

WAGNER NATURAL AREA SOCIETY NEWSLETTER

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Newsletter of the Wagner Natural Area Society, Management Committee and Volunteer Stewards with the Natural Areas Program of Forestry, Lands & Wildlife, of the Wagner Natural Area, Spruce Grove, Alberta



Road Construction Gathers Momentum



Anyone who has driven east on Highway 16X recently for the first time after an interval may find they temporarily lose their bearings as they approach the T-junction with SH 794; the old Villeneuve corner looks devastatingly different these days as construction of the overpass, scheduled for completion in fall 1993, gets under way. Also clearly visible from the highway is the great sigmoid curve of the new roadbed linking the overpass to the east/west road that runs from Hwy 60 to the southeast corner of Wagner Natural Area. A ditch has now been dug across this road where the new road begins to curve north towards 16X, creating a barrier to cut off vehicular access to the Natural Area and to allow the western portion of the road to fill in.

Don Snider, Manager of Environmental Affairs with Alberta Transportation and Utilities, noted in a news release issued last May the special provisions with which the contract for construction on the south side of 16X was to be undertaken to meet environmental concerns:

*Equipment refuelling shall not occur on the project site except in exceptional circumstances.

*The contractor shall not bury or burn rubbish on the site.

*The contractor shall erect an erosion control fence (silt fence) before placing any fill in the area.

*Equipment shall not travel outside the silt fencing except for construction of the channel realignment.

*Only vegetation clearly marked for removal by the Engineer will be cleared for fence construction.

*Reseeding will be with the following seed mixture: Slender Wheatgrass (40%), Fowl Bluegrass (20%), Alkali Grass (20%), June Grass (10%); White Clover (10%). The seed mixture will be certified, Canada No. 1 grade. Reseeding of failed areas will be done after one growing season. Initial seeding is to be done before September 28 to allow ground cover to develop before winter.

The following provisions apply to reclamation of the east/west road west of the new road:

*All fill shall be removed down to the level of the surrounding terrain.

*Culverts will be removed and natural drainage patterns reestablished.

*The contractor shall recontour the roadbed and embankment sides to suit surrounding topography.

*The abandoned road will be scarified to create suitable micro-sites for seed germination and then left to revegetate naturally.

*Vegetation will be established in the immediate vicinity of the reestablished drainage patterns by hand seeding of the seed mixture indicated above.

*Low velocity erosion control blankets may be required to ensure that sedimentation into the drainage channels does not occur.

*If natural revegetation is inadequate after one year, then seeding with the above seed mixture will be done.

Provisions for the whole project include restrictions on where equipment can be maintained and conditions for collection of fuels and lubricants, collection and removal of engine oils and containment of accidental spills. Other requirements are aimed at preventing pollution of water bodies by fluids, overburden, brush or camp refuse. Hours of work are from 0700 until 2200 unless complaints are received. Environmental monitoring is to take place during construction due to the sensitivity of the site. Further specifications apply to topsoil placement and revegetation of the landscape borrow.

Editorial

The Nordegg Syndrome--or, Getting in Touch with the Land

It's late afternoon on a showery day in the third week of July and my son and I pull off Highway 11 into Nordegg. We've been driving the Forestry Trunk Road south of Cadomin nearly all day. We need a break as well as a few groceries to tide us over the next couple of days' camping. We do a quick tour of the hamlet of Nordegg and confirm our suspicions--that it is nothing much more than a name on a map and a correctional centre. This is followed by some ineffective shopping at the one and only "convenience" store--"Yeah, we're out of milk"--and an unproductive request for help and information from two teenagers with a cavalier attitude toward customer service. So much for politicians' rhetoric and the notion of "excellence in tourism," I think sourly. Still, reluctant to get back in the car just yet, we head for the only diversion we can think of, the restaurant of the one motel, for a coffee and a cool drink.

Here a strange atmosphere envelops us. Although the room is two-thirds full, it is strangely quiet; groups of people at the tables eat or wait silently or mouth at each other without animation. Even the one waitress serving creates no bustle. I, alone, get up to look at some old photographs on the back wall. Most of them are of the main street or of various buildings or people taken when Nordegg was a thriving coal-mining town in the early decades of this century. There is even a picture of a moustached Martin Nordegg, founder of the town, himself, looking practical and confident in turn-of-the-century gear. I sit down, mollified a little, grateful at least for this one manifestation of creative tourism or civic pride in local history.

Perhaps some sad spirit of a ghost town pervades this room or perhaps it's lingering irritation on my part, or most likely, traveller's exhaustion. But suddenly I have this illusion, this fantasy that, just before we arrived, the

people in this room had been instantly transported here, as if by some Oz-ian tornado. It seems to me that they have been taken from some suburban shopping mall in Edmonton or Red Deer and plonked down here, and *they do not know where they are!* As I watch, the aura of surrealism gradually shifts and changes, like drifting northern lights, until it seems not so much a case of telekinetic transportation as of isolation. We are all of us cut off, both from the outside world and from each other, in the middle of nowhere, encapsulated in own little worlds of family and vehicle and destination. And in all this Nordegg itself is somehow implicated. Nordegg, now a mere roadside stop catering indifferently to tourists, has lost its connections with the past and failed to forge an identity in the present. It cannot give us a sense of location, cannot tell us where we are. I continued to gaze around the room. People were eating typical Canadian, cafeteria-style food, apart from one child who would not touch his brimming plate--snacked out no doubt during long hours of boring driving. (I wondered what the oldtimers of Nordegg would make of today's extravagant abundance and waste.) As I contemplated this food, the familiarity, the sameness of it, it occurred to me what I might be witnessing. Was not all this an apparition of the urbanization of Canada? Here were people living in uniform cultures in cities, driving vast distances to get to the next uniform city, taking no interest in and making no connection with the little towns and hamlets in between that perhaps may have had distinctive regional or local character. It was a daunting thought because, carried further, if people take no interest in *human* history and settlement when they travel, what hope is there that they will appreciate local and regional *natural* history? For, of course, none of us in that restaurant *had* whirled in on a tornado; all of us had driven

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Wagner Society Executive, 1992

President - Terry Thormin (482-1389)

Past President - Barry Jenkins (458-1794)

Vice-President - Derek Johnson (436-8231)

Treasurer/Membership Director - Janice Cantafio (963-3938)

Secretary/Newsletter Editor - Patsy Cotterill (481-1525)

Director/Public Relations - Alice Hendry (962-4836)



Salut, Suzanne!

Suzanne Campeau, a former member of our management committee, left us in the spring to become a project leader for Canada World Youth, an informal educational program involving young people from Canada and developing countries. Suzanne, a wetland ecologist by profession, worked hard for Wagner Society during the two years she was associated with it, and we miss her and her enthusiasm and commitment. When we last spoke with her, however, Suzanne was looking forward to getting acquainted with the ecology of Costa Rica!

The Visitor Year in Wagner

Visitors' books may not make great literature, but reading through them is always an illuminating exercise. Scanning the completed sheets from the trail-guide boxes gives us an idea of how many people are coming to Wagner, from where (although not everybody is conscientious about filling in their home town), their reasons for coming, and what their reactions are. Often the comments give us some feedback on how well we, the Society, are doing as volunteer stewards under the Natural Areas Program, reminding us, at the very least, to keep our pencils sharpened and our trail guides replenished. (Presumably the couple who commented that "each marker should have an information plaque" were not aware that there were—or should have been!—trail guide booklets available in the boxes at the trail-heads.) Most people, of course, come to Wagner for a nature walk, and most find it pleasant and relaxing and often interesting. A lot of people come from Edmonton or even very locally, but some from elsewhere in the province make annual pilgrimages, and a few arrive from much farther afield while on holiday or on tour. The main objective of many people visiting during the summer is to see orchids, and indeed some orchid species are readily visible from the Marl Pond Trail at the appropriate time. Still, in recent years we have been recommending the Cabin Trail as the best route to take to see Yellow Lady's-Slipper and its white-flowered relative, Sparrow's Egg Lady's-Slipper. To make the Cabin Trail both more accessible and "people-proof," we have done some brush- and trail-clearing this summer and have put together some sections of boardwalk to cover the wetter spots in the trail. We plan to have all this completed by next spring.

Some notable visitors this year were zoologist Wayne Roberts and Cheryl Croucher, former CBC environmental broadcaster, to tape Boreal Toad and frog calls in the early spring, the staff of Olds College

Landscape Gardener Apprenticeship program who came to study bog ecosystems, and a team of researchers from Forestry Canada. Well-known nature educators Joy and Cam Finlay visited on May 17 to gather copy for an article on Wagner for their nature walks series in the *Edmonton Journal*. This article appeared just before the last weekend in May and brought a flood of new visitors, as such articles usually do. We can only hope that many of these first-timers were sufficiently impressed to make Wagner a regular stopover on their itineraries.

Some visitors were obviously dismayed by the lack of water in the marl ponds this year. If this had been peculiar to Wagner it would have been cause for alarm, but it seems that water levels in streams, ponds and sloughs were low throughout this part of the province. As the water disappeared very early, we speculate that reproduction rates of frogs and toads have been almost nil this year. However, mammals, including and perhaps especially humans, have benefited greatly from the enormous mortality of mosquito larvae! Perhaps we can learn a lesson from this: that, in nature, conditions fluctuate from year to year, favoring the fortunes of some species at one time and others at another. In nature, at least in the short term, there are only ups and downs, not the progress, the continual improvement, that people have come to expect in human affairs.

One visitor, obviously overwhelmed by the diversity, requested that we label plants. This is a tall order—even in botanic gardens it is notoriously difficult to keep markers associated with their corresponding plants—and a plethora of markers would in any case detract from the natural effect we are trying to maintain along the trail. Perhaps in the future we may be able to publish a handy pictorial guide to Wagner wildflowers, but in the meantime we suggest that aspiring botanists join a guided tour for help with the names. (If a guided visit isn't being advertised, request one, by calling a Society executive member or the Natural Areas Program at 427-5209. We'll do our best to accommodate you.) Generally speaking, though, it's less important to know the names of plants than to understand a bit about the ecology of the area—where the water comes from, why there are different types of plant communities, how peat is formed, and so on. Reading the trail guide carefully can provide some insights on this, and again, interpretive tours are helpful.

Visitors' books may not be, as we said, great literature, but we appreciate the humor in some of the entries. We were relieved to read that the aspiring football player who was "forced" to come nevertheless had a "fine" experience (meaning, presumably, not nearly as bad as he'd thought) when he got here. To the person who

reported, jokingly or otherwise, that he came "to practise motorcycling" and then made the comment that we need "cleaner bathrooms," may we suggest that he visit elsewhere? (Actually, we think the bathrooms are not too bad at all, and apart from using them as receptacles for soft drink cans from time to time, people have respected them. Nevertheless, new holes have been dug and we hope to have the outhouses moved over them soon.) One couple, using pseudonyms, came to Wagner for "romance," and their comment was "Need we say more?" Our reply would simply be that, in Wagner, even the solitary visitor can find romance!

Car Theft a Problem

Vandalism has fortunately not proved to be a big problem in Wagner. However, this summer there was a rash of thefts from vehicles parked outside the main entrance to the Natural Area. Please ensure you lock your car before leaving it, and either lock your valuables inside your trunk, or, if they are portable, take them with you.

Trail Guide Update

We are now looking at updating our trail guides. (Things change in nature, and not all the sites now clearly illustrate what the markers and the trail guide information intend.) If you have any comments to make about the guides, please contact one of the executive at home or Natural Areas at 427-5209.

May Count 1992

A total of 52 species were recorded in flower in Wagner on May 31, the day of the May Count this year. Participants were Alice Hendry, Paul Sparrow-Clarke, Diana Barager, Aileen Rhodes, Elaine Gordon, Sharlene Becker and Patsy Cotterill. A major disappointment was not finding Calypso orchids this year. With luck this will be a passing aberration and these attractive orchids will be spotted again in future years.

Wagner Society--Emerald Award Finalist

This spring Wagner Society was a finalist, along with Ducks Unlimited (the eventual winner) and the Environmental Law Centre, in the not-for-profit category of nominees for Emerald Awards. These awards are presented by the newly created Alberta Foundation for Environmental Excellence, itself a partnership of the law firm McLennan Ross, the chartered accountancy firm of Deloitte & Touche, and Alberta Environment. They recognize "exceptional commitments to enhancing

our environment." Pat Clayton and Terry Thornin attended the awards ceremony and dinner on June 1 to accept a plaque on behalf of the Society. The Society appreciates being nominated and would like especially to thank Peter Lee, Manager of the Natural Areas program, for his support.

Summer Employees

Our thanks are due to high-school student Kelly Redinger who was our summer employee for July and part of August. His wages were paid with funds obtained under the SEED grant program. Apart from routine maintenance of the site, Kelly was responsible for such things as helping to put boardwalk sections together for the Cabin Trail; clearing brush from the cabin site to the south fence and flagging a trail along the southern part of the Cabin Trail; digging two new holes for the outhouses; transplanting about 45 Lady's-slipper Orchids from an area where road construction is in progress to places in the north field close to the end of the Marl Pond Trail; and pulling Scentless Chamomile weeds from disturbed areas adjacent to the parking lot and Tansy plants growing along the west fence line (Atim Road). As well he removed old fencing, cleaned out nestboxes and made 20 new birdhouses. Alice once again acted as volunteer supervisor and spent a considerable amount of time with Kelly "in the field." She reports that he got quite adept at spotting Bog Adder's-mouth Orchids, and became fiercely protective of them. Thanks also go to Paul Sparrow-Clarke who worked hard for us for a few weeks in the spring but had to leave because he did not meet the SEED qualifications.

Field Day, August 1

A word of appreciation to the 30 or so people who joined us for guided tours of the Marl Pond Trail and sampled our displays in the picnic shelter during our annual field day. Your enthusiasm spurs us on to further efforts.

Wagner Pins

The Society has placed an order for 100 "Wagner" pins, with delivery expected by the end of October. We plan to retail them at \$5.00 per pin. They will be 3/4 inch in diameter, in four colors, with gold outlining and lettering. The design will be similar to that used on the T-shirts and for the logo of our newsletter banner and was developed by Paula Smith. Phone Patsy at 481-1525 or Janice at 963-3938 to order one or more pins.

Small Protected Areas Stewardship

In March, Society Vice-President Derek Johnson and Don Stiles of the Federation of Alberta Naturalists attended this one-day course. It was one of seven in the Protected Areas Management Program directed by Bert Einseidel for the University of Alberta's Faculty of Extension. Derek and Don report on it here.

"Small" protected areas are those having an area of less than 1,000 hectares. Dr. Jim Butler told a class of 20 people including recreational consultants, nature centre employees, members of NGOs, and students. Butler, Professor of Parks and Wildlife Conservation at the U of A, and Lesley Brown, doctoral student, gave lectures on the themes of conservation and management of small protected areas in the morning, and directed workshops in the afternoon.

Butler, in his lecture entitled "History and Value of Small Protected Areas," noted some of the famous early conservationists such as John Muir, who was the first to use the word "interpret," Henry David Thoreau of *Walden* fame, Galen Clarke, the first park ranger (at Yosemite), and Jack Miner, who worked with geese in Ontario.

Butler showed slides of some small protected areas around the world and gave a perspective on each. Small protected areas may be under the charge of a ranger, steward or custodian, and may be variously titled conservation area, preservation area, sanctuary and so on. Some of the names commonly used in Canada are "Watchable Wildlife" area, catch and release area, natural area, wildlife preserve or world heritage site.

According to Brown, holistic management of small protected areas, the focus of her lecture, involves looking at the big picture: the economic, social and biological health of an area. Brown described the phenomenon of fragmentation--the breaking up of a once much larger and continuous habitat into smaller portions by human settlement and development. The smaller a reserve, of course, the more vulnerable it is to outside forces. Effects of fragmentation include loss and alteration of habitat, changes in species composition, an increase in barriers to movement, inbreeding (because organisms' freedom of movement is restricted) and an increase in disturbance. Wind, light and moisture alter with fragmentation. For example, a road through a habitat changes these factors such that habitat up to 200 metres from the road edge is severely affected, and from 200 up to 400 metres, moderately so. While artificial edges do favor some bird species, for example, these are usually the commoner

ones, such as Robin, Magpie and Tree Swallow. Interior species such as Hairy Woodpecker and Pileated Woodpecker experience loss. Managers advocate buffer zones as a means of reducing the effects of fragmentation. Brown further argued that education is needed to counteract some popular misconceptions--that protected areas "lock up" economic resources, for example, or that ecological reserves are "distant" places visited only by scientists. Besides fragmentation, threats to protected areas come from inadequate management, often the result of budget constraints, human encroachment and abuse, industry and agriculture, and the introduction of exotic species. Holistic management includes such things as developing an information base (on the biology and wildlife of the area), setting measurable objectives and drawing up a management plan. Other features of this type of management style are public relations, community involvement, contributing to the economy (for example, by ecotourism), contacting landowners (who cooperate in creating buffer zones), research, staff training, environmental education and visitor programs, and networking.

Networking was one of the topics discussed in the afternoon workshops and recent natural areas conferences in Calgary and Edmonton (Sherwood Park) were cited as good examples of it. Perhaps small protected areas could be an agenda item on annual municipal conferences on recreation?

To improve public relations, more could be done to persuade politicians of their "no-maintenance" value (and hence lower costs long-term), and promote natural areas by advertising through the media, nature centres and on-site signs. Course participants were reminded that property values are higher in the neighborhoods of protected areas! Participants endorsed the value of active management--for example, using controlled burns and pulling weeds--as passive reclamation is too slow. They also believed it important to assign priorities in selecting areas for protection. Having a data base can provide the science needed for making a choice, but judgment and vision make the choice an art. Noting the importance of public perception, Butler concluded with the suggestion that hunting for the Long-toed Salamander can be made as appealing as hunting Elk!

A number of handouts were made available at the course, including two papers by Lesley Brown on management of small natural areas. Contact Derek if you would like further information on these.

The Nordegg Syndrome

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through huge tracts of forested wilderness to get there. Small wonder that we felt we were in the middle of nowhere--such forests *are nowhere* because they have no meaning or value to us--there is nobody to interest us in them, nobody to interpret them for us. I pondered then for some moments Canada's environmental oxymorons. The relatively small human population of this country allows for wilderness and even for some forms of larger wildlife, but at the same time obliterates vast wildernesses in the name of global (human) economy. There is also the fact that though Canada still has wildland, in our urbanized culture few people live in intimate contact with the land, knowing and caring for it and being willing to protect it against depredations in the interests of this same global economy.

I left that eerie restaurant feeling depressed, a depression that did not lift even when we were back on the Forestry Trunk Road, connecting with the gravel road through the car's rattle and at least making visual contact with the forest. It continued even after we camped at Ram River Falls Recreation Area--a beautiful but unpopular campsite that I'll lay a bet none of our Nordegg diners followed us to. (Here I pondered my own oxymorons: how I could feel loneliness in that campground, a need for human communication and interpretation, and yet at the same time find selfish satisfaction in its solitude--the fewer people there are around, the more the world belongs to me!) My gloomy mood persisted throughout my desperate attempts to make connections with that local landscape. It persisted even after I'd chatted with someone who really did appreciate his local surroundings--a retired camper who'd been born in Mountain Park, ridden horses all through the Coal Branch, had driven his car across the Cardinal River before the bridge was built and had camped pretty near every weekend of his life. It didn't entirely go when I stared for minutes on end deep into the lodgepole pine forest--a study in contrasts under a lowering sky: dark olive-green of tree canopy, blackish gloom between the trunks, glaucous green of hairy wild rye at the base. It remained when we

visited the falls, twice in one day, marvelling at the layers of dark rock making up the canyon, bent almost at right angles by the great forge of the earth. It hovered like a mist when I drank in the glacial-green of the North Ram River as it skated with incredible speed over shallows, or ponded, pristine-clean, in backwaters. It was there when I listed all the plants in the mountain meadow (the overflow campground, but is it ever needed?), resplendent despite, or perhaps because of, the rain in yellow, white, blue, purple, pink and red. It wasn't entirely dispelled when I found a little strip of Rough Fescue grassland between the forest and the river bank, and revelled in the great tussocks of grass and the Prairie Smoke still in flower. It condensed like dew at night in the tent when with a flashlight I read Don Gayton's *The Wheatgrass Mechanism* and tried to make connections with someone else's experiences with the land. But on the evening of the second day it lifted, and neither reason nor fantasy had anything to do with it: I simply saw the sky turn red. (In the morning, the promise of sunshine was fulfilled and I reflected that, though we may not understand the earth, we are all attuned to the sun!)

So what has all this got to do with Wagner Natural Area, you ask? Nothing, specifically. But, back on the theme of the urbanization of Canada, I do wonder if natural areas, especially those close to cities and towns, can't act as nuclei for a return of people to the land. I wonder if they can't somehow become what hamlets and farms and teepee encampments were in the past--links in a chain of settlement that allow human intimacy with and knowledge of the land. Getting to know our local natural area gives us a break from the monotony of suburban sameness, diverts us with some local natural color. At worst, natural areas are good therapy for the stress of isolation from nature; at best, they could make us care enough about nature to save this planet. Getting to know our natural areas will not make us Ph.D.s in ecology, but surely it will provide the antidote to the Nordegg syndrome. It will stop us becoming a bunch of stuffed dummies in our own little urban and domestic space capsules, out of touch with our natural environment!

Patsy Cottorill

Upcoming Activities

The following are all free and open to everyone. Bring your own coffee mug.

Wednesday, October 21, 1992 ANNUAL MEMBERS' NIGHT, WAGNER SOCIETY. 7:45 p.m., Provincial Museum Auditorium. Jim Butler will speak on *Small Protected Areas: Their Benefits to Society and Biological Conservation*; Peter Lee on *The Role of Wagner and Other Small Protected Areas in Alberta*. The evening will also include presentation of the Annual Recognition Award, president's report and refreshments.

Thursday, October 22, 1992 Edmonton Plant Study Group Meeting. *Hawaii: Garden of the Tropics*. Derek Johnson will lecture and show slides on exotic introductions to Hawaii in the ground-floor lecture room of the Provincial Museum at 7:30 p.m.

Thursday, November 26, 1992 Edmonton Plant Study Group Meeting. *Cardinal Divide: Alpine Refuge*. Joyce Gould of Natural and Protected Areas will talk and show slides on this significant ecological area in the eastern Front Ranges.

Foresters Keep Abreast of the Times

Federal scientists are keeping abreast of the study of climate change by using up-to-date medical technology. This summer, forest researchers from the Northern Forestry Centre in Edmonton took "mammograms" of samples from trees growing in Wagner Natural Area. But they were not looking for pathological growths; they were checking out techniques for studying normal growth patterns of wood in trees. Seasonal increments in girth of tree trunks reflect the varying kinds of growing seasons and conditions the trees have experienced throughout their lives and tree "cores" are routinely taken to determine such increments. A core is obtained using a special instrument that is drilled into the tree trunk and then used to extract a narrow segment of wood, or core, from along its radius. In this core the seasonal increments in growth corresponding to annual growth rings can be seen and measured.

Cores were taken from Aspen, Balsam Poplar, Paper Birch, Tamarack, Black Spruce and White Spruce trees from three sites in Wagner. They were about the width of a narrow pencil with the growth rings showing as vertical bands. There was nothing unusual about this. But when the cores had been mounted between thin slats and sanded down on both sides to a thickness of 2 mm, they were taken to the W.C. Mackenzie Health Sciences Centre for X-ray with mammography equipment! The study report noted that the technique was a success but that the mammography was carried out amid tit-ters of laughter! Even so, it is hardly a laughing matter for the trees. Bear in mind that tree coring replaces the need for felling a tree to expose a cross-section of its growth rings in entirety. Thus these mammograms could be said to have saved tree lives!

Membership in Wagner Natural Area Society

Paid up members of the Wagner Society, including the executive, presently number 39. The membership year ends December 31. Please consider renewing promptly to continue your support of the Society and Wagner Natural Area. Fill out the membership/renewal form below and mail it with a cheque made out to Wagner Natural Area Society. Do the same thing if you are joining the Society for the first time. As a member, you will receive free copies of the newsletter, (about 3 per year) and an invitation to the Annual Members' Night in October. Field trips and other activities are organized from time to time. Donations are tax deductible. For more information, contact Janice Cantafio, 963-3938.

Please include me as a member of the Wagner Natural Area Society!

___ Family \$12 ___ Individual \$10
___ Student \$8 ___ Senior \$12

Besides my membership fee, I enclose a gift to support the activities of the Wagner Natural Area Society: _____

Name _____

Address _____

Town/City _____

Province _____

Postal Code _____

Telephone No. _____

Mail to: Janice Cantafio, Membership Director, Wagner Society, Box 842, Stony Plain, Alberta T0E 2G0



More clearing for road construction? No, this deforestation was caused by natural agents: the beaver inhabiting the dugout at the west edge of Wagner Natural Area adjacent to Atim Road. Watch for a feature on beaver management in an upcoming issue of the newsletter.

For further information on Wagner Natural Area or other Natural Areas in the province, or to report information or emergency situations in Natural Areas, call Public Lands at 427-5209.

Wildflowers of Wagner (2)

Gentianella crinita Fringed Gentian

Gentianaceae Gentian Family

Visitors to Wagner Natural Area in mid- to late summer (July and August) will easily recognize this tall, slender plant with attractive deep violet-blue flowers. It grows abundantly in Wagner's fens and sedge meadows, wet calcareous meadows and shores being its ideal habitat.

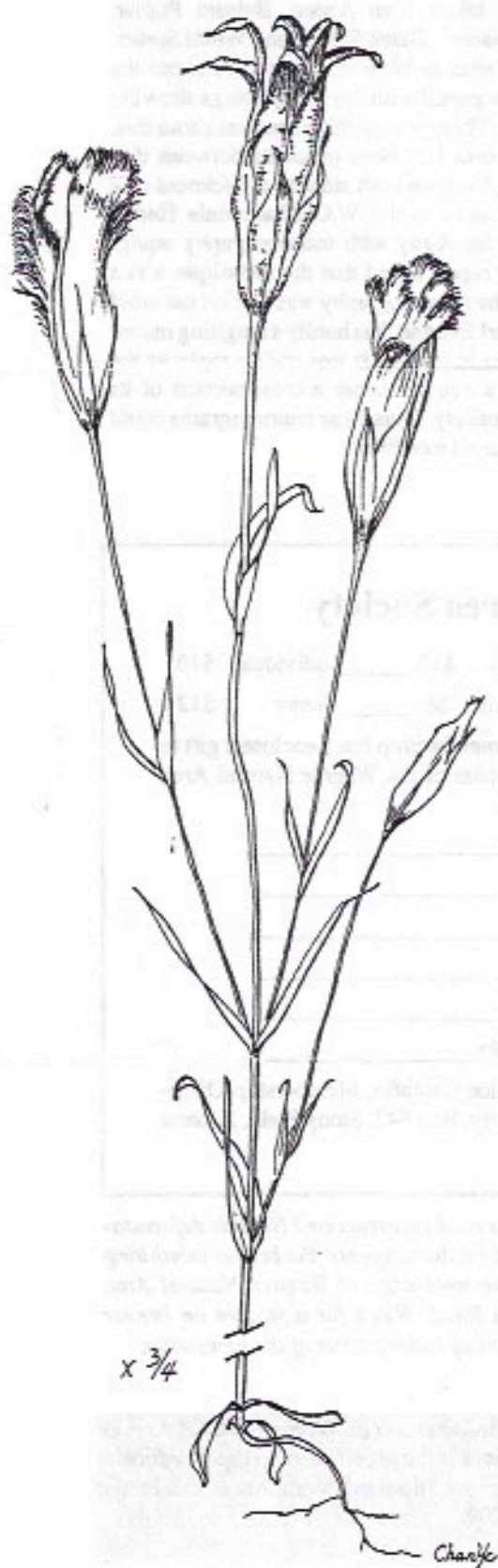
It is an annual or biennial, which means it relies on abundant seed production and high germination rates to propagate its kind. It has only a small taproot, and cannot persist throughout the winter or reproduce vegetatively. The smooth stem grows upright to about 40 cm high, and is unbranched or bears a few slender branches terminating in flowers. The paired, opposite stem leaves are narrow and pointed, from about 2 to 6 cm long.

The few flowers are large (up to 5 cm long when fully developed), slender funnel-shaped and showy. The corolla consists of four petals which are joined at the base to form a tube but are free and flaring at the top. The edges of these free lobes are teased out into tassels or fringes that give the plant its name. The corolla sits inside a tubular green cup or calyx, also four-lobed. The green calyx lobes have pointed tips, membranous blue or whitish edges and ridges or keels which bear tiny white dots or papillae. Nectar glands occur in a ring at the base of the corolla lobes and alternate with the four stamens, each with a long pollen-bearing anther. The two-parted ovary, which at flowering time is capped by a large flatish stigma that collects pollen, develops into a cylindrical brown capsule which eventually elongates beyond the withered remains of the flower. The tiny brown seeds are borne all over the inside of the capsule. The latter splits along its "seams" at the top, releasing the seeds when shaken by the wind. The stiff, brown, ruptured capsules are often visible well into the winter.

Distribution: *Gentianella crinita* occurs in suitable habitats in the west and central parts of the province and farther south.

Other Species: A look-alike species with the same common name, but differentiated botanically as *G. detonsa*, occurs in northern Canada, especially the northeast. It enters Alberta in Wood Buffalo National Park. Another member of the genus *Gentianella*, *G. amarella*, or Felwort, also occurs in Wagner, and is reasonably common, for example, at the old cabin site and to the south of it along the Cabin Trail. An annual or biennial plant of moist woodland and meadows, it cannot be confused with the Fringed Gentian. It is a much smaller plant whose shorter, violet-blue flowers (up to 1.5 cm long) lack the marginal fringes of *G. crinita* but instead have fringes at the mouth of the corolla tube.

Taxonomy: In identifying what are commonly called Gentians, care must be taken to distinguish between plants that belong in the genus *Gentianella* and those that fall into the genus *Gentiana*. The two genera differ in a number of ways, one being the existence in *Gentiana* (but not in *Gentianella*) of folds or "plaits" of tissue in the hollows where the ridged corolla lobes are joined. There are no *Gentiana* species in Wagner.



Drawing by Yuet Chan