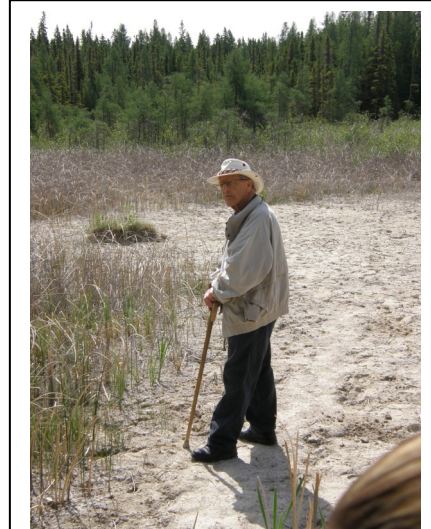


WAGNER NATURAL AREA NEWSLETTER

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Newsletter of the Wagner Natural Area Society, and Volunteer Stewards
of Wagner Natural Area, Parkland County, Alberta



'Tis the season of field trips...

Above left: About 25 people from Alberta Parks administration in Oxbridge Place took part in a parks field day on a tour of Wagner Natural Area on June 18. Irl Miller, picture right, demonstrating how dry the marl ponds are, and Patsy Cotterill, both from Wagner Society, helped guide the tour, along with Wayne Nordstrom, Parks biologist (foreground, picture left).

On June 16 Wagner Society volunteers guided a tour by delegates to the Congress of the International Council for Local Environmental Initiatives hosted by the City of Edmonton.

Unfortunately Wagner Natural Area is not putting on its best face for our visitors. The drought has meant that no water has been present in the western marl ponds this year so far, preventing amphibian breeding. The ponds along the Marl Pond Trail are also becoming heavily colonized by bulrushes. Orchid flowers are much harder to find than usual.

Photos by Archie Landals, Alberta Parks

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Wagner Natural Area Society Board 2009-2011

26519 Highway 16, Spruce Grove, AB T7X 3L4

Visit our website at <http://www.wagner.fanweb.ca>

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All telephone numbers are preceded by 780-.



The Wagner Grapevine



May Count of Plant Species in Flower

Falling on Sunday, May 31, this year, the Count was carried out by Patrick and Linda Kyle, with Patsy Cotterill as leader/compiler. It was remarkably similar to last year's, both in overall number of species, 53 species compared to 55 in 2008, and in flowering stage of individual species. Given that the Count took place at the very end of May this year, this is testimony to our persistent cold spring weather. The 2009 Count would probably have been several species higher if Alice's property and the trail near Keizers' property had been surveyed as they were last year. It was also affected by the drought; for example, no flowers of Two-seeded Sedge were seen, and surprisingly, Sweet Grass still hasn't shown up in Wagner's fields and ditches. Nor has Annual Bluegrass, a weedy grass that very much depends upon surface moisture to thrive. Alaskan Birch, normally past flowering by late May, just scraped into the count this year. I checked the east side of the property on May 29, thinking, correctly, that Long-spurred Violet, which is normally in peak flower by mid-May, would still have plenty of flowers visible to indicate its location. It wasn't flowering as profusely as a few years ago, but I was still able to count about 100 plants. This violet frequents the moist hollows created by overthrown trees in the mature spruce woods on the northeast part of the property, west of Morgan Creek. It was a relief to see that Wagner's population is doing well, as by comparison, Long-spurred Violet is proliferating almost like a weed in the disturbed peaty soil of the Fath property to the east. The white-flowered Kidney-leaved Violet is even more abundant in this part of the site and in spruce woods elsewhere.

It is now late June and the drought persists. The marl ponds along the Marl Pond Trail are completely dry, and flowering of both sedges and wildflowers continues to be inhibited, a state of affairs that will likely not change this year. Round-leaved Orchids, for example, are virtually invisible in the spruce woods along the trail. Fortunately, the fens in the south-east part of the property remain wet, and flowering, although delayed, may approach normal levels. Excellent displays of Bog Rosemary, Saline Shooting-Star and Heart-leaved Twayblade grace the southern fens, underlining the importance of groundwater to Wagner's flora, as this area has the highest concentration of springs.

Restoration of the south-east fields

Over the winter and early spring a "focus group" of the Wagner Board consisting of Beth Jenkins (chair), Patsy Cotterill, Derek Johnson and Cathy Mowat met to discuss restoration of the "south-east fields", fields formerly under cultivation but now part of the Wagner Natural Area thanks to government purchase of 160 acres in the south in 2001.

Restoration has proven to be a contentious business; we have already procrastinated for about a couple of years, and a meeting with Parkland County officials in August 2008 produced ideas but no concrete plan on which there was consensus. Hence the committee's task was to provide a step-by-step plan that would meet the approval of both the rest of the board and Wayne Holland, the government's land manager for

our area. Parkland County had kindly offered to do the actual land operation for us. Our first plan was to disk or harrow the easternmost field and the two small centre fields, spray for weed control and then sow with a native grass seed mix, allowing for the possibility of forbs to be introduced later when weeds were under better control. The westernmost field would merely be spot-treated for Perennial Sow-thistle and Creeping Thistle and natural succession allowed to take its course, assisted possibly by planted "islands" of vegetation. We proceeded to select a native grass seed mix consisting of Slender and Bearded Wheatgrasses, Fringed Brome and Annual Bluegrass, which have been supplied by Brett Young Seeds, along with certification. This mix was approved by Wayne Holland. In May, however, there was a change of plan: James Leskiw, Supervisor of Agriculture with Parkland County, informed us that they were going to dispense with the preliminary herbiciding and simply broadcast this seed mix straight onto the ground, using some new machinery. On June 9 and 10, Kassia James, the County's summer intern and graduate of Lakeland College's restoration program, completed this broadcast seeding of the fields using a machine referred to as "the Kubota." This was followed by harrowing to bring the seed into better contact with the ground. Germination is, of course, completely dependent upon rain. This represents our first major step in a multi-year experiment in restoration.



Kassia James of Parkland County and her "Kubota" seed spreader

Bouquets

Congratulations to Derek Johnson, who was recognized for many years of service to Wagner Society as a director at our Annual General Meeting in March. Derek received a small acrylic-on-canvas painting entitled "Tamarack Dance" by local artist Cindy Barratt.

Derek has resigned from his directorship, but immediately took on the position for one year of Special Director, Science Advisor. Hey, you're not getting off that easy, Derek!

Remembering Pat Seymour (1928-2009)

By Alice Hendry

In 1983, when the Wagner Natural Area Society (WNAS) was first organized, the board of directors was composed of individuals representing organizations. These first board members were our founding members. Founding member Pat Seymour represented The Friends of the Devonian Botanic Garden. He usually referred to his organization as “The Friends.”

Pat graced our meetings for a number of years. He was vice-president of the WNAS board from 1983 to 1984. He was the society’s president from 1985 to 1986. His “presidential years” were marked by the society’s negotiations with a snowmobile organization whose members wanted to drive their machines in the natural area. The society held its meetings with the snowmobile organization at the Devonian Botanic Garden, which Pat considered to be neutral ground. Pat always referred to his presidency as “the snowmobile years.”

When we weren’t dealing with snowmobile organizations, we held our meetings at the homes of the various board members. Thus, we held several meetings at Pat’s apartment. We quickly learned that we had better not schedule a meeting for St. Patrick’s Day. Pat reserved St. Patrick’s Day for ...something else. We never did discover just what he did on St. Patrick’s Day. Meetings at Pat’s apartment were particularly lively. This is probably because he served us trifle. In fact, he always prepared two trifles – one laced with liquor and the other for abstainers. Pat’s trifles were not ordinary trifles. They were memorable for their size (they filled two HUGE bowls to the brim) and for their flavor (with or without the extra ingredient). Years later our board members still refer to the meetings at Pat’s place as “the trifle meetings.” In memory of Pat, our meetings are often graced with a trifle dessert, but no one has dared to try to match either the size or the potency of Pat’s trifles.

When WNAS celebrated the opening of the Marl Pond Trail in 1983, Pat facilitated the ceremony by organizing the transportation. He provided the Devonian Botanic Garden parking lot as the location for bus service to and from Wagner Natural Area. Ceremony guests rode too and from “The Garden” in small school buses. This mode of transportation, captive audience, led to some worthwhile conversations between politicians and environmentalists. Is that what Pat had in mind?

In spite of his involvement with WNAS, Pat did not spend much time in the natural area. He was probably hesitant because of the reputation of Wagner’s rapacious, ever-present, blood-thirsty hordes of mosquitoes. On the one occasion when he did venture into the more remote regions of the natural area, he wore white from head to toe. He had read that mosquitoes were attracted to dark colors. His costume did have the effect of blending his outline into the whitish background of the marl ponds. However, in wooded areas he could be seen from a mile away. Oddly, the white clothes appeared to work. He received not one bite during a several hours long excursion into mosquito country.

Besides mosquitoes and snowmobile organizations, Pat’s ire was raised by anyone who incorrectly referred to the title of his “Garden.” We distinctly remember him stamping his foot and loudly proclaiming: “It’s just one garden, not gardens. It’s a botanic garden, not a botanical garden.” He also liked to remind us that he was a horticulturalist, and not a botanist. Some of us naively assumed that the two professions were virtually the same. We were frequently reminded that this was not the case.

Pat attended our board meetings until the early 1990s, but he retained an interest in Wagner Natural Area for the rest of his life. He would phone us to find out what was happening and to chat about his life and what he was doing. His phone calls were always a pleasure. We regret that we won’t hear from him again.



Patrick Seymour presiding over the Opening of the Marl Pond Trail Ceremony on June 7, 1986

Breeding Bird Survey Resumes in Wagner Natural Area this year: Volunteer Observers Wanted... By Loney Dickson

This year the Breeding Bird Survey (BBS) for Wagner Natural Area was started up again with a slightly revised methodology which will allow members and other birders to contribute their findings.

Although I will be conducting specific point counts throughout the area, I am hoping that members and other birders will contribute their records to the effort. If you have been involved in collecting data for the Alberta Breeding Bird atlas you already know the type of data that is required, but if you haven't, here is a brief summary.

To contribute data to the BBS the bird species seen or heard and the breeding evidence observed for each species are reported for each visit to the Wagner Natural area. Observations are made between May 28 and July 7, 2009. However, species occurrence data for any date of the year can be reported and will be used to create an annual list of species seen in the Wagner Natural Area.

Standards for breeding evidence

Four levels of breeding evidence may be reported:
Observed; Possible Breeding; Probable Breeding; Confirmed Breeding

Within each of these levels, there are categories of breeding evidence denoted by a letter code. These codes represent behavioural and empirical evidence that indicate breeding activity. These codes are recorded for each visit to a site or when reporting general observations from a visit to the Wagner Natural Area.

Observed: X species identified but no indication of breeding

Possible Breeding: H Species observed and/or breeding calls heard in suitable nesting habitat

Probable Breeding: P Pair observed in suitable nesting habitat; T Territory presumed through territorial nesting behavior, or bird on same territory at least 10 days apart; C Courtship behaviour between a male and a female; V Visiting probable nest site, but no further evidence obtained; N Nest building/excavating of a nest hole by wrens and woodpeckers

Confirmed Breeding: NB Nest building or adult carrying nest material; used for all species except wrens and woodpeckers; DD Distraction display or injury feigning; UN Used nest or eggshell found; FL recently fledged young or downy young; ON Occupied nest indicated by adult entering/leaving nest site or seen incubating; CF Carrying food; adult seen carrying food or faecal sac for young; NE nest with eggs; NY nest with young.

An example of what some data might look like:
"Lincoln's Sparrow Probably breeding C (latitude and longitude)

Lesser Yellowlegs Confirmed breeding ON (at first bridge on boardwalk)

Common Raven Observed X, etc.

Feel free to use the FAN Alberta Birdlist for reporting your results or simply provide the following information for each visit:

Your name

Other observers' names

Email address &/or phone number(s) (in case I need further information from you about an observation)

Date of observation

Species – level and category of breeding evidence.

For species you believe to be unusual or for any species you actually have "Confirmed Breeding" a description of and/or latitude and longitude data for the location would be very useful for the records.

Don't forget that the birds you report should **only** be from within the Wagner Natural Area.

Your data collected from the breeding period of May 28 through July 7, 2009 should be **submitted by no later than July 31, 2009**.

Data should be sent to: Loney Dickson (preferably by email) at loney@albertacom.com. Please use the topic "Wagner bird data" in the subject line. Results may also be mailed to Loney Dickson 53442 Range Rd 222 Ardrossan, Alberta T8E 2M5

Data from outside the BBS period must be submitted by December 5th, 2009 to be included in the general species list.

For those of you who want your data sent on to FAN for their checklist program please ensure you fill out the checklist front piece completely, to meet their requirements, and indicate you want it submitted to FAN. I will make sure it is forwarded.

Thanks for helping out, and have fun birding at Wagner!



Eastern Phoebe
(Internet)

What You Always Wanted to Know About Groundwater...

By Cathy Mowat



Beaver impoundment at Wagner Natural Area

Groundwater is simply water that is stored below the ground surface in soil spaces, loose material such as sand and gravel, porous rock, and deep bedrock fractures. The depth at which these soil and ground spaces are completely saturated with water all of the time is called the **water table**. When a useable amount of water is present, a groundwater **aquifer** exists. There is an ongoing exchange of water between surface water bodies and groundwater aquifers.

Groundwater is not only fed by surface water bodies and precipitation; but in turn, a significant reduction in groundwater can adversely affect wetlands, streams, rivers, and lakes.

Groundwater has historically been withdrawn for agricultural, municipal, and industrial uses. It also plays an important role in the natural character and ecology of a region. Wetlands are highly dependant on having access to sustainable groundwater resources at, or near, the surface of the ground. Many recreational streams depend on the release of groundwater as well as precipitation and surface water runoff. Forest trees rely on predictable amounts of soil moisture, and many valued commercial human activities (such as agriculture) can be hard hit when groundwater reserves are reduced and the local water table retreats to a greater depth

Local **groundwater reserves** often depend on the precipitation, infiltration of water into soil, streams,

wetlands, lakes and rivers (as well as other uses of groundwater) over a much larger area. If not planned and managed appropriately, various kinds of development can reduce the recharge and replenishment of groundwater aquifers. Development that, for example, diverts significant amounts of natural precipitation and surface water runoff into sewers, preventing the normal infiltration of water into the soil, can significantly lower the local water table. Without sufficient replenishment of groundwater, through some means, lowering the level of the water table in one or more locations eventually lowers the water table everywhere within the aquifer.

The **quality of water** going into a groundwater aquifer is also important because of its connection to surface water quality, and the way in which people depend on groundwater, both directly and indirectly. Some industrial operations, if poorly managed at the individual lot level, can seriously pollute groundwater aquifers. Because groundwater moves beneath the surface over large distances, this pollution can be carried “downstream” beneath the ground to other properties and water users. At the same time, the deep movement of water in groundwater aquifers makes any pollution of these aquifers difficult to mitigate or correct. Ultimately, human beings, economic activity, plants, and animals can all be adversely affected by groundwater pollution.

The **economic and quality-of-life losses** that can result from reduced or polluted groundwater resources can be significant. These losses can range from: direct financial costs to individual acreage owners as private wells become unuseable or too shallow to collect groundwater

- to significant commercial losses for farmers as soil moisture levels fall
- to substantial quality-of-life issues for the community as a whole, as valued natural

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amenities such as natural areas, ponds, streams, lakes and rivers are adversely affected. These losses are persistent, cumulative, and hard to reverse, and the value of maintaining safe and sufficient ground water and surface water resources cannot be overstated.

Ultimately, the **conservation of any natural resource** generally requires:

- a) a recognition of the value of the resource
- b) an understanding of the issues that will need to be addressed in order to conserve the resource as development proceeds
- c) the ongoing exchange of ideas within the community
- d) the constructive use of alternative designs and approaches during development
- e) careful planning and resource management at several levels of government.

As our regional communities develop and expand, the conservation of groundwater resources will require conservation efforts similar to that given to other natural resources.

There are a number of approaches that can be used to protect groundwater resources during development, including:

- a) The development of an accurate and solid understanding of local groundwater resources based on good science.
- b) The implementation of planning processes that use this foundation of knowledge to protect ground and surface water resources during community development.
- c) The use of practices and standards that actively address the groundwater issues that have arisen from some of the traditional practices in the residential development, industrial, commercial and agricultural areas.

Recognizing the limits of groundwater aquifers,

preventing groundwater pollution, and using alternative and proven development practices, such as Low Impact Development, are likely among three of the most important considerations in preventing the loss and contamination of groundwater resources.

For more information on groundwater issues facing the Wagner Natural Area, contact the Wagner Natural Area Society at:

wagner@fanweb.ca



Calcium- and iron-rich spring water pooling in a fen

Are you passionate about saving natural areas, conserving environmentally sensitive land?

The **Edmonton and Area Land Trust (EALT)** has got a brand-new website which explains the various ways in which you can help. Check EALT out at <http://www.ealt.ca>

Wagner Natural Area Society is also hatching some schemes to recruit more volunteers. What we have in mind are not onerous time commitments but rather a chance to help out occasionally and give Wagner's visitors a taste of what management and monitoring duties are like. (If you have birding experience, also see the article by Loney Dickson on page 4.)

Wagner Natural Area: An Inspiration to Local Artists

By Alice Hendry

Wagner Natural Area (WNA) has been the subject of many an artist's brush and photographer's lens. The board of directors of Wagner Natural Area is only aware of a few of these Wagner enthusiasts. For example, we learned of Mathilde Burak's enthusiasm for painting Wagner scenes when her son contacted us after her death in 2005. She had, her son told us, spent hours painting scenes along the Marl Pond Trail. A new bench in Wagner is dedicated to Burak. The Burak bench was financed by donations to the society in memory of Mathilde.

Our Marl Pond Trail guide contains illustrations by artists Terry Thormin, Edgar T. Jones, John Maywood, Yuet Chan, Chris Miller and Mike Jenkins. The illustrations are important aides to understanding the trail's natural features. Yuet Chan, Rayma Peterson, and John Maywood have also provided illustrations for our newsletter.

Artist Rayma Peterson has painted many a Wagner scene. In 2001 Rayma created our poster, *The Orchids of Wagner Natural Area*. We have made good use of this beautiful poster, providing free copies to schools, WNA neighbors, government employees and politicians. Sales of the poster, while not steady, have also been profitable. Rayma has also provided illustrations for our new *Field Guide to the Trees of the Marl Pond Trail*.

Spruce Grove artist Cindy Barratt discovered Wagner Natural Area five years ago. Since then she has painted several acrylic and watercolor interpretations of WNA habitat, landscapes, flora, and fauna. The titles of her paintings include: "Tamarack Dance," "Along the Marl Pond Trail," "Walking the Marl Pond Trail," "Fen Habitat, Wagner Natural Area," and "Round-leaved Orchid."

Cindy's Wagner paintings have been featured in two recent Edmonton Area exhibits. The first, titled "A Bird in the Hand," featured four artists. This exhibit took place at Profiles gallery in St. Albert in November, 2008. Cindy exhibited eleven of her paintings of Wagner Natural Area. In March, 2009, at the Spruce Grove Art Gallery, Cindy's Wagner paintings were featured. This exhibit was titled "A Conservation Portrait – Wagner Natural Area."

In her exhibits, Cindy combines artwork, nature samples (from her own property), and education

materials to provide an "educational and interactive

experience that encourages and promotes the conservation of natural habitats and species." Each of Cindy's exhibited paintings is combined with text describing Wagner Natural Area and the need to protect Wagner's all-important water. In her Artist's Statement, Cindy writes, "The peaceful tranquility of the countless areas that we can environmentally and ecologically protect and conserve from our expanding urban and industrial sprawl are irreplaceable and immeasurable. It is my intention to use my work as a platform to draw attention to this very important concept and to inspire others to appreciate, protect and preserve more of this precious earth we all share."

Photographers and film-makers also find Wagner a delight. Over the years Wagner has provided subjects for Edgar T. Jones, Freeman Patterson (though he complained about the mosquitoes), John Acorn, Terry Thormin, Leota Cummins, Karvonen Films, and many, many others. Wagner has been the subject of many a slide show and presentation. Photographs taken in Wagner have appeared in books, magazines and newspaper articles.

These artists, photographers, and writers, who have used their art to entertain, to educate and to create a sense of wonder, are vital contributors to our efforts to focus attention on the value of natural areas such as Wagner. We would like them to know that we appreciate and value their efforts.



Wagner's wonderful landscapes and wildflowers are an inspiration to local artists and photographers.

Plants of Wagner No. 31

Viola nephrophylla

(Family Violaceae)

Bog Violet is confined to the fens in Wagner Natural Area, although elsewhere it may occur in other moist habitats, especially where there is influence of calcareous groundwater. From late May to mid June it makes a striking show in the fens, its large violet-blue flowers conspicuous amid the browns and greens of the fen vegetation. The leaves arise from the short rootstock on long stalks. They have rounded-triangular, shallow-toothed blades up to 4 cm across and about as long. Some leaves have a larger terminal tooth that gives them a pointed look. The leaf base is heart-shaped, with two large lobes that often curl inwards, showing the underside of the leaf, which is greyish-blue and prominently veined.

The flowers are borne singly on long slender flower stalks (scapes) up to about 13 cm long. They arise straight from the rootstock and bear two tiny reduced leaves or stipules. The flower has the typical violet structure. It is held vertically, with two erect petals, about 2 cm long, above and three below, the latter consisting of two lateral petals and a lower lip. The lateral petals have “beards” of white hairs towards the base and the lower lip is whitish towards the base and strongly purple-veined. The lateral petals have nectar-bearing appendages that extend into a spur which is about 0.5 cm long, horizontal, and formed by the base of the lip. This arrangement and the petal markings help guide insects towards the nectaries; the pollen the insects pick up in transit will effect cross pollination for the plant.

Five narrow green sepals surround the petals, with the two lower ones straddling the spur. At the centre of the flower five stamens form a tight, cone-shaped ring around a cylindrical green ovary. The greenish stamen filaments bear pale yellow anthers with two narrow anther sacs and an orange appendage. The pale green stigma protrudes through the centre of this “cone.” The fruit is a greenish capsule about 1 cm long which, as in all violets, splits when ripe into three valves or “arms” to reveal the numerous small seeds. Some of these seeds are ejected when the capsule splits open. The seeds contain a fatty appendage called an elaiosome, making them attractive to ants, which by carrying them away aid in dispersal. Whether this is significant in the case of Bog Violet is not known, although ant mounds are fairly common within the fens.

Other violets occur in Wagner: Kidney-leaved Violet (*Viola renifolia*), common in the drier spruce woods; Marsh Violet (*V. palustris*), rare in wet areas in the south-east part of the property; and Canada Violet (*V. canadensis*) in deciduous woodland. The rare Long-spurred Violet (*V. selkirkii*) also occurs in moist hollows in mature spruce woods east of the Villeneuve extension.

Bog Violet

(Violet Family)



Photos: P. Cotterill;
2009-06-09

