

# WAGNER NATURAL AREA NEWSLETTER

Volume 11, Number 2 November 1997

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



Wagner Natural Area Society presents

## Annual Members' Night 1997

on Thursday, November 20, 1997 at 7:30 p.m.  
in the Ground Floor Lecture Room of the Provincial Museum.

**Dr. David Chanasyk** of the Dept. of Renewable Resources, University of Alberta,  
a hydrologist and applied soil physicist, will speak on:

### "Our Attempts to Live With Water"

President's Report ♪ Treasurer's Report ♪ Refreshments

Admission is free. ♪ Buy or renew memberships in Wagner Society.

*View of the main fen at the  
south end of the Marl Pond  
Trail.*

*Water is the raison d'être of  
Wagner Natural Area.*

Photo by P. Cotterill



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## Farewell (but not Goodbye) to Peter Lee!

**P**eter Lee, formerly of Alberta Environmental Protection, Provincial Parks, and a host of other names by which this government department has been known in the past, was given a farewell luncheon in his honour on September 12, 1997. Pete's erstwhile government colleagues were present *en masse*, but we on the Wagner Society executive put up a good showing too. Numerous speeches were made, most of them attesting to Peter's abilities as a leader, though the tone did change at times to comic and often hyperbolic relief with Dr. Jim Butler's "slide show" and the notorious account of Peter's *bearly* attractive underwear lost and found in the remote bush. In response, Peter gave another of the inspiring speeches that have become his hallmark. He quoted as his inspiration in turn his father's admonition to be "a gentleman and a scholar" and credited his passion to save wild land as the driving force behind his desire to move on.

Our tributes to Peter consisted of a letter read by President Pat Clayton in which we "designated" him "Sir Natural Area" invoking our authority as the "model (guinea pig?) ... Natural Area", a "thank-you" speech by Alice and the gift of a framed photo of a Yellow Lady's-slipper (taken by Leota Cummins).

Here is part of Alice's presentation:  
"Since our society was formed in December of 1982, you have been through a lot with us. Together, we have met challenges, survived frustrations and shared triumphs. *You* learned a lot from our partnership. Your experiences with us served in many instances as firsts for the volunteer steward program. We were, for instance, the first volunteer group to manage a natural area, we were the first to fight a road development. In a way, we served as willing guinea pigs for a program that this province can look upon with pride. Without your vision and dedication, there would not be a volunteer steward program in Alberta, there would not be a Wagner Natural Area Society and there would not be a Wagner Natural Area.

"*We* learned a lot from working with you. You provided the inspiration for much of what we have accomplished. When we were discouraged, you provided encouragement.



When we needed support, you were there. When we needed guidance, you were our guide....

"Without this support and encouragement we would have burned out long ago. Instead, we just held our 146<sup>th</sup> directors' meeting. The last time our volunteer hours were added up, for the period from the end of 1982 to the end of 1995, we had put in 11,710 volunteer hours for Wagner Natural Area. That is 292.75 40-hour weeks, or five-and-a-half years of free labour. And we know that many other volunteer stewards, groups and individuals, have put in similar hours. You can be proud of the volunteer steward program<sup>1</sup> and what it has meant to Alberta.... Thank you, Pete."

~~~~~

Peter has joined World Wildlife Fund Canada at their Regional Director for Alberta, Endangered Spaces Campaign. The goal of that campaign is to establish a network of protected areas representing Canada's environmental diversity by the year 2000. As such Peter will be spending a lot of time on Alberta's controversial Special Places initiative. He views his new responsibilities with enthusiasm because, he says, "as difficult and divisive as Special Places has become, it is still an opportunity for Albertans to realize a reasonable, wonderful, provincial preservation goal in a national and global context."

Peter will be working out of his home in Edmonton and, like many of his friends and colleagues, we look forward to a continuing partnership and friendship with him.

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<sup>1</sup> Started in 1986.



## The Wagner Grapevine



### May Count, 1997

The Count took place on Sunday, May 25 this year, and another late spring (for the third year in a row) was reflected in the relatively low total of 51 species recorded in flower.

Participants this year were Patsy Cotterill, Rae Ehrman, Birgit Friedenstab, Alice Hendry, Michelle Johnson, Stephanie Proudfoot, Ray Schmelzeisen and Pat Wishart. Several species are included in this total that were not in flower in Wagner NA proper but were flowering on Alice's Hendry's property in Osborne Acres, southeast of Wagner. An example is the orchid pale coralroot (*Corallorhiza trifida*), which was only in bud in Wagner but in flower at Alice's. The woods behind her house also yielded western Canada violet and marsh violet, (*Viola canadensis*, *V. palustris*), although none could be found in Wagner, despite a careful search for the latter species along Morgan Creek near the east perimeter. This area was, however, productive of the rare long-spurred violet (*V. selkirkii*) which comes into bloom mid-May. Alice's sharp eyes spotted the diminutive heart-leaved twayblade (*Listera cordata*), making this the only orchid record for the Count this year. Saline shooting star (*Dodecatheon pulchellum*) just scraped into the record with a report of a flower on May 27.

Elisabeth Beaubien, Research Associate in Phenology at the U of A's Devonian Botanic Garden predicts that we should have an early spring next year due to El Niño, which is already bringing us a warm fall. Writing in *Iris* (29, Fall 1997), she notes that records for over 20 years (1973-1996) show that all strong and medium El Niño events have meant early flowering for central Alberta. So, in 1998, species counts could be back in the 80s!

Anyone who is interested in phenology (tracking flowering times) and has Internet access can check this out further at <http://www.biology.ualberta.ca/devonian.hp/pwatch.htm>. Elisabeth is also producing a *How to Plantwatch* manual for distribution in March next year.

Derek Johnson compiles the May Count flowering plant records for Alberta and does an excellent job of collecting, verifying and reporting diverse records from all over the province. The results of each count are published in a spring supplement to the *Alberta Naturalist*.

### Late Spring, Wet Spring

A heavy winter snowfall combined with plenty of wet weather in April, May and June combined to present visitors to Wagner with some surprises when they ventured out along the Marl Pond Trail this spring and early summer. Many parts of the trail were inundated and impassable to those who were not well-booted or not averse to wet feet. (Well, Wagner is a wetland, and it's always advisable to wear rubber boots in the spring.) We hope that this high precipitation will have boosted the populations of frogs and toads, whose tadpoles to survive must complete development and metamorphosis before the marl ponds dry up in mid to late summer.

### Summer Employee

As noted in last spring's newsletter, we were unsuccessful in obtaining a SEED grant to fund a student to work in Wagner over the summer, losing out to other groups who could afford to top up the employee's wages to a competitive level. This scenario is likely to be repeated next year, so we are looking at alternative options, for example, sharing a student with Clifford E. Lee Nature Sanctuary or soliciting grant money. (If anyone knows of a likely sponsor, please let us know.) Still, we were not without help. Brent Huchuk was kindly loaned to us on fine days by the Federation of Alberta Naturalists, who were employing him courtesy of Epcor. Under the supervision of Irl Miller and Pat Clayton, Brent carried out maintenance duties, including painting the picnic shelter and biffies, putting gravel on the trail and anti-slip strips on the boardwalk, and some brush clearing. Thanks Brent, and thanks also to F.A.N. for agreeing to the sharing arrangement!

*Continued next page...*



## The Wagner Grapevine



...Continued from previous page

### What Have We Been Doing?

**Management Plan:** We have made some revisions in response to suggestions by other government departments with an interest in this plan, e.g., Natural Resources Service and Public Lands. A final version is in production. Our management plan now includes a fire management plan.

**Donor Recognition Plaques:** We are in the process of purchasing plaques for installation on site.

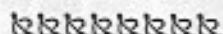
**Maintenance:** With all the changes and shifts and downright disappearances in government departments it's difficult to find good help these days! We knew the floods would go away but deadfall on the fences and across the trails from the May snowstorm was another matter. Still,

we got some of it cleared and, thanks to Irl Miller, Derek Johnson and Dave Ealey, some needed fence-mending got done on our fall clean-up day, October 4.

### Bouquets

Thanks to **Dick Clayton**, whose regular assistance on clean-ups and with maintenance of the trail guide post signs we tend to take for granted. Dick is a member of the management committee of Clifford E. Lee Nature Sanctuary, but lends his expertise and carpentry skills to Wagner too.

Bouquets also to **Jeanne Oh**, **Mike Jenkins** and **Glenn Jenkins** who have helped out in various ways during the season.



### Wagner Society Executive, 1997

|                             |                                                                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| President                   | Pat Clayton (456-9046)                                                                                                             |
| Past President/Treasurer    | Dave Ealey (422-0858)                                                                                                              |
| Vice-President              | Irl Miller (455-3866)                                                                                                              |
| Secretary/Editor/Membership | Patsy Cotterill (481-1525)                                                                                                         |
| Directors                   | Leota Cummins (447-4256); Alice Hendry (962-4836);<br>Beth Jenkins (458-1794); Derek Johnson (436-8231);<br>Edgar Jones (436-5327) |

### Please Communicate!

To report concerns/observations for immediate attention, please call:

**Wayne Holland, Land Resources Manager, Public Lands at 464-7955.**

For general information relating to the Natural Area or the Society, or to let us know that you intend to lead a group tour, call our voice mail at 988-4477 and leave a message. We will reply within a few days.

**Eco-Topical Quote:** "No reputable scientist claims that climate warming is 100 per cent certain. They say that it is very likely to occur, and that if it occurs, the results will be detrimental to economies and social structures, as well as to ecosystems. We cannot wait 20 years to act, for once in the atmosphere, greenhouse gases remain there for decades, and we can do nothing to counter their effects."

David Schindler, Killam Professor of Ecology, University of Alberta, writing in *The Edmonton Journal*, A17, November 8, 1997.

## Snails in Wagner Natural Area (based on a study by Jeanne Oh)

In the summer of 1996, our summer employees **Glenn Jenkins** and **Jeanne Oh** undertook a survey of snails in Wagner. The idea for this project came from **Joyce Gould** of the Alberta Natural Heritage Information Centre, Dept. of Environmental Protection, who was interested in knowing whether any of the rare snails of the family Hydrobiidae were present in Wagner. Jeanne (who did most of the study) did not find any of these rare snails, but since such a study had not been undertaken before, even the information she obtained on common snails was of interest.

Snails are members of the class Gastropoda, largest of the 6 classes of the phylum Mollusca. Gastropods include land, freshwater and marine forms with shells such as periwinkles, conchs, limpets, abalones, land and pond snails and the shell-less land slugs and sea slugs. The majority of gastropods have a shell, a single spirally coiled structure that is usually sufficiently large for the animal to retreat into for protection. The head is well developed, with tentacles, eyes and a mouth with jaws and a rasping ribbon-like tongue or radula. The muscular foot allows for a creeping locomotion.

In the subclass Pulmonata (lung-bearing snails), to which all Wagner's snails belong, respiration takes place through a pulmonary cavity, well supplied with blood vessels and with a contractile opening. Some pulmonates are entirely aquatic, filling the pulmonary cavity with water from which they extract oxygen, while others (all Wagner species) breathe air at the water surface or on land. Most Pulmonates are herbivores, feeding on plants and algae. They are hermaphrodites, having both types of sex organ in each individual. Eggs are produced in jelly-like masses, often within capsules, and hatch into miniature adults.

Wagner has several representatives of the 2 large families Lymnaeidae (pond snails) and Physidae (bladder snails) which are thin-shelled, freshwater animals. In the Physidae the aperture (of the shell) is on the left (sinistral), and in the Lymnaeidae on the right (dextral). Snails of the family Planorbidae (ram's horn snails) have flattened shells, coiled in a single plane.

Jeanne collected from 5 freshwater and 4 terrestrial sites in Wagner, using a pond net in

the aquatic sites and putting down plywood sheets (which were sometimes mysteriously moved, probably by well-meaning visitors who thought they were garbage!) to catch the terrestrial species. Jeanne tried to collect for preservation only representative specimens, identifying on site where possible, and returning all surplus snails to their habitats. She noted a decrease in density of snails as the summer advanced into a hot, dry August. The snails of the marl ponds had to bury themselves under the marl or move into deeper waters to survive. Besides the species listed below, Jeanne often found the gray garden slug, *Deroceras reticulatum*, a European species found in cultivated areas, on her plywood traps. This species was most abundant in the main field near the picnic shelter, attached to the base of vegetation. Incidentally, Jeanne also found the shells of a freshwater clam, *Sphaerium* sp., (Mollusca, class Bivalvia) in fast-moving streams on the way to Chris Miller's study site.

In her report, Jeanne observed that (pulmonate) snails can act as indicators of water quality. As they do not rely on dissolved oxygen in the water (as air breathers) they can tolerate water that contains high levels of organic matter.

Jeanne and the Wagner Society would like to thank Dr. **Hugh Clifford** of the University of Alberta and Mr. **Jim van Es** for guidance with this study and for considerable help with identification (immature snails being particularly difficult to identify).

Here are the snail species Jeanne found:

### Family Lymnaeidae

*Lymnaea stagnalis jugularis*. Found in the large marl pond along the Villeneuve extension south of the Wagner property, this is a species of perennial waters in which vegetation is always present. It is larger than *Stagnicola* species.

*Stagnicola catascopium catascopium*. Found all over Wagner NA, and abundant in Jones's Pond, it resembles *S. elodes* but has a larger, heavier shell with a low spire, broad aperture and inflated whorls.

*Stagnicola elodes*. The most common species, found on vegetation all over Wagner, it reached

a density of >200 individuals per square metre at Post 17 along the Marl Pond Trail.

**Family Physidae**

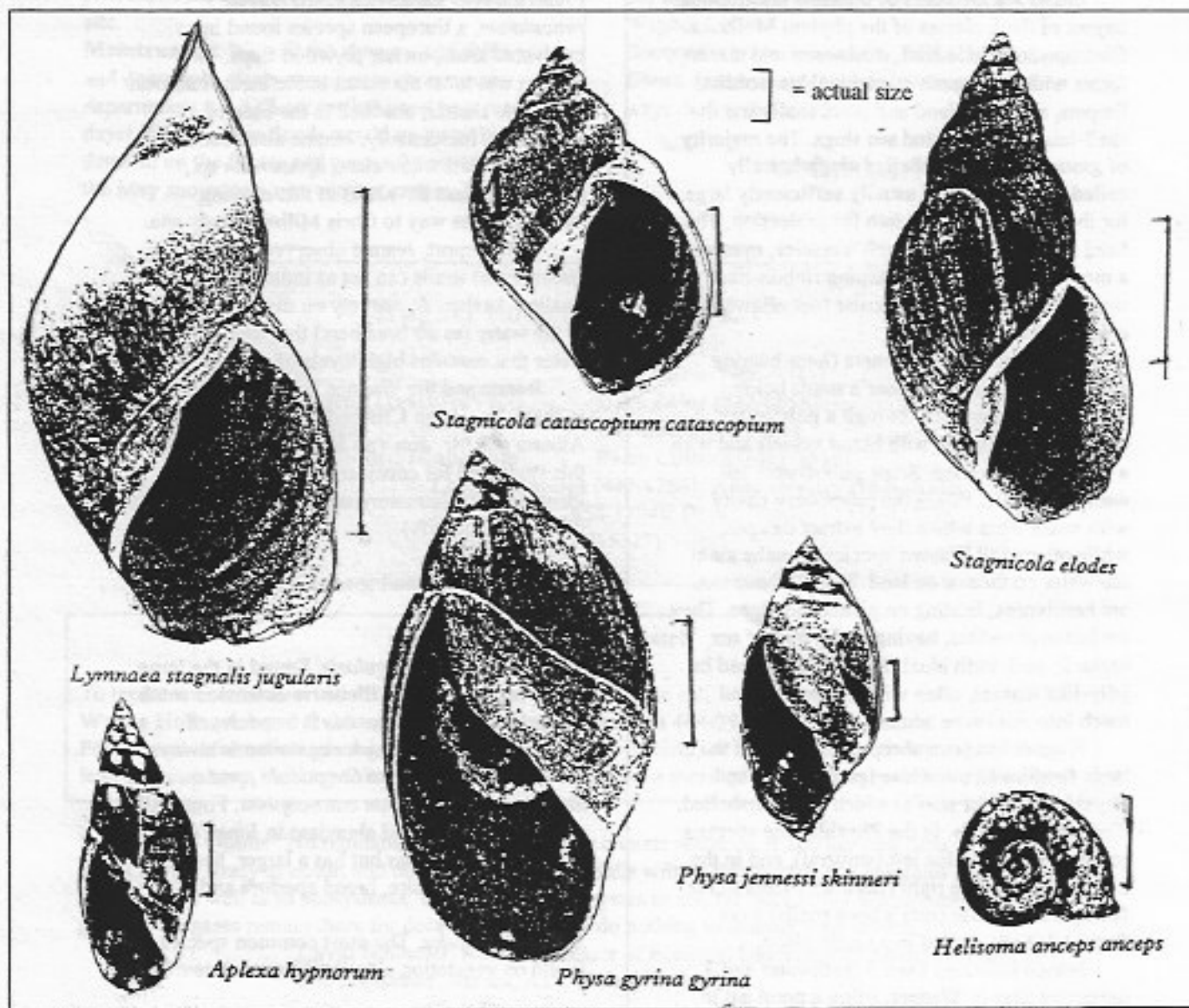
*Aplexa hypnorum*. Live specimens have a glossy jet-black shell and are more elongated than *Physa* snails. This species occurs in temporary (rarely permanent) water bodies and was found in Wagner NA in the creek near the parking lot. *Physa gyrina gyrina*. The apex of the shell is more pointed than in *P. jennessi skinneri*. This species tolerates water with relatively high organic content; if it is the only species present organic matter may be present to excess. *Physa jennessi skinneri* (Blunt Prairie Physa). A species of muddy bottoms in lakes, ponds,

marshes and slow-moving streams, it was found at Chris Miller's study site.

**Family Planorbidae**

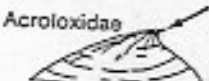
*Helisoma anceps*. This species with a flatly coiled shell lives in permanent water bodies. It was most abundant in Jones's Pond and in the south fens.

Besides the aquatic snails listed above, Jeanne found land snails belonging to the *Succinea* genus (family Succineidae; amber snails). Always found near water, especially shallow water, they occurred all over Wagner Natural Area. Their identification to species is difficult as it is based on reproductive anatomy.




### Key to Some Alberta Snails


(adapted from Clifford, H.: *Aquatic Invertebrates of Alberta*. 1991. Edmonton. University of Alberta Press.)




Acroloxidae




Ancyliidae




Valvatidae



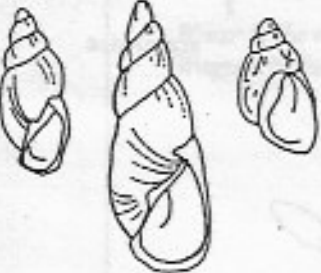
Physidae




Hydrobiidae



*Radix auricularia*



*Stagnicola*



*Physa*

1. Shell saucer-like, no whorls.....  
(includes snails with apex of shell pointed, family Acroloxidae e.g. lake limpet, *Acroloxus lacustris*; and snails with apex blunt, family Ancyliidae (freshwater limpets); no Wagner representatives of either family)..... 2
1. Shell with whorls, not saucer-like..... 2
2. Whorls in 1 plane, no spiral ..... family Planorbidae  
(ram's horn snails; e.g., *Helisoma anceps* in Wagner)..... 3
2. Whorls of shell in a spiral, sometimes a very low spiral..... 3
3. Whorls in a low spiral; shell wider than high; operculum present in living specimens ..... family Valvatidae (no Wagner species)
3. Whorls of shell in a relatively high spiral, shell higher than wide; operculum present or absent ..... 4
4. Aperture on right when facing you and spire of shell pointed up ..... 5
4. Aperture on left when facing you and spire pointed up ..... family Physidae  
(bladder snails; see family key)
5. Shell usually not > 6 mm high; no operculum; apex usually pointed; common species: ..... family Lymnaeidae (pond snails; see family key)
5. Shell very small, < 6 mm high; operculum in living specimens; apex blunt; rare species ..... family Hydrobiidae (not known from Wagner)

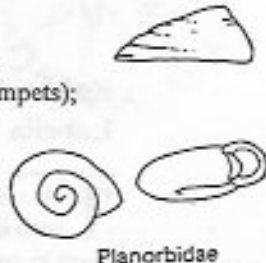
**Family Lymnaeidae (pond snails)**

1. Aperture very large, almost as large as height of shell ..... e.g., *Radix auricularia*  
(ear pond snail; shell height to 30 mm; not found in Wagner)
1. Aperture always < 4/5 height of shell ..... 2
2. Shell not > 35 mm high (in Wagner species)..... 3
2. Shell very large (in mature specimens); to 50 mm high; shell inflated\* .....  
..... *Lymnaea stagnalis* (great pond snail)
3. Shell > 11 mm high ..... *Stagnicola* species
3. Shell < 11 mm high ..... (no representatives known from Wagner)


\* a juvenile of *L. stagnalis* of about 6 mm would have about 2 whorls, whereas a 6 mm specimen of the other lymnaeids would have 4 or more whorls

**Family Physidae**


1. Shell elongate, appearing glossy ..... *Aplexa* species  
(shell height to 18 mm)
1. Shell more inflated, not so glossy ..... *Physa* species  
(shell height 7-25 mm depending on the species)




Planorbidae




OP



Lymnaeidae



*Lymnaea stagnalis*



*Aplexa*

## Wildflowers of Wagner No. 12

### Kalm's Lobelia Lobelia Family

This slender biennial or short-lived perennial herb is a common though never abundant plant in our fens, where it blooms from mid-July into August, about the same time as the fringed gentian.

The stems grow 10 to 40 cm high and are mostly unbranched and hairless. The leaves along the stem are simple, stalkless and narrow, either linear or narrowly lanceolate; while the basal leaves are usually smaller and spatula-shaped, narrowing from a broader blade into a stalk; they are often inconspicuous or gone by flowering time. About 2 to 6 attractive mauve-blue flowers, 8-15 mm long, are borne in a terminal inflorescence on slender pedicels which have a pair of narrow bractlets about mid-way along their length.

In the flower, a green cup-like calyx with 5 narrow sepal lobes surrounds the two-lipped corolla. The 2 lobes of the upper lip stand erect and are deeply split; the 3 lobes of the lower lip are spreading. The corolla lobes usually have a white centre, giving the effect of a white "eye" to the flower. The 5 stamens are inserted at the base of the corolla tube but their blue anthers are joined in a ring round the purplish style and protrude from the split corolla. A close look will show that the 2 lowermost anthers have bearded tips. Seeds are produced in a 2-celled capsule that opens at the top.

A delightful component of calcareous meadows, Kalm's Lobelia is not likely to be confused with other flowers. Its only close relatives in Alberta do not grow in our area. *Lobelia dortmanna*, an aquatic perennial, and *L. spicata*, a prairie species, are both rare, being predominantly plants of eastern North America. The genus name honours Matthias de l'Obel, a 16<sup>th</sup> century Belgian botanist, and the species is named for Per Kalm, a student of Linnaeus, who travelled in Canada in the mid 1700s.

### *Lobelia kalmii* L. Lobeliaceae

