

Botany Alberta 2005: Blood Reserve

by Elaine Gordon

The Kainai Reserve is located in southwest Alberta, west of Lethbridge and directly north of Cardston. It is bordered by the Belly River to the West and North and the St. Mary's River on the East. From Highway 2 the land appears flat and rather uninteresting. In fact, this country is incredibly beautiful and diverse, with hills and gullies, and always the mountains in the background, with the distinctive Chief Mountain standing out from all the others.

In 2004 I had the pleasure of working on the Swift Fox Reintroduction Project on the reserve. Working with a team of researchers, we conducted a baseline study of all the birds, insects, mammals, and plants in potential release sites. Twelve foxes were released in September, 2004, of which ten are still alive. More foxes will be released over the next five years until a substantial population is established. A similar reintroduction was highly successful in Montana and it is hoped that the two populations will eventually join via a wildlife corridor.

Botany AB 2005 was an enigma on all counts — with highs and lows all at the same time.

Kainai

The highs began with the crossing of the Belly River and the colourful road sign welcoming everyone to Kainai lands with the familiar "Okī" (hello). While they

were formerly called the "Blood" Tribe because of their traditional ochre face paint, which is still used occasionally, they are now more commonly referred to by their traditional name "Kainai" which means "many chiefs". The highs definitely included the hospitality and friendship of the Kainaiwa who, as always, went overboard to make us feel welcome. They had quite a day planned for us and it became more and more interesting and fun as time went on and we became more familiar with each other. Kenny Many Fingers, Kansie Fox, Jermayne Wells, Jane Fox, my husband, Don Gordon, and I made up our intrepid little group.

carefully backed away to go plant hunting.

This site was quite badly over grazed, but we still found some beautiful old favourites. Shining arnica (*Arnica fulgens*) was in full bloom as were the brown-eyed susans (*Gail-*



Kainai Entrance Sign photo: E. Gordon

Burrowing Owls

Burrowing owls have now been verified on the reserve, so our first stop of the day was to check out the plants at the burrowing owl site. Here is where we ran into our first enigma. We were really excited to actually see the adult burrowing owls — a first for both Don and me. However, their burrow was on the side of a gravel driveway; not at all what we had expected, especially after the classic photos we've seen of burrows in the middle of unbroken prairie grassland. A driveway? I'm sure the owls must have had a good reason for picking such a site. Two young babes were in the burrow, so we took photos and

lardia aristata). In a similar site last year I found the most intriguing little plant, least mouseltail (*Myosurus minima*), on the edge of a prairie pothole. While not a rare plant, it is not very common and is very restricted in its range. We looked for it but it was not to be this time around.

Kenny Many Fingers

Kenny's family is very plant-oriented, and he has extensive knowledge of the uses of native plants. He has also recently graduated from the Traditional Land Use Program at Red Crow College. This led to some really interesting discussions. As I

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identified (or tried to identify) plants, Kenny would give us some of the medicinal uses. For example, wild bergamot (*Monarda fistulosa*) is made into a very effective tea to counteract diabetes, liver and stomach ailments; dried, ground ragwort (*Senecio* species) florets will help asthma sufferers. Interesting, considering that the pollen of ragwort often triggers asthma.

Kenny also happens to be a storyteller extraordinaire. Between stories, medicinal knowledge and finding the lovely spring flowers, the day flew. As we were not on any particular schedule, Kenny not only told some wonderful Blackfoot legends, he took us to the places where these events occurred. Wow! Hearing the stories told in the places where they actually happened took us back in time to the old days before contact with white people, and the inevitable culture clashes.



Kenny Many Fingers Photo: E. Gordon

However, this was the late 1800's and the RCMP were in the process of establishing white man's law, so Char Coal was subsequently charged with murder. For several months he lived as a fugitive, hiding with sympathetic Kainai families and eluding the RCMP. Eventually however, acting on a tip, the RCMP arrested Char Coal just south of Pincher Creek, brought him to trial, and he was subsequently hanged for murder. This was a truly sad story of culture clash and misunderstanding.

The area where Pretty Wolverine Woman had been seduced is on the banks of the Belly River in a lovely bergamot and lupine meadow with blue-eyed grass hiding among the grasses. There is no trace of the house left, although until recent years, some of the boards could still be found. There was something magical and terribly tragic listening to Kenny tell the story.

A wonderful day was enjoyed by all and included a meal of traditional Indian fry bread and tacos. This is not for the faint of heart by any means, but diets and cholesterol were thrown to the wind and we dug right in. If you are ever driving on Highway 2 south of Standoff, look for the "Indian Fry Bread" sign on the east side of the highway and pull right in — highly recommended!

The only really low spot of the day was that Botany Alberta 2005 had been rescheduled due to flooding and violent spring storms. As a result, no one else was able to make it on the June 25–26 weekend. However, the results of the floods were apparent

everywhere — fields were saturated and roads washed out. We had originally planned to camp at Red Crow College, but the area where we had camped last summer was under a metre of water with some ferocious mosquitoes waiting to carry us off. It didn't take much convincing to move to a motel in Cardston.

The weekend ended on Sunday morning with a drive to Belly Buttes, the sacred grounds where Sundance is held every summer in early August. This is the most important religious event of the year and tribes gather from Montana, B.C. and other areas to take part in the religious and social festivities. Belly Buttes is the highest point of land on the reserve and a wonderful spot to take photos of this beautiful landscape.

Don and I would like to thank Kenny, Kansie, Jermaine, and Jane for a most wonderful weekend. We'll certainly be back at every opportunity. ☘



Burrowing Owl Nest Photo: E. Gordon

The most poignant story is that of Char Coal and his wife, Pretty Wolverine Woman. Pretty Wolverine Woman had been unfaithful with a cousin of Char Coal. Under traditional Blackfoot law, Char Coal had two choices. He could reject his wife outright, or he could take her back. However, taking her back meant that he was required to kill his cousin to restore honour to his wife and himself. Char Coal truly loved Pretty Wolverine Woman and wanted her back as his wife, so he carried out the deed of disposing of his cousin. Under Blackfoot law, he and Pretty Wolverine Woman were now restored to marital bliss.



June Grass Photo: P. Cotterill

Puzzling Pairs: Birches

by Lorna Allen

Yes, it is a birch tree — but which one?



Birch bark Photo: L. Allen

Most people will know that when they look at a tree with the unmistakable white bark that peels readily, they are looking at a birch. But which birch? Alaska birch (*Betula neoalaskana*) or white (or paper) birch (*B. papyrifera*)? These are so similar that some authors do not consider Alaska birch to be a separate species, but treat it as a variety of white birch. Current taxonomy however does recognize them as two separate species, and they are treated as such in the *Flora of Alberta*.

The table below compares Alaska and white birch, and the information in it comes mostly from the description in the *Flora of Alberta* (1992), supplemented by information in *Illustrated Flora of British Columbia*, Vol 2. Both Alaska and white birch are small trees (to 30 m tall). Both generally have white, often peeling, bark with dark lenticels (small dots or spots).



Paper birch leaves Photo: L. Allen

The bark can sometimes be yellowish or reddish brown or dark grey, especially on younger trees. The surest way to tell the two apart is to look at the leaves. Shape tends to be different, although this can be difficult to judge. If you flip the leaf over and look at the underside, a good white birch will have distinct tufts of hairs tucked at the point where the veins intersect.

While Alaska birch may have hairs along the edge, it doesn't tend to have the clumps in the axils of the veins of the leaf. White birch, it seems, is an all-around hairier tree, with hair-covered twigs as well. In Alberta, further south than about Edmonton, if you see a birch tree, it probably is white birch. But from roughly the Central Parkland Natural Subregion, north, both species occur. In the southern part of its range, Alaska birch seems (I think) to be the birch tree in the little pockets of wetlands, while white birch tends to be found in the uplands. Let us know if your observations agree with this. Further north, Alaska birch moves on to the uplands as well, and in many areas, becomes the main birch tree. ❁



Alaska birch leaves Photo: L. Allen



Iris

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If you have an announcement, article or other item, you are invited to submit it to the editor for publication. Items concerning native plants will be given highest priority.

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Characteristic	Alaska birch (<i>Betula neoalaskana</i>)	White birch (<i>Betula papyrifera</i>)
Twigs	Mostly hairless; covered with glands	More or less covered with long hairs; occasionally glandular
Leaf shape	Deltoid (broadly triangular)	Egg shaped in outline, broadest near leaf petiole
Leaf hairs	May (or may not) have hairs on the margin of the leaf but no tufts in vein axils on the leaf underside	Tufts of hairs in vein axils on leaf underside.

Cuttings from the ANPC's 2005 Workshop: “Grow Naturelle”

by Patsy Cotterill

The ANPC's 18th annual conference and general meeting were held April 9, 2005 at the Coast Terrace Inn, Edmonton and followed by hands-on workshops at the University of Alberta Devonian Botanic Garden on April 10. Aply organized by Elaine Gordon and Linda Kershaw, the conference/workshops had as their theme low-impact gardening and the use of native plants in gardening and landscaping.

Following a welcome by president Ed Karpuk, wild plant and garden enthusiast Cherry Dodd kicked off the morning's presentations with a description of the work of the Edmonton Naturalization Group, a group of people who seek to promote use of

native plants by growing out wild-collected seeds or transplanting whole plants that have been salvaged from the path of the bulldozer! These either remain at the City's nursery as stock for naturalization projects, or are transplanted into some of the City's protected areas under the sanction of the City's Partners-in-Parks program. The removal of invasive aliens is, needless to say, a common consumer of volunteer hours, including last year the start of a project to remove caragana bushes

from a river valley slope (Whitemud Creek) where a calcium- and iron-rich seep makes for interesting calciphile flora. Cherry is the author, in conjunction with ENG, of a manual entitled *Go Wild! With Easy to Grow Prairie Wildflowers and Grasses*, featuring selected Edmonton-area grassland plants that can be seen growing in a landscaped demonstration bed at the John Janzen Nature Centre in Edmonton.

Collecting Wild Plants

Botanist/ecologist Lorna Allen's presentation entitled "What, where, when, how? New ANPC guidelines for collecting wild plants" provided an update on this project, which dates back to the first issue of guide-

lines for the collection and use of wild plants in 1996. The guidelines are organized into three categories: for wildcrafters (a draft of these is now available for review), for researchers and students (now in draft form) and for people working in reclamation and horticulture (in the planning stage). One problem, Lorna explained, is that in Alberta we do not know exactly which species are being used, and to what extent. The guidelines will also indicate which plants are sensitive to collecting. It can be anticipated that increasing popular interest in native gardening will pose a threat to certain species, for example, showy species with bulbs, cactuses and orchids (as much as 10% of wild orchids

50,000 wood lilies have been raised and given away to the public to raise awareness of the depredations made on this species by wild collecting. This may be a program that Alberta should emulate!

Wildflower Seed Mixes

Landscaper and garden designer Cynthia Pohl described the field trials she had conducted at the Ellis Bird Farm during the summer of 2004, growing out various commercially available wildflower seed mixes. The results, showing very low biodiversity and even less representation of locally native plants, were startling but not totally surprising. (Eileen Ford and her colleagues in the Red Deer River Naturalists, doing

similar if less rigorous testing, has already reported the "poppy and bachelor's buttons" syndrome to ANPC members!) There are plenty of things wrong with these wildflower mixes that promise colourful wildflower gardens from a mere sprinkling of seeds: misleading advertising, poor results, inadequate labelling, and perhaps worst of all, the potential for importing invasive plant material. (The good news, however, was that the only plant that appeared in Cynthia's trials that is on



ENG's demonstration bed at John Janzen Nature Centre Photo: P. Cotterill

being sold commercially could be wild-collected). It is important to encourage people to buy only nursery stock that has not been collected from the wild (see the report of June Flanagan's presentation below). Heavy harvesting of wild seed also carries potential dangers, including that of reducing the food supply for wildlife. Researchers and students should be instructed to collect no more than is absolutely necessary for their work and if possible not whole plants. Unfortunately, little is known about the extent and the impacts of collection of non-vascular plants and mushrooms. The next step in the process will be the dissemination of the guidelines. Lorna noted an excellent project in Saskatchewan where

Alberta's list of noxious weeds was the common dandelion!) As well as recording germination and growth of the contents, Cynthia scored the seed packets themselves for the following desirable information: common and Latin names, region in which the species are native, germination requirements and expiry date of seeds. None of the packets or mixes scored adequately. It seems clear that there is a vast difference in meaning between "wildflower" (wild somewhere, no doubt, as opposed to cultivated, but usually not found growing wild in Alberta) and "native" meaning a naturally growing local plant. Members of the audience suggested that this distinction between native and wild should be explained on the

ANPC website, together with a list of plant growers in Alberta who produce genuine native seed mixes. Another suggestion was that ANPC members could give talks to horticultural societies on this issue.

Alien Invasive Plants

Jim Posey, Calgary botanist and long-time ANPC member, in a talk entitled “Strangers in Old Man’s Garden” depicted, in words and pictures, a veritable rogues’ gallery of alien invasive plants, together with fascinating facts about them and possible means of control. Did you know that Canada thistle (which some of us would prefer to be called creeping thistle or field thistle after its Latin name) was already outlawed by 1885? Or that sheep can eat leafy spurge? Or that nodding thistle is becoming a problem in Fish Creek Provincial Park, or that catnip (*Nepeta cataria*) is on the increase in Writing-on-Stone Provincial Park? Flowering rush (*Butomus umbellatus*) has been found in Red Deer; the ubiquitous yarrow (*Achillea millefolium*) is mostly European in origin. Jim is always looking for updates and additions to his gallery with the aim of posting the particulars of these “Not Wanted” on the ANPC website.

Native Plant Source List

When, in 2003, botanist and horticulturalist June Flanagan took on the task of updating the first version of the ANPC Native Plant Seed Sources List compiled by Dana Bush 10 years earlier she little realized what a magnum opus it was going to be: so much had changed, plant names as well as seed sources! Compiled after June had interviewed suppliers of native plants and seed across the Prairies, the 2005 Native Plant Source List is divided into three parts: suppliers and contact information; services; and an index to suppliers of particular species by scientific name (It is a relief to know that the new names, obtained from the USDA, are cross-referenced to the old names!). The index includes a description of the business’s specialty (most supply a particular niche in the market), the supplier’s unique number and the services provided, for example, consultation, custom-growing, and give-aways. Special services may also include seed testing, specialized native seed harvesting, custom plant labels, seed cleaning and contract seed production. The source list will now be sent out to the ANPC Board for input and review, then posted on the website, and subjected to periodic update.

Adopt-a-Plant Program

The Adopt-a-Plant program currently being launched under the auspices of the ANPC, the Alberta Natural Heritage Information Centre (ANHIC), the Fish and Wildlife Division of Alberta Sustainable Resources and the University of Alberta Devonian Botanic Garden evolved out of an idea by Calgary botanist and consultant Dana Bush. René Belland, Assistant Director of the Devonian Botanic Garden, COSEWIC committee chairman and bryologist, explained in his presentation that under this program volunteers selecting a rare plant (or plants) for adoption would be trained to identify, locate and monitor this species. The data they obtain will be submitted to ANHIC, used in their tracking program and made available to authors of status reports, all for the purpose of making decisions regarding conservation. Currently the ANHIC tracking list includes approximately 480 species of vascular plants, 403 bryophytes and 477 lichens. The goals of the program include hiring a coordinator of volunteers (a paid position), developing an interactive website, and organizing workshops to train volunteers, starting in 2006. Forms were available at the workshop for participants to sign up. Anyone wanting further information can contact any of the following:

René Belland in Edmonton
(rene.belland@ualberta.ca; (780) 987-3054);

Dana Bush in Calgary (dbush@axys.net; (403) 750-7660);

Ed Karpuk in Red Deer
(Ed.Karpuk@gov.ab.ca; (403) 340-7114 work, (403) 347-5723 home);

Margot.Hervieux in Grande Prairie
(Margot.Hervieux@gov.ab.ca; (780) 538-5603).

Pesticides

Edmonton botanist Elisabeth Beaubien is best known for her work on compiling phenology records and her PlantWatch program, begun in Alberta in 1987 and expanded nation-wide in 2002. However, in recent years in her spare time she has become increasingly involved in — and vocal about — pesticide (insecticide and herbicide) issues. These have attracted public and media attention as more Canadian communities pass bylaws phasing out the use of pesticides for cosmetic purposes (e.g., to achieve a weed-free lawn). Elisabeth, a member of the Sierra Club of Canada’s Prairie Chapter’s pesticide committee and

of an Edmonton group working to develop a bylaw, finds Edmonton’s intransigence over changing the status quo frustrating given that 75% of Edmontonians are believed to support a bylaw to phase out pesticides on private and public land, and 72% are estimated already not to be using pesticides. Elisabeth outlined some alternatives to water- and herbicide-guzzling conventional lawns, including planting drought-resistant grass or white clover, and xeriscaping. More information is available at the Sierra Club’s website at pesticidefreeyards.org (which even includes dandelion recipes!).

Home Composting

The City of Edmonton has won many awards for its waste management programs, including recycling, composting of biodegradable materials, and wastewater treatment. It also offers comprehensive courses in home composting to citizens. Mark Stumpf-Allen, an employee of Edmonton Waste Management Branch in its Environmental Programs, described the basics of home composting in his talk “Crazy about composting!” He also indicated the correct proportions in which to mix compost for potting soil, new beds and established garden beds.

Native Plants for Prairie Gardens

For her second presentation of the day June Flanagan drew on her horticultural experience with native plants to provide hints and guidelines for environmentally friendly landscaping and gardening, the same experience that informs her recently published book, *Native Plants for Prairie Gardens*. For example, she suggested grouping together plants with similar water requirements to permit more efficient use of water, with an “oasis” zone closest to the water source, followed by a transition zone of perennials and shrubs requiring less water, and a zone of drought-tolerant species (such as certain grasses, succulents and silver-hairy plants, such as *Artemisia* spp.). In discussing native lawn grasses June noted that there is no miracle grass: Kentucky bluegrass and red fescue green up early but become dormant in the summer and require watering to remain green all year; blue grama grass has been used successfully as a lawn grass but is late-season and becomes brittle when dormant. Other advice June offered included adding organic matter (annually) to the garden, mulching everything (shredded or chipped

bark is best, except where you want plants to self-seed, in which case you use compost), and watering deeply (one inch per watering), infrequently, and before 10 in the morning! On the question of improving clay soils, June noted that it is much better to add organic material than sand.

Partnerships in Edmonton

In his talk entitled “Growing Partnerships in Edmonton” John Helder, Principal of Horticulture for the City of Edmonton, provided insights into how Edmonton is engaging in a variety of partnerships, mainly with citizens and non-profit groups, to help look after the City’s parks, woodlots and other natural or naturalized areas. Fostering pride in and appreciation of City landscapes, these initiatives include the Communities in Bloom program (which now includes the competition categories “native plant garden” and “pesticide-free garden”), the annual river valley clean-up, the “Parks, Naturally” naturalization program, which has seen over 6,000 tree seedlings planted by volunteers since 1993, community gardens, school naturescaping, urban forestry (in which people take over ownership of City elms) and Partners-in-Parks, a flexible program that allows individuals or groups to volunteer in whatever ways interest them. Despite increasing community interest and involvement, John’s position in the City’s Community Services department has its challenges. He calls for more public education to promote natural area appreciation and stewardship since, he says, “not everybody loves an urban woodlot.”

Wetland Restoration

In the final presentation of the afternoon, landscape architect Bob Gibbs described a project he has undertaken for the City of Edmonton, in collaboration with Lynn Maslen of Spencer Environmental Management Services. It involves creating a wetland in an environmentally significant area of Edmonton (Roper Mill Creek Natural Area) according to principles of ecological restoration (as opposed to more conventional reclamation processes) as set out by the Society for Ecological Restoration (www.ser.org), of which Bob is a member. It will follow an ecological trajectory, or pathway to the desired ecosystem, which will resemble an existing system, in this case shorelines of the Sturgeon River downstream of Big Lake, the reference ecosystem in SER parlance. (For practical reasons dictated by the availability of plant

material, other wetland sites will serve as models as well.) Important goals are that the newly constructed riverine marsh (versus a closed-basin system) will constitute a “functional biological corridor” connected to upstream and downstream reaches of Mill Creek as well as perform stormwater management functions such as attenuating peak flows and improving the quality of drainage into lower Mill Creek Ravine. Human access for education and low-impact recreation will be encouraged by the installation of trails and interpretive signs. Revegetation of the pond will involve using soils (mud) salvaged from other wetlands in the Edmonton area, supplementary seeding and planting, and natural migration. As

Mill Creek Natural Area will need to find a steward to take care of it in the future — another opportunity for a partnership between City and citizenry, perhaps?

Native Gardens

“*Garden* is an active verb as well as a noun,” admonished consultant, researcher, author and horticulturalist Ann Smreciu in her keynote address to the workshop, following the annual general meeting and the banquet supper. Ann was referring to the “myth” that native plants grown in a garden setting require little maintenance. Ann used the ingenious and humorous technique of reading out fictitious letters she had written to highlight some of the popular misconcep-



ENG’s demonstration bed at John Janzen Nature Centre Photo: P. Cotterill

well, a deep marsh (with bulrushes), as shallow marsh (with cattails and sedges), and a littoral zone (with marsh grasses and rushes) will be established. Other ecosystems to be created are a wet meadow, a grassland, and plantings of woody material including willow beds, riverine forest beds with balsam poplar and appropriate flood-tolerant understory species, and mixed woods. To enhance habitat, boulders will be strategically placed as dragonfly perches, bat and bird boxes installed, and the pond stocked with brook stickleback. Bob noted that he is developing protocols for the monitoring and management of such a restored ecosystem, which are much more complex than for a traditionally reclaimed area (where certain fixed standards have merely to be achieved). He observed that Roper

tions about naturescaping, for example, the letter from the lady who thought she was nurturing a wild ecosystem in her dandelion-infested lawn, and couldn’t understand why the neighbours were less than enthusiastic! Ann’s point was that we need to have realistic expectations about gardening with natives, and not mislead or be misled into thinking that it is necessarily simple or easy. (Nevertheless, Ann, whose M.Sc. topic was the germination requirements of native plants, remains a keen practitioner and proponent of native gardening.) First, we need to be clear about what is meant by “native”; the thinking now is that plants should come from at least the same natural region as the one in which they are to be grown. As botanists, we have a responsibility to increase awareness of the problem of

invasive plants. It may also not be true that native plants require less water and nutrients than cultivated ones, especially if they haven't been able to develop a good root system during establishment, or if they lack the complex trophic relationships (e.g., mycorrhizae) that they had in the wild; the garden is not the same environment as the one to which they are adapted. Maintenance is essential: it may be necessary to control the spread of rhizomatous plants or prolific seed producers, and native perennials will need dividing. Weeding is still a fact of life, as is mulching. Native plant seeds, especially woody ones, can have complex dormancies, evolved to aid survival through unfavourable times or conditions, and so may require cold periods (stratification) or, as in many leguminous species, physical abrasion of the seed coat (scarification), to achieve germination. Ann said she always advises her clients to examine their motives (why they want a native garden), choose plants that suit their garden condition, start small, remember that plants can be custom-grown by nurseries, follow the guidelines for collecting seeds if wild-harvesting: collect legally, get landowner permission, know the growing requirements of the seeds, oh! and be able to recognize the seedlings, so as not to weed them out inadvertently! On a philosophical note, Ann warned against the "ark mentality", the notion that native gardening is going to make a large contribution to the preservation of biodiversity. For this purpose, it is always better to preserve natural habitats!

Workshop

On Sunday, April 10, Ann Smreciu and her consulting assistant Michelle Pahl, together with Cherry Dodd, who provided some of the seeds, conducted morning and afternoon workshop sessions at the University of Alberta Devonian Botanic Garden greenhouse, demonstrating how to sow and water a variety of native plant species. Participants took home their pots in anticipation of the upcoming growing season! Ann also showed us some of the native woody plants she has in experimental trials at the Garden, being grown for restoration projects in the Fort McMurray area. ❀

Endangered Species Update

by C. Dana Bush

Species Approved by Endangered Species Conservation Committee (ESCC) for Listing under Alberta's Wildlife Act:

Endangered

Soapweed – *Yucca glauca*
 Western spiderwort – *Tradescantia occidentalis*
 Tiny cryptanthe – *Cryptantha minima*

Threatened

Sand verbena – *Tripterocalyx micranthus*

Special Concern

Western blue-flag – *Iris missouriensis*

Data Deficient

Slender mouse-ear-cress – *Halimolobos virgata*

Status Under Review

Porsild's bryum – *Mielichhoferia macrocarpa*

Plant Species Status Changes

Western blue-flag was down-listed from "Threatened" to a "Species of Special Concern". A five-year status evaluation was completed and the risk categories were reassessed. Status recommendations, contained in the ESCC Scientific Sub-committee's Status Evaluation were as follows:

"The Western Blue Flag did not clearly qualify under any of the risk categories. However, because this species lies close to the thresholds for Criterion D2, and as a precaution owing to the previous recommendation to list this species as Threatened in Alberta, the subcommittee agreed that this species should be identified as a 'Species of Special Concern'."

Slender mouse-ear-cress was recommended as "Data Deficient", as the ESCC Scientific Sub-committee deemed insufficient data for properly assessing the risk categories.

Porsild's bryum is listed as a species of priority for detailed status reports planned for 2004–2005. ❀

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Wildcrafting Tips

by Linda Kershaw

Fall is the season for harvesting, and putting aside provisions for winter. With so much rain this summer, 2005 has been a wonderful year for fruits and vegetables. My garden has never produced such giant potatoes and sweet, crunchy carrots as we've enjoyed this fall. The freezer is also filled with chopped apples from our backyard trees and a bucket of saskatoons from the bushes along our ski trails. It was easy picking this summer, and farther north, the blueberry crop was equally abundant.

Most of us love the special flavour of wild berries, and we also enjoy the pleasant pastime of picking fruit on fall and summer outings. Often, we just nibble along the way, but when fruit is abundant we may make a more concerted effort to gather enough for a pie, enough to make syrup or jam, or enough to freeze. That way we can enjoy the taste of summer year-round. But how much is "enough"? How much can we take from an area without harming the wild plants and animals that live there?

The ANPC recently completed the first draft of its Plant Collection Guidelines for Wildcrafters. These guidelines are designed to help people assess the potential impact of gathering wild plants, and to encourage considerate collecting for food, medicine, and crafts.

Here are few of the questions to consider when gathering wild plants.

Where should we collect?

Areas that are visited by large numbers of people (e.g. trails through public land) are susceptible to repeated collecting. If everyone takes a few berries, the total amount taken is multiplied many times. Never collect from parks and reserves or from fragile habitats such as sand dunes and wetlands. On private land, get permission from the owner. Disturbed areas such as roadsides and sites slated for development will generally be least affected by collecting. However, vehicles and vehicle exhaust along roads can be hazardous.

What should we collect?

Know your plants. If you're not completely sure of the identity of the plant, don't collect it. It could be poisonous, or it could be rare. If only part of the plant is going to be used, take that part and leave the rest. Learn

which plants are sensitive to collecting and which plants are likely to be collected by other visitors. Feel free to remove the entire plant if the plant is an invasive weed, but try not to spread weed seeds or to create new habitat by leaving disturbed ground.

How much should we collect?

Try to take the plant's population size into consideration. If there are only 10 plants in an area, taking one will have a much greater impact than removing 10 from a site with thousands of plants. Similarly, gathering a cup of berries when the berry crop is poor could have a much greater impact than picking a bucketful in a bumper-crop year. The Collecting Guidelines suggest a 1-in-50 rule of thumb for gathering plants and plant parts such as fruits and flowers.

There are lots of helpful pointers in the ANPC Plant Collection Guidelines for Wildcrafters. Check out the first draft in the publications section of the ANPC website at www.anpc.ab.ca/downloads.htm. If you have any questions or comments, be sure to let us know. The guidelines will continue to evolve as our understanding of ecological and genetic processes and the role of native vegetation in maintaining these processes develops. Conscientious wildcrafters always strive to have minimal impacts on wild populations. ❁



Saskatoon Berries Photo: L. Kershaw

ANPC Objectives

The **Alberta Native Plant Council** strives to:

- Promote knowledge of Alberta's native plants.
- Conserve Alberta's native plant species and their habitats.
- Preserve plant species and habitat for the enjoyment of present and future generations.

The Council's specific objectives are:

- To educate individuals, industry, and government about native plants.
- To promote awareness of native plant issues through a newsletter, an annual workshop, and in the media.
- To co-ordinate information and activities concerning Alberta's native plants.
 - To develop briefs or position papers for special projects; for example, biodiversity, forest vegetation management, wetlands, rare species or phenology.
 - To organize field trips, plant studies and May Species Counts.
 - To update lists of current research and conservation projects.
- To preserve natural habitats and plant communities.
 - To support legislation that protects native plants.
 - To take action to establish, preserve and manage protected areas.
 - To undertake Alberta projects jointly with like-minded groups.
- To encourage appropriate use of Alberta's native plants.
 - To produce information on the use of native plants in land reclamation.
 - To develop and distribute collection, salvage and management guidelines.
 - To update a list of native seed sources and suppliers for horticulture and reclamation.

Coalbed Methane Development in Rumsey: David meets Goliath

by Cheryl Bradley

Drillers of coalbed methane wells are poised to trump conservation interests in the Rumsey Natural Area this fall because government has sold the mineral rights in the protected area and has failed to provide leadership in protecting this internationally significant treasure. It is widely recognized that survival of plains rough fescue (*Festuca hallii*) grasslands in Alberta, and in the world, is heavily reliant on protection and wise management of the 183 km² Rumsey Ecological Reserve and Natural Area, located about 80 km north of Drumheller. Conservation interests, including the Alberta Native Plant Council, are opposing the industrial intrusion and holding government accountable for its commitments to protect the area's ecosystems.

In the 1970s it was recognized that Rumsey was the biggest and best representation of aspen parkland, including plains rough fescue grasslands, remaining in Canada. Throughout the 1980s, complaints by conservation interests about fragmentation of the area's ecosystems by roads and pipelines led to development of a management plan for Rumsey South. The plan, completed in the early 1990s, allows for responsible use of resources provided the natural ecosystems are preserved and protected. Drilling of new wells was allowed along existing access routes, which extend through most of the area. The plan also commits government to conduct biophysical inventories, to assess the success of past and current reclamation activities, to review the cumulative environmental effects of oil and gas development, and to monitor vegetation change and activities that may affect the area's environmental integrity.

In 1996 Rumsey South was designated a Natural Area as part of Alberta's Special Places program. The management plan for Rumsey South was not revised to reflect the new protected area status. Alberta Energy, despite the objections of conservationists, continued to sell mineral rights in the Natural Area. Public land managers experienced huge slashes in budgets. Attempts were

made by some committed staff to improve reclamation procedures and address invasive species, but for the most part management plan recommendations regarding ecosystem protection were not implemented. Fortunately there was not much conventional oil and gas drilling activity in the area due to poor prospects. In 1999, Amoco



Approach to wellsite in Rumsey showing disturbance species
Photo: C. Bradley

Canada routed a major pipeline around the Natural Area due to conservation concerns.

Meanwhile, the conservation status of plains rough fescue communities was becoming clearer. A study published in 2003 by the Resource Data Branch reported that only 12% of grassland remnants in the Central Aspen Parkland support plains rough fescue community types and about half of these have invasive non-native plants, including the highly aggressive awnless brome (*Bromus inermis*). Researchers failed to find examples of successful restoration of rough fescue grassland following disturbance except along small pipelines, which are plowed in or use "no strip" construction. All plains rough fescue plant communities were placed on a provincial tracking list of plant communities reflecting a high priority for conservation. Designation of rough fescue as Alberta's provincial grass emblem in 2003 recognized "the importance that wild grass species have played and will continue to play in our province and the need to ensure these species continue to thrive and survive" (Hon. Shirley McClellan, Hansard 24 Feb).

Rising energy prices and new technologies have resulted in interest among oil and gas corporations to drill for resources, which previously were uneconomical. Coalbed methane, also referred to as natural gas in coal, is one such resource. The Alberta Government has refused to manage coalbed methane development differently from conventional oil and gas development, despite the threat of substantially higher well densities and environmental impacts. In early 2004, Trident Exploration Corp. was allowed to drill a coalbed methane well

in the Rumsey Natural Area. Conservation interests were not aware of this new activity in the protected area until after the well and a pipeline were completed, in violation of conditions placed on the activity by Public Lands. Trident now is proposing a major drilling program on 31 sections within the Natural Area. Trident has 100% mineral ownership of 5 sections and contractual agreements with other companies to develop 26 sections. Trident wants to drill at least one well per section prior to December 31, 2005.

Over the last year ANPC has had numerous discussions with Trident and with front line government staff responsible for managing the Rumsey Ecological Reserve and Natural Area. All parties agree there is a need to improve our understanding of the current condition of range and aquatic ecosystems, to monitor the effects of land use activities on plains rough fescue grasslands, to assess cumulative effects, and to find ways of restoring rough fescue grasslands. But, for economic reasons, Trident is intent on proceeding in haste with a drilling program in the Natural Area using a micromanagement approach on individual well sites. Allowing the activity to proceed will be akin to shutting the barn door after the horses are out when it comes to conservation of the area's ecosystems. The plains rough fescue grasslands in Rumsey are too important to lose. ANPC is working with other conservation organizations to prevent Trident from proceeding. It promises to be a David and Goliath battle given the large bureaucracy in Alberta Energy and the Energy Utilities Board, which traditionally favours development, whether or not an area has protected area designation. Stay tuned for more updates in *Iris*. ❀

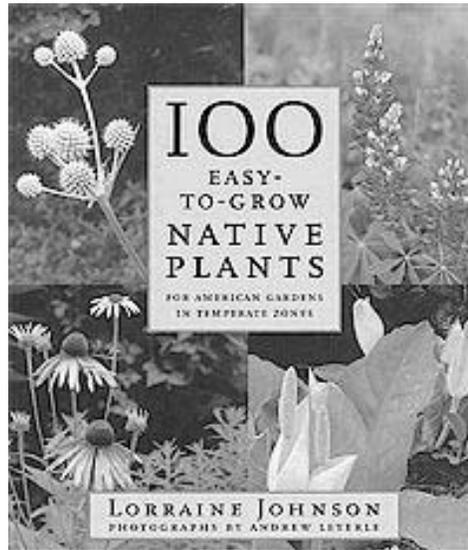
Book Review

100 Easy-to-Grow Native Plants for Canadian Gardens

reviewed by Mari Decker

The updated “100 Easy-to-Grow Native Plants for Canadian Gardens” is a well compiled and enjoyable read, featuring plenty of good colour photos and user-friendly information on growing requirements. The book covers native plants from coast-to-coast, rather than being specific to our region, so if the reader is a purist and wants to plant only Alberta natives, they will need to be discerning. Canada is here divided into three regions: Northwest, Prairie, and Northeast, and interestingly enough, most of Alberta doesn’t fit into any of these areas. Other than the southeast “prairie” corner, we are a blank space on the distribution map presented!

However, of the 100 fully-featured plants, 21 species are native to Alberta, and of the many other plants mentioned in the “Related Species” section on each page, about 45 other Alberta natives are included. Some of these are plants on our rare tracking list though, and will likely not be avail-



able in Alberta nurseries. The author includes “Guidelines for Ethical Gardening” (from the North American Native Plant Society), which serves to educate readers on the necessity of not negatively impacting native plants in native habitats.

The layout of each full-feature page is spacious and the information is well researched. Two nice features of the book are a “Good Companions” section on each full-feature page, and a series of quick reference colour picture lists at the back for each region, different habitats (woodland,

meadow, prairie) and growing conditions (drought-tolerant, dry soil in shade, acidic soil, deep shade, moist areas). Though in both cases, again, if you want only plants native to Alberta, you will have fewer species to choose from than these sections imply. Addresses for nurseries that sell native plants across the country are presented, including five from Alberta.

The author, Lorraine Johnson, appears to be well-versed in native gardening, having been the president of the North American Native Plant Society, author of several books, a regular contributor to gardening journals, and a correspondent on radio and television gardening shows. Though she is perhaps guilty of the ANPC-noted danger of over-simplifying native gardening, her argument in favour of native gardening is well-formed and interesting to read. We have the ability to create “small places of ecosystem health”, so “dig-in! The roots of change need to be anchored deep.” We need more tools on the market to encourage more people to do this the better! And for a reasonable price, this book would make a nice gift for a native gardener you know (or a treat for yourself!), either as an introduction to native gardening, or an addition to a growing native plant library. ❀

VOLUNTEER POSITION: CONSERVATION COMMITTEE

ANPC is looking for a volunteer for the conservation committee to work to conserve native plant habitats.

For more information, please check out the ANPC website at

www.anpc.ab.ca

or contact Lorna Allen at lorna.allen@gov.ab.ca



Smooth blue beard-tongue (*Penstemon nitidis*) Photo: M. Decker

VOLUNTEER POSITION: PRESIDENT

ANPC needs a president! Main duties are to call and chair the bi-monthly board meetings, and delegate action items. It is an opportunity to “make a difference” while working with a fun group of enthusiastic volunteers.

For more information, please check out the ANPC website at

www.anpc.ab.ca

or contact Lorna Allen at lorna.allen@gov.ab.ca

Plant Happenings

by Lorna Allen

COURSES AND WORKSHOPS

Native Plant Society of Saskatchewan AGM and workshop

www.npss.sk.ca/events.html
Feb 9–11, 2006
Yorkton, Saskatchewan.

Canadian Land Reclamation Association (CLRA) and International Affiliation of Land Reclamationists (IALR)

www.clra.ca
First Announcement and Call for Papers
Annual Meeting and Conference:
August 20–23, 2006
Crowne Plaza Hotel
Ottawa, Ontario
Technical sessions, short courses, field
trips, trade show and banquet.

The Devonian Botanic Garden's fall course list is now out.

www.devonian.ualberta.ca

PUBLICATIONS

A field guide to Common Riparian Plants of Alberta.

www.cowsandfish.org
Click on *publications*.



Black Henbane (*Hyoscyamus niger*) Photo: A. Elliot

Species At Risk 2004 Pathways to Recovery conference proceedings are now posted on the conference website at

<http://www.speciesatrisk2004.ca/html/searchform.html>

WEBSITES

Botany Links

www.botany.net/IDB/bot-pt.html#qs
(Submitted by J. Posey)

Invasive species

www.gri.msstate.edu/about/news/2004/usgs-invasive-09-27-2004.php
www.invasivespeciesinfo.gov
www.weedcenter.org
(Submitted by Ksenija Vujnovic):

Invasive species

http://www.for.gov.bc.ca/hfp/invasive/IAP_01.htm

An interesting approach to address the invasive species problem. (Submitted by K. Ostermann)

Evergreen Native Plant Database: Lesson Plans

www.evergreen.ca/en/lg/plans_listing.html
The Evergreen Native Plant Database was developed principally to provide informa-



Dames Rocket (*Hesperis matronalis*)

Photo: A. Elliot

tion on native Canadian wildflowers. Lessons include full class plans. This site also provides extensive information about Canadian vegetation. (Submitted by Elisabeth Beaubien)

Wikispecies

species.wikipedia.org/wiki/Main_Page
“*Wikispecies* is a new project supported by the Wikimedia Foundation with a great potential. It is meant to become an open, free directory of species. This will cover animalia, plantae, fungi, bacteria, archaea, protista and all other forms of life to the extent that our users allow us.” (Submitted by John Rintoul)

Citizen Scientists

www.citizen-science.ca
Learn about fellow Citizen Scientists and monitoring initiatives. (Submitted by John Rintoul)

Biodiversity Data Portal

ge.gbif.net
Global Biodiversity Information Facility (GBIF) data portal for its new connection with Google Earth. Click on *the following information* link to find system requirements and to download application. Species then can be searched by scientific name globally, and each point highlighted to specific (mostly specimen) information. (Submitted by Marilyn Anions) ☘

The Nisku Prairie Management Committee invites you...

To check out the many opportunities,
To learn, experience, enjoy and
To make a real difference.

By pitching in with your energy and talents you'll be helping to ensure that the Nisku Native Prairie Reserve continues to be a living example of rough fescue grassland and aspen parkland for future generations.

The growing season is a very "hands-on" time at Nisku Native Prairie Reserve (Nisku Prairie): volunteers pull weeds, pick seeds, plant, pitch refuse, paint plants with herbicide and more! This results in the opportunity for both volunteers and the community to enjoy the beauty and biodiversity of the grasslands and aspen groves.

With the snow, the work goes indoors, to

move the various projects forward. Planning for next growing season and preparation of Nisku Prairie for the winter ahead.

We have the following areas that we need a hand with:

- Winter preparation, which includes:
 - Mowing grass,
 - Picking seeds,
 - Pulling weeds,
 - Updating vascular plant species list
 - Starting species lists for lichens, non-vascular plants and insects.
- Administration, which includes:
 - Maintenance of the contact list,
 - Volunteer coordination,
 - Advertising,
 - Leadership for work bees,
 - Smooth brome control program

- organization,
- Stewardship reports,
- Pamphlets,
- Signage,
- Creation of a crest,
- Grant applications,
- Coordination of a grazing lease,
- Webpage creation and
- Volunteer appreciation initiatives.

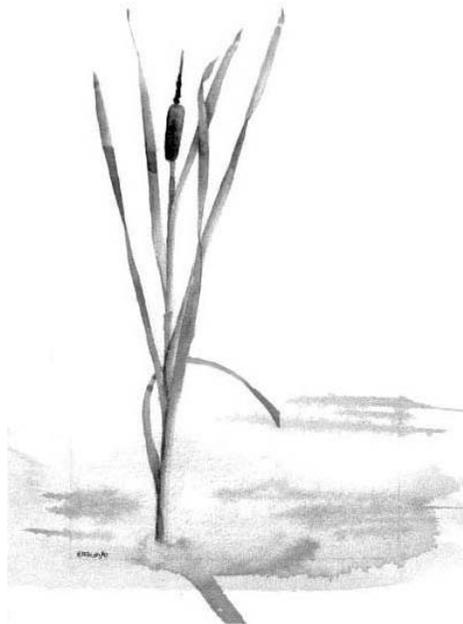
If you're interested or would like more information, please contact:

Birgit Friedenstab
Volunteer Steward for Nisku Native
Prairie Reserve
Alberta Native Plant Council
780-440-0971
birgitf@telus.net ☘

Adopt-a-Plant Alberta Logo Contest

Adopt-a-Plant Alberta is an exciting new programme that will allow interested amateur and professional botanists to become directly involved in the conservation of rare plants in Alberta. This initiative has been generating a great deal of interest among plant enthusiasts throughout the province. More details are provided in this issue of *Iris*.

The Adopt-a-Plant Alberta organizing committee has decided that this new programme needs an eye-catching logo. Here is your opportunity to apply your creative talents and help the committee come up with a pleasing design. The committee recommends that the logo include the name "Adopt-a-Plant Alberta" and a unique symbol or relatively simple image based on the theme of rare plants. Beyond this let your imagination and creativity run free! Entries will be accepted either as a paper document sent by mail or as a digital image in JPEG or TIF format sent as an e-mail attachment. Please remember to include your name, address, phone number and if you have one, an e-mail address.



Contest prize Original watercolour: C. D. Bush

All entries must be delivered by February 28, 2006 to:

Lisa Matthias
Alberta Sustainable Resource Development
Fish and Wildlife Division
Resource Data and Species at Risk
2nd Floor, Great West Life Building
9920 – 108 St.
Edmonton, Alberta,
T5K 2M4

e-mail: Lisa.Matthias@gov.ab.ca
phone: (780) 422-8411
fax: (780) 422-9557

The contestant who submits the winning logo will receive an autographed copy of ANPC's award-winning book *Rare Plants of Alberta* and an original watercolour painting by C. Dana Bush.

Thank you in advance for your participation and good luck! ☘