the area, spreading as hay fields and other open areas became part of WNA’s landscape.

Prevention/Control: The best way to prevent Canada thistle is to monitor and identify patches early before they spread and minimize landscape disturbances (avoid creating new open areas).

- **Mechanical control:** hand-pulling (ideal) or removing the flowers (large areas);
- **Chemical control:** herbicide;
- **Biological control:** Canada thistle stem weevil (*Hadroplontus litura*)¹, Canada thistle gall fly (*Urophora cardui*)², Canada thistle rust fungus (*Puccinia punctiformis*)³



Identification Features:

Size: Up to 30 cm to 150 cm in height. With erect, branched, ridged and spineless stems (Figure A).

Leaves: Lance-shaped, with sharp spines along the edges and hairy underside (Figure B).

Flowers: Purple to pinkish flower heads, typically 1.5 to 2 cm in diameter. The flowers usually bloom from July to September (Figure C).

Roots: Horizontal and deep root (taproot) (Figure D).

Seed/Fruit: White-feathery, parachute-type seeds (similar to dandelion).

Biological Control: Thistle tortoise beetle larvae (*Cassida rubiginosa*) spotted in a Canada thistle at WNA (Figure E) and thistle gall fly (*Urophora cardui*) resting in a leaf after our release (Figure F).

*Photos courtesy of:
Isabela Bernsdorf*

WILDLIFE SPOTLIGHT

Territorial Tensions: Blue Jay Vs. Great Grey Owl

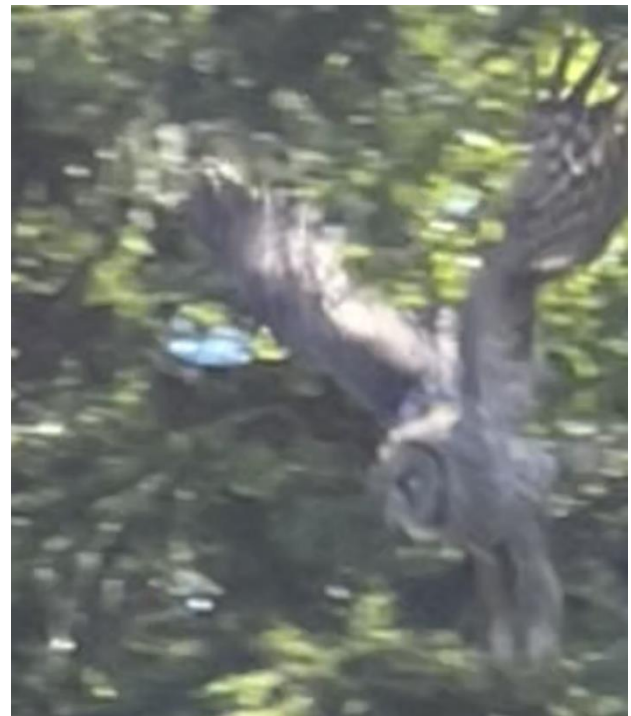
By Isabela Bernsdorf

As a biologist, working on Wagner Natural Area has been a pleasure. You never know what you will find, so I always try to have a camera close to me to register everything I can. Andy and I were having lunch at the end of Marl Pond Trail a few weeks ago, when we heard an angry blue jay calling nonstop. I decided to look, and a huge, silent owl flew to the other side of the field and perched on another tree. I quickly identified it as a great grey owl (*Strix nebulosa*). Great grey owls are known to be one of the world's largest species of owl, but it did not intimidate the blue jay! The blue jay followed the owl and hit it twice until the owl flew away, and I never saw it again. Luckily, I had my cellphone and recorded all that action! The picture is not great because it was taken from a video recording, but you can see the dish face and the large wings.

Despite their size, great grey owls are difficult to spot in the province. They typically perch on the edge of forests in silence, choose to hunt during the night, and fly low and quietly. However, they are easy to recognize by their "grey suit" with a "bow-tie" across their neck and dish face. Their eyes and bill are yellow, and two pale arcs form an X between their eyes.

That blue jay's behaviour was not surprising. They can be fearless and aggressive when it comes to defending their territories against predators or other threats. It is known that a blue jay will swarm and scold owls until they move on, especially if there is a nest nearby.

We were very lucky to experience that encounter, and it was the first owl I had ever seen in Canada, making it even more special!



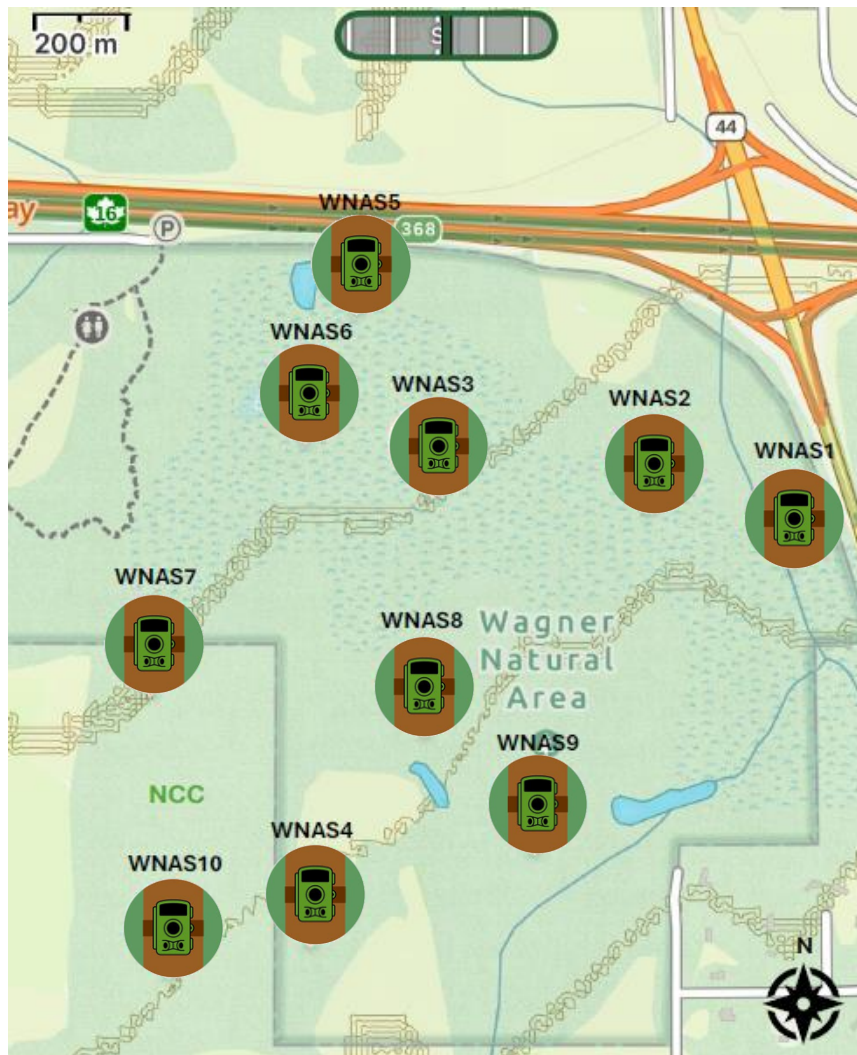
Great grey owl flying away after being bullied by a blue jay. Photo courtesy of: Isabela Bernsdorf

Belted kingfisher update: As promised in May's newsletter, I returned to the pond several times to check on the camera and hopefully spot the belted kingfisher again. Unfortunately, I haven't seen them since. Let's hope they continue to visit and eventually call Wagner their home!

2024 Summer Student's Wildlife Camera Project

By Isabela Bernsdorf

I am excited to share the findings of the wildlife camera project at Wagner Natural Area for this summer! The project was sponsored by Parkland County and the Canadian Parks and Recreation Association. Ten trail cameras were spread across WNA's different microhabitats, including open fields, fen, conifer forests, ponds, and succession areas to record and monitor the wildlife present in the natural area. This project's objective was to capture Wagner's biodiversity, providing valuable insights into the behaviour and presence of different vertebrate species. By monitoring these diverse habitats, we gathered crucial footage to support our conservation efforts and better understand the wildlife distribution through the different microhabitats.



Camera locations in Wagner Natural Area (approximate).

Summary

Camera ID	Habitat Description	Predominant Vegetation	Wildlife registered	Notes
WNAS1	Near Morgan Creek; blow-out zone	Trembling aspen; balsam poplar; prickly rose; red-osier dogwood; red raspberry	White-tailed deer Coyote Moose Porcupine	Coyote with silver-grey colouration (Figure A); WTD with antler malformation (Figure B)
WNAS2	Wildlife corridor; open area	Black spruce; willow sp.	White-tailed deer Moose	WTD with antler malformation (Figure C)
WNAS3	Pond	Cattail; black spruce; willow sp.	White-tailed deer Moose	WTD with antler malformation (Figure C)
WNAS4	Old hay field; succession area	Grass sp.; trembling aspen; willow sp.	White-tailed deer	
WNAS5	Wetland	Black spruce; horsetail sp.; marsh marigold; Labrador tea; moss spp.	White-tailed deer Coyote Snowshoe hare	
WNAS6	Blow-out zone	Black spruce; Prickly rose; Canada thistle	White-tailed deer Snowshoe hare	
WNAS7	Old hay field; Succession area	Grass sp.; red raspberry;	White-tailed deer Snowshoe hare Porcupine	
WNAS8	Old Beaver Dam; pond	Cattail; willow sp.	White-tailed deer Beaver	WTD with antler malformation (Figure C)
WNAS9	Wildlife corridor; Open Area	White spruce; black spruce; Grass sp.	White-tailed deer	
WNAS10	Old hay field; Succession area	Grass sp.; Balsam poplar; Prickly rose; red-osier dogwood	White-tailed deer Coyote	

*WTD = white-tailed deer

Highlight Moments



Access our website to see more: <https://wagnerfen.ca/wildlife-cameras/>

Coyote (*Canis latrans*)

Coyotes were detected on three cameras (WNAS1, WNAS5, and WNAS10), which are situated near roads, fences, and waterbodies. This pattern aligns with known coyote behaviour, as they often prefer areas close to forest edges for scouting. The cameras captured coyote activity both day and night, with most sightings showing solitary individuals. However, one camera recorded a pair of coyotes together. A notable silver-grey coyote was frequently seen on camera WNAS1, indicating it might reside in that area (Figure A). Silver-grey coyotes are considered uncommon. Near camera WNAS5, I found coyote scat containing fur and small bones, likely from rodents or hares. There were no signs of new litters or dens, but based on the camera footage, there are at least six coyotes in the area. Further studies are necessary to monitor the coyote population in our natural area.

White-tailed deer (*Odocoileus virginianus*)

All cameras captured white-tailed deer activity, indicating their widespread presence throughout Wagner Natural Area. As I looked through the footages, I observed the colour variation between them and the scars that makes each one unique (and how curious they are, always sniffing the cameras!). However, what really caught my attention was two individuals that had malformation on their antlers. The first (Figure C) appeared multiple times on cameras WNAS3, WNAS2, and WNAS8, while the second (Figure B) was recorded once on camera WNAS1. These atypical antlers can occur due to various factors such as injury, hormonal imbalances, or genetic anomalies. Most abnormalities are caused by trauma to

the testicles or to the antler during the velvet stage or skull.

Upon comparison of footage, the antler of the first deer appears to be developing normally despite being oriented downward. We have limited footage of the second deer and will continue monitoring its condition.

Porcupine (*Erethizon dorsatum*)

Porcupines have been recorded on cameras WNAS1 and WNAS7, which are located far apart and in distinct habitats. This indicates that porcupine activity is widespread throughout Wagner Natural Area. If you have walked through Wagner, you have likely seen grooves and marks on the cambium layer of trees—clear signs of porcupine activity all over the property. In winter, when food sources are scarce, porcupines rely on the inner bark of trees. In the warmer months, they eat buds and leaves, as seen in the WNAS1 video. At least three porcupines were recorded on our cameras, but we likely missed a few due to some cameras being positioned higher than others.

Moose (*Alces alces*)

Moose activities were recorded on cameras WNAS1, WNAS2, and WNAS3, located in the west portion of Wagner. Typically, female moose give birth to one calf during spring or summer, but we were fortunate to capture a female with twins (Figure E) on our property for 8 hours!

While reviewing the footage (yes, I watched them all), I observed her attentive parental care and protective behaviour. Throughout the time recorded, she remained vigilant, never sleeping, and alert to every sound. Moose are known for their aggressive nature when protecting their calves and during mating season, being able to confront

predators and even attack vehicles. The calves, which usually stay close to their mother for 12 to 18 months before becoming independent, were quite curious. They frequently licked and sniffed the camera and chewed the camera straps. It was fascinating to see the mother nursing them. She would stand up to nurse, even when the calves did not solicit to be fed. When feeding, the calves struggled a bit when on the same side, but stayed longer when positioned on opposite sides. As soon as they left, our silver-grey coyote appeared and started to sniff the spot they were laid on!

A few days later, camera WNAS2 captured footage of a mother moose with one calf passing through. It's unclear if this was the same moose with only one surviving calf or a different pair, but it's exciting to know that Wagner Natural Area serves as a moose nursery!

Snowshoe hare (*Lepus americanus*)

Hares were recorded on cameras WNAS5, WNAS6, and WNAS7, on the east side of the natural area. All snowshoe hare footage was captured during the night, which is consistent with their nocturnal behaviour to avoid predators. Those three cameras were located close to blow-out areas, that may act as hiding spots for breeding and shelter. Also, if you visited Wagner, you may have encountered snowshoe hares at the parking lot and the Marl Trail Pond, which reflects our findings.

Beaver (*Castor canadensis*)

Trail camera (WNAS8) captured footage of a beaver entering an old beaver dam. This sighting is particularly interesting as there hasn't been recent beaver activity in Wagner Natural Area. Beavers can pose problems if they are too close to roads. They have the

potential to undermine roadbeds and block culverts, leading to flooding and infrastructure damage. Fortunately, this pond is located well within Wagner, so there is no immediate concern. However, this situation will need to be monitored to prevent potential issues in the future.

Conclusions

The Wildlife Camera Project has provided important documentation of the biodiversity present in the natural area. The footage and information gathered gave us a better understanding of the species distribution, particularly in identifying unique individuals. I hope these valuable findings and videos will support the conservation efforts and decision-making processes of the Wagner Natural Area Society.

As with any pilot project, challenges were inevitable. The most significant difficulty was adapting to the changing landscape throughout the season. Every time I went on my "camera quest" the landscape had changed, and everything seemed different. Accessing the cameras was always challenging. I may have underestimated how tall the grasses could grow and the blow-out areas. I would always discover a new fallen tree or that a plant had grown in front of my camera! I would say that I acquired a lot of new field skills!

Finally, I am incredibly grateful for this summer, the learning experiences, and the people I have met. A big thank you to the Society and sponsors for this opportunity. Wagner has once again captured my heart, and I look forward to the possibility of working together in the future!

Bibliography & References

¹ Government of British Columbia. (2018). *Hadroplontus litura* (F.). Available in: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/agents/hadroplontus_litura.pdf

² Government of British Columbia. (2020). *Urophora cardui* (L.). Available in: https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/biocontrol/biocontrol-agents/urophora_cardui.pdf

³ Government of British Columbia. (2018). *Puccinia punctiformis* (F. Strauss.) Rohl.). Available in: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/agents/puccinia_punctiformis.pdf

MEMBERSHIP – WAGNER NATURAL AREA SOCIETY

Support / Donate / Volunteer

For more Information about Wagner Natural Area or the Society and about field trips and other activities, go to wagnerfen.ca.

Wagner Natural Area is a Registered Charity. Donations will help maintain this very special area; \$20 or more are receipted for Income Tax purposes, CRA B/N119287522 RR 0001

Society’s annual fee is \$10 for Supporting Members and \$15 for Voting Members. Voting Members are key to run WNAS; must qualify through nomination. See website. The Society’s fiscal year is January 1 to December 31.

Annual fee (Supporting \$10/Voting 15): \$_____

Donation: \$_____

TOTAL: \$_____

May the Society CONTACT you by: **EMAIL: Yes /No**

PHONE: Yes / No

Email Address: _____

Phone: _____

If you can VOLUNTEER to help with the Society with maintenance of the Natural Area (circle): **Yes**

Name(s): _____

Mailing Address: _____

Mail this form with cheque/money order, payable to Wagner Natural Area Society, to:
Treasurer, Wagner Natural Area Society, 30531-118 Ave., Acheson, AB T7X 6M5

Or scan the completed form and pay online. Submit your membership/donation by Interac bank transfer to treasurer@wagnerfen.ca [July 2024]