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Iris

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ALBERTA
Native Plant
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▶ Look for more information on the ANPC's website. www.anpc.ab.ca



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Cover photo: Marsha Hayward;
Lichen on aspen in boreal forest.

Gateway to the North

Sandy Davis and Donna Fleury

The 2014 annual Botany Alberta field trip was held in and around Athabasca, an area with a significant history as the "Gateway to the North." Organized by Paula Evans, Marsha Hayward and Sandy Davis, the event included stops at a variety of area habitats and ecological areas, ranging from mixedwood forest and beautiful fens to a boreal forest conservation area and a portion of the Trans Canada Trail. Mother Nature smiled on the participants, with perfect, sunny weather, a multitude of flowering plants, and swallowtail butterflies by the thousands.



Our enthusiastic group consisted of people from Edmonton and area, Red Deer, Calgary, Athabasca, Saskatoon and New Brunswick. On Friday night we met on the banks of the Athabasca River at the Waterfront Park. Paula Evans, who is also a local resident and historian, toured the group through the historic railway station that has undergone extensive renovations, and is now the Tourist Information office and Railway Station Museum, and shared interesting historical highlights and stories. Later we walked along the waterfront park, identifying and enjoying the native and non-native plantings, including a vegetation restoration project along the Tawatinaw River, which flows north from Helliwell Lake to its confluence with the Athabasca River at Athabasca.



On Saturday morning, local naturalist/botanist/geologist Deirdre Griffiths hosted a tour of the Crooked Creek fen

See **Gateway**, page 2

Gateway, from page 2



and surrounding upland aspen-spruce forest. Deirdre explained the geology and natural history of the area as a context for our later explorations. As one of their many projects, Deirdre and her late husband, Graham Griffiths, have contributed extensive research and survey information for the surrounding Crooked Lake area. The fen provided several exciting finds, although the late spring conditions meant orchids and other plants were sadly not yet in bloom.



We toured the Karvonen conservation property near Amisk Lake on Saturday afternoon. This area was secured through the Alberta Conservation Association's Boreal Habitat Conservation Program. Albert and Pirkko Karvonen, who still live in the area, founded Karvonen Films Ltd. in 1976, producing more than 120 wildlife films and environmental documentaries over the years, many focusing on this boreal forest area near Amisk Lake. We followed trails in the aspen-white spruce/low-bush cranberry (*Populus tremuloides*-*Picea glauca*/ *Viburnum edule*) forest and many photographed the flowering plants.

Find more information on the Boreal Habitat Conservation Program at the following website:

<http://www.ab-conservation.com/go/default/index.cfm/programs/program-report-details/?&cfgridkey=B782781B-BCD6-BFDD-5F3511B7C5464366>

We spent Sunday along the Peace River Trail, a part of the Trans Canada Trail. We explored a pond and surrounding vegetation and an open jack pine (*Pinus banksiana*)/*Cladonia*-*Polytrichum* forest. We enjoyed beautiful weather, lots of botanical camaraderie and a wide variety of boreal plant species. The lucky campers at the Island Lake Campground were able to see barred owlets and fall asleep to the call of the loon and the sight of the 'super moon.'



Information regarding the Peace River Trail is available at the following website:

<http://www.albertatrailnet.com/for-trail-users/trans-canada-trail/fact-sheets/peace-river-wilderness-trail/>

During discussions over dinner on Saturday night at the Athabasca Golf Course, participants suggested the Porcupine Hills as a location for Botany Alberta 2015.

A list of plants identified over the two days will be available on the ANPC's website.
www.anpc.ab.ca. ♦

Favourite plant sightings from Saturday included cloudberry (*Rubus chamaemorus*), striped and pale coralroot (*Corallorhiza striata* & *trifida*), three species of ferns (*Gymnocarpium dryopteris*, *Matteuccia struthiopteris*, *Botrychium virginianum*), blue columbine (*Aquilegia brevistyla*), golden saxifrage (*Chrysosplenium iowense/tetrandrum*), small bog cranberry (*Oxycoccus microcarpus*), bishop's-cap (*Mitella nuda*), a variety of mosses, and shown below:

- Top – marsh-marigold (*Caltha palustris*)
- Centre – ground-cedar (*Lycopodium complanatum*) and bog cranberry (*Vaccinium vitis-idaea*)
- Bottom – northern starflower (*Trientalis borealis*)



Tongue-tied in Latin: D's & E's

C. Dana Bush

Here are the pronunciation guides for D's and E's. I don't know if I'll ever say e-kee-*nah*-kee-a without laughing. Thank goodness I can still pronounce e-lee-*o*-ka-ris.

Similar to the last article in this series, it is the C's that will stump us – C and Ch are pronounced with a K sound – only Cy is pronounced with an S sound. The stress on the syllables varies between sources (of course – who said it was consistent). I've given some alternatives in this list.

Vowels

ă = cat	e = let
a = <i>apart, canal</i>	i = <i>in</i>
o = <i>hot</i>	ie = <i>kite</i>
ō = <i>note</i>	u = <i>full</i>
oi = usually as <i>oy</i>	ū = <i>tub</i>
in boy but classically as <i>o-i</i>	

D

Daphne	<i>dăf-nay</i>
Delphinium	<i>del-fin-ee-um</i>
Dianthus	<i>dee-ănth-us</i>
Dicentra	<i>di-ken-tra</i>
Dodecatheon	<i>dō-dek-a-thee-on</i>
Draba	<i>drah-ba</i>
Dracocephalum	<i>dră-kō-kef-a-lum</i>
Dracunculus	<i>dra-kun-kew-lus</i>
Drosera	<i>dro-se-ra*</i>
Dryas	<i>dree-as</i>
Dryopteris	<i>dree-op-te-ris*</i>

Consonants

c = always hard as in cat
g = always hard as in gate
s = as in this, not as in those.

E

Echinacea	<i>e-kee-nah-kee-a</i>
Echinochloa	<i>e-keen-o-klō-a</i>
Echium	<i>e-kee-um*</i>
Elaeagnus	<i>e-lee-ăg-nus</i>
Eleocharis	<i>e-lee-o-ka-ris</i>
Elodea	<i>e-lō-dee-a*</i>
Elymus	<i>e-li-mus</i>
Empetrum	<i>em-pe-trum</i>
Epilobium	<i>e-pi-lo-bee-um</i> or <i>e-pi-lo-bee-um*</i>
Erigeron	<i>e-ri-ger-ron*</i>
Erodium	<i>e-rō-dee-um</i>
Erysimum	<i>e-ri-si-mum</i>
Eschscholzia	<i>esh-sholts-ee-a</i>
Eupatorium	<i>ew-pa-to-ree-um</i>
Euphorbia	<i>ew-for-bee-a</i> or <i>ew-for-bee-a*</i>

* Pronunciation of Biological Latin <http://www.saltspring.com/capewest/pron.htm>. Accessed January 30, 2014.

Reference:

Coombes, Allen J. 1985. *Dictionary of Plant Names: Botanical Names and Their Common Name Equivalents*. Timber Press, Portland, Oregon. ♦

Marsha Hayward



Epilobium angustifolium (common fireweed)

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Range Health

Alan Dodd

Have you ever walked through a field of grass, such as in an urban park or golf course, and thought to yourself: wow, this is a really well manicured and healthy looking plant community? Would you be surprised to learn that the community you're looking at is in fact probably unhealthy from an ecological perspective, with little value for wildlife? Well, now there is a tool for both lay people and experts alike to help understand what makes a healthy plant community.

Developed by scientists in the provincial government in the early to mid-2000s, range health is an important tool for evaluating the health of plant communities in Alberta and elsewhere. This article was written to spread knowledge of range health outside of the range management community. The tool is simple enough to be used by folks such as ranchers and other landowners with a little training, but it is also used by AESRD agronomists and other professionals. Range health assessments can be carried out on grassland, forest, and tame pasture communities, with slightly different variables assessed for native versus tame communities. For the purposes of this article we will focus on native plant communities.

Range health evaluates five components or indicators of ecological communities: (1) ecological status, (2) plant community structure, (3) litter, (4) soil stability, and (5) noxious weeds. The combination of these five indicators tells you if the range is Healthy, Healthy with Problems, or Unhealthy.

Ecological Status:

Ecological status refers to the position of a community along the successional pathway. Certain plant species respond differently to disturbances such as grazing. For example, in the Dry Mixedgrass Natural Subregion, heavy grazing causes mid-height grasses such as needle-and-thread (*Hesperostipa comata*) and northern wheat grass (*Elymus lanceolatus*) to decrease, and short-statured species such as blue grama (*Bouteloua gracilis*) and various upland sedges (e.g., *Carex stenophylla*, *Carex pensylvanica*) to increase. A community is given a higher score for its resemblance to the lightly disturbed 'reference' community.

Structure: Plant community structure is a little more difficult to visualize than the other four ecological indicators. It refers to the different layers one finds in a particular plant community. It is easier to visualize in an aspen (*Populus tremuloides*) forest than a grassland community, but it is important in both. In an aspen stand, a Healthy community will have low forbs, mosses, and lichens on the forest floor; taller forbs and grasses; low, mid, and tall shrubs; and finally trees. This diversity of layers in a Healthy community provides more wildlife habitat than simple structured communities and it also makes more efficient use of resources such as sunlight. You may have seen disturbed aspen stands that have a thick layer of grass strewn with broken aspen branches and few forbs and shrubs – these



C. Dana Bush

Healthy fescue grassland in the Rumsey area.

communities are Healthy with Problems, or Unhealthy.

Litter: Litter, also known as carryover, mulch, or thatch, is the layer of dead and decomposing plant material on the soil surface. Litter plays an important role in many ecosystem functions, including retaining soil moisture, which is invaluable in the arid prairie environment, and preventing erosion among other roles. Healthy grassland and forest communities generally have a thick layer of litter, depending on their soil type.



C. Dana Bush

Heavily grazed grassland with little cover or litter.

Soil/site Stability: Soil stability has two inter-related components: bare soil and erosion. Human-caused bare soil tends to increase in a community as the level of

See *Range Health*, page 8

Getting to Know Ann Smreciu

Kimberly Gould

If you see someone dancing on the shores of Lake Athabasca, or across the prairies of southern Alberta, especially in ethnic costume, you have probably found Ann Smreciu enjoying the meeting of her two passions – native plants and folk dance. For over 30 years, Ann has promoted the use of native plants in reclamation in Alberta, and for almost as long, she has been a member and director of Balada in Edmonton, specializing in Romanian dance.

Shortly after arriving in Alberta, Ann completed her Masters at the University of Alberta focused on germination of native plants. Much of this work has influenced her future publications, *Growing Native Plants of Western Canada* and over 80 species profiles detailing habitats, harvest, germination, production, and much more. She tackled projects ranging from the Old Man River Dam to the Clover Bar Landfill, and a study on sand plants harvested from the Athabasca dunes. The various techniques led to the publication of *Establishing Native Plants Communities*. Ann has given care and attention to the myriad of communities, ecological regions, and most beautiful parts of Alberta.

Ann's current focus is the oil sands, where her advocacy for native plants came to fruition in the Oil Sand Vegetation Cooperative (OSVC). This group of five companies began working together in 2009 to harvest and bank native seed in a proactive approach to reclamation. Over 30 species of

trees, shrubs and aquatic species have been harvested and banked. A significant portion of harvested seed has already been deployed in progressive reclamation efforts. She is also providing information on shrub species for an update to the 2009 *Alberta Forest Genetic Resource Management and Conservation Standards*.

Beyond native plants, Ann's garden is a point of pride and enjoyment that she shares with friends while sipping wine or roasting hot dogs over the fire pit. Ann has been a Partner In Parks in Edmonton and most recently established a community garden in her neighbourhood of Rio Terrace. They won an award for the quality of their compost and are installing new beds as more and more neighbours join the program. A significant portion of Ann's time is given to her children, and the other place you are likely to see her is at one of her son's many soccer games.

In all things, Ann is passionate, full of pride, and eager to share. I have been fortunate to be her friend and colleague.

Publications that Ann has authored or made significant contributions to include the following:

Pahl, M.D. and A. Smreciu. 1999. *Growing Native Plants of Western Canada: Common Grasses and Wildflowers*. Alberta Agriculture, Food and Rural Development, and Alberta Research Council. 188 pp.

Wild Rose Consulting



Ann Smreciu in the field.

Smreciu, A., K. Gould and S. Wood, 2013. *Boreal Plant Species for Reclamation of Athabasca Oil Sands Disturbances*. OSRIN Report No. TR-44. 23 pp. plus appendices. <http://hdl.handle.net/10402/era.37533>

Smreciu, A., H. Sinton, D. Walker and J. Bietz. 2002. *Establishing Native Plant Communities*. Alberta Agriculture, Food and Rural Development, Alberta Environment, and Alberta Sustainable Resource Development. 93 pp.

Alberta Sustainable Resource Development, Forestry Division. 2009 (3rd version). *Alberta Forest Genetic Resource Management and Conservation Standards*. Available at: <http://esrd.alberta.ca/lands-forests/forest-management/documents/FGRMS-AlbertaForestGeneticResourceManagementAndConservationStandards-May2009.pdf> ♦

Finding Rare Plants in Alberta's Northeast

Lindsay Monk, ABMI

If a botanist went for a walk in the Lower Athabasca region of Alberta, how likely would it be that he would encounter a rare plant species? How long in kilometres or time would she have to walk to find one? If we could predict the likelihood of finding a rare species in a particular area, would that change where botanists would go for their walks?

It's these types of questions that inspire Dr. Scott Nielsen, associate professor of conservation biology at the University of Alberta and Alberta Biodiversity Monitoring Institute (ABMI) collaborator. Dr. Nielsen is the project lead on the ABMI's Rare Plants project¹ – designed to fill existing gaps in knowledge of vascular plant distribution in the Lower Athabasca.

So, how does Dr. Nielsen map the probability of encountering a rare species in the Lower Athabasca?

It begins with element occurrence locations of where S1, S2, and S3² plants have been found in the Lower Athabasca, integrating the Alberta Conservation Information Management System (ACIMS) database, lease site information from industry consultants, data from academics, and ABMI's provincial monitoring dataset.

Using these data, Dr. Nielsen selected 21 different rare plant species and modeled their distribution across the Lower Athabasca. Inclusion was based on rarity,² regional importance and habitat type. Regional importance was defined as at least 20% of species observations in Alberta

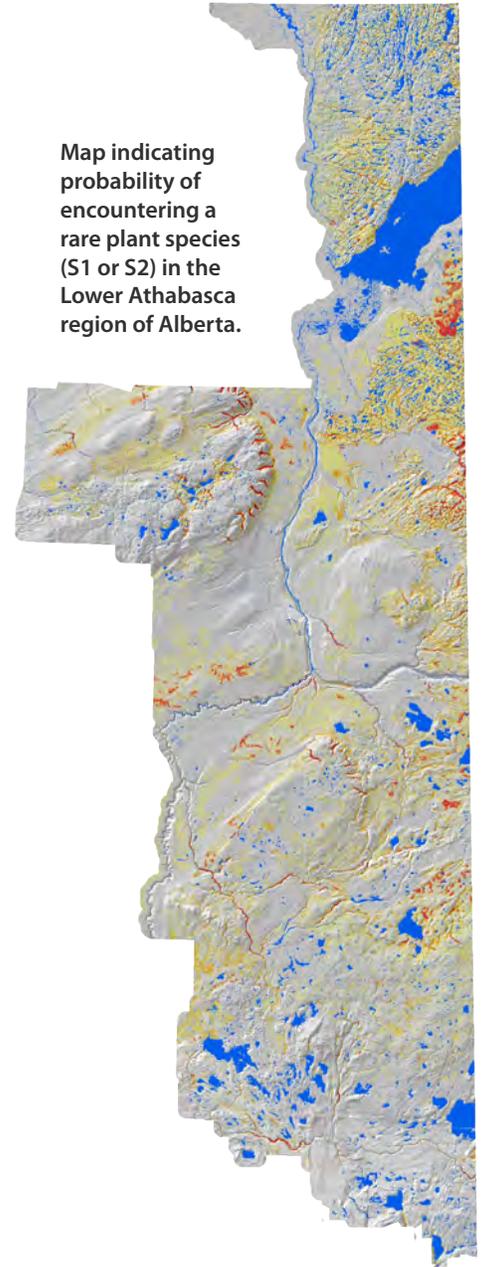
occurring within the Lower Athabasca region. Habitat type was included to make sure there was a complement of different species with different habitat preferences, as many rare plants are habitat specialists. Finally, there had to be enough observations of these focal species to model their distribution. With such requirements, only 21 plants met the initial criteria!

The next step was to query the environment preferred by these focal species based on their point locations in GIS using several different landscape measures: habitat was modeled based on the Ducks Unlimited Enhanced Wetland Classification system and was enhanced with surficial geology, climate and a suite of terrain-based indices derived from a digital elevation model (DEM), including terrain wetness, topographic position, and solar radiation.

These environmental measures were used to model the plants' environmental niche and potential distribution (suitable habitat) across the Lower Athabasca. All the models were combined to create a single map highlighting the relative importance of different places for finding the target rare species initially included and hopefully other rare species associated with the sites searched, since all vascular plants are recorded at a site and not simply the target species.

Using that map, Dr. Nielsen devised a weighted sampling approach to emphasize places with greater likelihood of encountering rare plants (plots were also allocated

Map indicating probability of encountering a rare plant species (S1 or S2) in the Lower Athabasca region of Alberta.



to places without predicted rare plants, but at lower intensities). At each site, a 0.25-hectare plot (equivalent in size to a sub-plot used within the ABMI network) is sampled to document presence of all vascular plants using a time-unlimited survey.

To ensure general representation of different habitats in the Lower Athabasca, sites were further

See **Northeast**, page 7

Northeast, from page 6



Tim Chipchar

Northern Slender Ladies-Tresses
(*Spiranthes lacera*)

This is an S1-ranked small orchid species that was observed in the 2013 season from a site northeast of McLelland Lake.

stratified by the Ducks Unlimited Enhanced Wetland Classification covering graminoid fens, shrubby fens, treed fens, treed bogs, pine forests, etc. While lacking the detail of ecosite mapping on leases, the advantage of this classification system was that it could be used across the entire region being modeled. Each Ducks Unlimited habitat type was allocated plots for sampling based on likelihood of encountering the target species (with more plots in areas identified as having greater probability of encountering rare plants). The advantage of the targeted (model-based) system is that it allows for increased sampling effort in rare habitat types, while reducing effort spent sampling more common habitats or environments where rarity is less likely. Because the model-based approach works best for species that are habitat specialists, it's likely that some non-habitat specialists may not

be covered by the approach. However, the sites are still able to provide general rates of rarity, or encounters, for those plants that aren't closely associated with a particular habitat type (e.g., *Botrychium*).

The results so far have pleasantly surprised Dr. Nielsen: "The model has shown good predictive capacity, backed up by what we've encountered in the field – we are getting better at predicting the probability of encountering an S1 or S2 plant, understanding environmental drivers of rarity, and attaching probabilities of occurrence of S1 and S2 plants for each habitat type." The model was field tested in 2012 and 2013, resulting in 51 new detections for 16 of the target rare plant species.

We've confirmed that certain habitat types are important for rarity: many rare plant detections were in rich fens. However, Nielsen notes that other rare species were found in what could be considered contrary habitats: fire-prone oligotrophic sand plains.

For instance, the pinweed (*Lechea intermedia*), which is globally rare, was found in a number of sandy recently burned sites in the far north, leading Dr. Nielsen to note, "rarity often happens at the extreme edges of habitat gradients."

Certain terrain variables appear to predict patterns of rarity. In particular Nielsen is finding that topographic position index (derived using a digital elevation model)

correlates with some rare plant occurrences and may relate to its effects on microsite conditions important to rare plant species.

Dr. Nielsen and his team have just finished their 2014 field season and have now visited 520 plots in the Lower Athabasca. Lead botanists Jacqueline Dennett and Tim Chipchar have spent the past few field seasons sampling plots in the region, meaning that, with more data, the project is able to use the locations Dennett and Chipchar have sampled, instead of prior plant location data. The project is now modeling the possibility of encountering an S1 or S2 plant using a larger, stratified random dataset, which allows for improved predictions across broader regions of the Lower Athabasca.

This adaptive sampling approach results in a continuous refinement of the model where new data feeds into the model and improves the predictions of hotspots of rarity. Rather than a lease-by-lease scale, Dr. Nielsen's mapping allows for

broad, regional assessments of rarity that can inform land-use planning and pre-disturbance assessments.

Nielsen emphasizes that regional mapping of rare plants

is not meant as a replacement for local meander-based surveys or for the provincial grid monitoring done by the ABMI. In fact, Nielsen's team is also completing meander plots and in particular focusing on measuring survey effort by



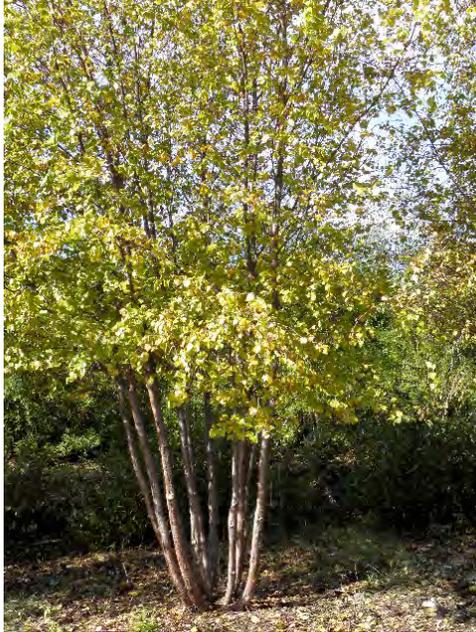
Pinweed (*Lechea intermedia*)

See **Northeast**, page 9

Native Plant Portrait: River Birch

Ken Wright

Reprinted with permission from Calgary Gardening, the newsletter of the Calgary Horticultural Society.



The river birch (*Betula occidentalis*) is one of the more ornamental native trees which grows frequently in the Bow River basin. Although the name would imply the need for lots of water, the opposite is true. The local seed sourced native river birch is very tolerant of our dry conditions. We have some growing in our yard that are 20 years old and have never been watered.

The small multi-stem tree grows to 8 m with fine textured branches, giving an almost weepy look in the winter. The bark varies from dark bronze red to lighter orange. The small leaves give a light mottled shade rather than a heavy dark shade.

One of the features of the river birch is the relatively small footprint

and upright form useful for screening in smaller urban yards. The tree will not overwhelm a small space, but will enhance it giving year-round interest. The summer form is light and airy, the fall colour is yellow to orange (depending on the fall we have), winter form is colourful twigs and branches, with the added bonus of attracting red polls, finches and chickadees that feed on the non-persistent catkins through the winter.

The general shape of the tree varies from very narrow upright to very broad spreading. The trees growing in open windy areas west of Cochrane tend to be more upright and of neater habit. The trees growing along the Bow River in Calgary and downstream, tend to be wider and more sprawling, giving an interesting broad form. There seem to be more hybridizing with the native paper birch upstream from Calgary than downstream. This hybridization can give rise to a variety of bark colours as the trees mature. Young wood up to five years is almost always deep purple with the long-term bark colours appearing as the trees mature. The range of mature bark colour adds an interesting dimension to the species.

Although it is not resistant to birch leaf miner, it is very tolerant of the insect, which becomes more of an aesthetic issue as opposed to a health issue. The infestations vary from year to year without harming or hindering the growth of the tree. The birch leaf miner, if it does occur, attacks early enough in the season for the plant to recover, form new leaves, mature and shut down on time for winter.

The twigs and branches of the river birch are often used in winter arrangements.

Ken and Pam Wright own Bow Point Nursery in Springbank, just west of Calgary. They specialize in hardy native trees and shrubs. <http://www.bowpointnursery.com> ♦

Range Health, from page 4

disturbance increases. Exposed soil is vulnerable to erosion, and topsoil loss can reduce productivity. Erosion can come in many forms, including animal or human trails, rills or gullies created when water flows downslope on bare soil, and the depressions from hooves in wet ground (hoof shear and pugging).



C. Dana Bush

Cattle trails causing erosion in grassland.

Noxious Weeds: Noxious weeds are non-native, invasive plant species that can out-compete native species and tend to persist on a site without management intervention. Noxious weeds have many potential negative effects on native species and communities, such as reducing native species diversity, displacing rare plant species, competing for native pollinators, altering soil characteristics, and replacing complex communities with single species monocultures. Healthy plant communities will have no noxious weeds present.

Range health is a quick and easy way to understand grazing ecology, to assess the health of the ecosystem, and to understand how it can be healed. With a little training and practice, even someone with minimal ecological knowledge can learn to assess the health of the communities they encounter, whether at their local urban park, cabin, or favourite natural area.

References:

Albert Rangeland Health Workbook:

<http://srd.alberta.ca/LandsForests/GrazingRangeManagement/RangeHealth.aspx> ♦

Northeast, from page 7

tracking their meander paths. The idea is to measure the probability of detecting a rare plant per kilometre or per unit time by habitat or even local terrain using detailed remote sensing data. In this way, Nielsen sees the rare plant sampling work they are doing as complementary to both ABMI plot-based efforts and ANPC meander protocols. A critical information gap in regional planning is the lack of spatial-contiguous sources of information identifying sites across the Lower Athabasca with potential rare plant habitat. This work helps fill that gap by providing a regional map of rarity and listing of rarity by habitat.

In future, the team hopes to continue to improve the understanding of rare plants across the Lower Athabasca region through additional sampling and integration with ABMI's core monitoring program. The team is also working to compare and incorporate meander-based data into the existing plot-based models and begin to explore more specific management questions such as success of mitigation options, and indirect effects of development on rare plants. Enough to keep the Rare Plants team busy for some time to come!

For more information, please contact [Monica Kohler](mailto:Monica.Kohler@ualberta.ca) (project coordinator) at mkohler@ualberta.ca or [Dr. Scott Nielsen](mailto:Dr.Scott.Nielsen@ualberta.ca) at scottn@ualberta.ca.

Additional information on the sampling methods can be found in: Zhang J, Nielsen SE, Grainger TN, Kohler M, Chipchar T, et al. (2014) Sampling Plant Diversity and Rarity at Landscape Scales: Importance of Sampling Time in Species Detectability. PLoS ONE 9(4): e95334. doi:10.1371/journal.pone.0095334 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0095334>

¹ The ABMI's Rare Plants project was originally conceived and initiated through the Ecological Monitoring Committee for the Lower Athabasca (EMCLA). The ECMLA, a consortium of oil sands companies, government ministries, and agencies coordinated by the ABMI, was established in 2010 with the goal of designing protocols to monitor rare and elusive species.

² We considered species to be rare if they were classified in 2011 as S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable), according to NatureServe Canada. Note that S3 species are no longer used in predicting regional hotspots of rarity, as many are more common in the Lower Athabasca region than their S3 rank suggests. ♦



Michel Rapinski

Slenderleaf Sundew (*Drosera linearis*)

This is an S3-ranked carnivorous inhabitant of fens. The Rare Plants project collected three records for this species in two years of sampling. The species appears to require consistently wet and open conditions.

Bear-O (The Botanist Song)

to the tune of
Day-O (The Banana Boat Song)

Chorus

Bear-O, Bear-O
Botanist coming and we mean you no harm
Bear-O, Bear-O
Botanist coming and we mean you no harm

Verses

Work all day in the pouring rain
Evening's coming and we want to go home
Mosquitoes and the blackflies, they drive me insane
Evening's coming and we want to go home

Butterworts, bladderworts, pitcher plants and sundew
Evening's coming and we want to go home (or...And there's the *Splachnum* that grows on the poo)

Cypripedium, *Calypso*, *Habenaria* and *Orchis*

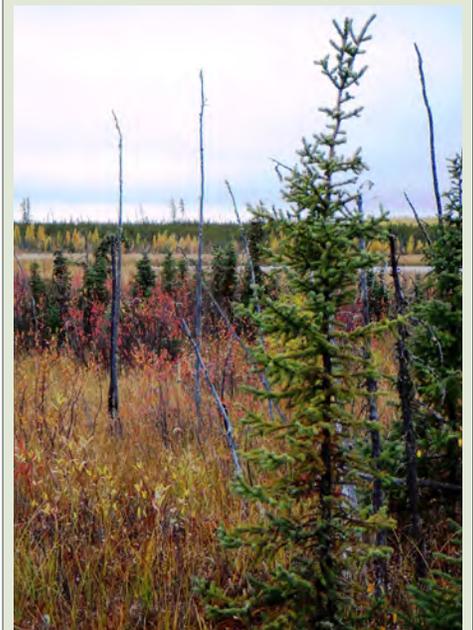
Orchids are lovely but we want to go home

Heli-man, Heli-man don't leave me in a wetland

Evening's coming and we want to go home
Heli-man, Heli-man don't leave me in a wetland

Evening's coming and we want to go home

Written by Dana Bush and numerous field partners. New verses are welcome!



Marsha Hayward

News and Events

Project Outreach

ANPC's Project Outreach was launched at this year's annual workshop in Drumheller. A new logo along with our compressed mission statement: "Sharing Knowledge, Supporting Conservation" are samples of ANPC's new look, developed to raise ANPC's profile in the community. Please watch for ANPC's display tables, banners and pamphlets at professional, conservation and natural history, and community events around the province.

Display booth volunteers still needed

If you like meeting people and talking plant talk, you may be interested in attending events representing ANPC at a booth display in your local area. We are developing a list of interested ANPC members to call on as display booth volunteers. For more information, please contact Jacqueline at mjredburn@hotmail.com.

ANPC Board Meetings

Board meetings are held four times a year between September and March, usually on the third Saturday of the month. If you think you might be interested in becoming more involved in ANPC, maybe as a volunteer for a committee or as an elected board member, these meetings are an excellent way to learn more about our organization and meet some fellow botanists. Join us in person or by phone! Make friends with other plant folks, enjoy lunch and do good things for the environment.

Please contact Sandy McAndrews at s.mcandrews@shaw.ca or Laurie Hamilton at laurie@zanshinenvironmental.com for more information. Committee volunteers and board members must be members of ANPC.

The fall-winter 2014-2015 dates for ANPC Board Meetings are:

- November 15
- January 17
- March 21

Rare Plant Study Groups

There are four rare plant ecology study groups associated with ANPC. Three meet throughout the year, indoors through the fall and winter and outdoors through the spring and summer. Beginning in October or November and running through until April, the following groups generally meet monthly. Group participants nurture their interest in and expand their knowledge of Alberta's native plants and communities and local ecology. **Please contact facilitators for details and to confirm attendance.**

Central Alberta Rare Plant Study Group (Edmonton)

Location: University of Alberta Herbarium, B-613 (botany wing), Biological Sciences Building (east end), Saskatchewan Drive, Edmonton. Date: Last Wednesday of the month; October to April inclusive. Time: 6:30 to 8:30 p.m. Facilitator: Varina Crisfield (vcrisfield@gmail.com).

Southern Alberta Rare Plant Study Group (Calgary)

Location: University of Calgary Herbarium, Biological Sciences Basement. Date: First Saturday of the month; October to April inclusive. Time: noon to 4:00 p.m. Facilitator: Heide Blakely (enzian44@shaw.ca).

Medicine Hat Rare Plant Study Group

Location: Medicine Hat College Herbarium (L155). Date: Third Saturday of the month (except February) from noon to 3:00 p.m. Facilitator: Cathy Linowski (clinowski@memlane.com).

Northern Plant and Ecology Study Group (NPESG)

This is a field-based study group, active through the growing season and into early autumn. Contact Marsha Hayward for more information (wildloonart@telus.net).

An E-flora for Alberta?

A resolution was passed at the Annual General Meeting to support a committee that will investigate the possibility of developing an e-flora for Alberta similar to the e-flora of British Columbia (<http://www.geog.ubc.ca/biodiversity/eflora/>). Volunteer recruitment is happening right now for work beginning in autumn 2014. If you're an enthusiastic botanist and think you'd like to participate in this initiative in some way, you can help beginning now by:

- keeping the proposal in mind
- keeping a record of any resources you come across, such as databases and potential funding sources
- determining what U of C and U of Lethbridge are up to and might contribute
- talking to potentially interested people

Please email nutmeg@planet.eon.net with E-FLORA VOLUNTEER in the subject line.

Asteraceae Lab

The University of Waterloo website has a good discussion of a new taxonomy based on molecular evidence within the Aster group. The bad news is that there are no longer any asters in Alberta. The website has photos and descriptions of each group, but no keys.

Interactive Salix Key

An interactive key of New World *Salix* species developed by Dr. George W. Argus, Curator Emeritus, Canadian Museum of Nature, Ottawa, Canada, is now available on the Alberta Conservation Management Information System (ACIMS) website: <http://www.albertaparks.ca/albertaparksca/science-research/interactive-salix-key.aspx>

ANPC Native Plant Source List

ANPC's updated native plant source list is now available on ANPC's website <http://www.anpc.ab.ca/content/index.php> Our thanks to Kristyn.



ACIMS Rare Plants and Rare Ecological Community Tracking Lists – Updated May 2014

The Alberta Conservation Information Management System (ACIMS) regularly updates their tracking lists with the new data that we submit. *Salix reticulata* ssp. *reticulata* has been added to the tracking list (S2S3), and *Carex tinctoria* has been removed from the list of species in Alberta.

Recovery Plans and Status Reports Resources

Alberta Environment and Sustainable Resource Development (ESRD), Plants: <http://esrd.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/plants/>

Alberta Conservation Association, Alberta Wildlife Status reports:

<http://www.ab-conservation.com/go/default/index.cfm/publications/conservation-reports>

SARA Recovery Strategies:

http://www.sararegistry.gc.ca/species/schedules_e.cfm?id=1

Rare Plant Survey Guidelines (2012) Revision

Based on feedback after the release of the 2012 revision, ANPC's board has decided that an update is warranted. The main goals are to:

- clarify existing text where it has been interpreted differently than intended
- streamline the existing text to focus more on guidelines and less on procedures
- address the questions about and relationship to bryophytes, liverworts and lichens

Cardinal Divide Access

The Grave Flats Road south of the Cardinal Divide, which was washed out in summer 2013, is likely to remain closed for the foreseeable future. Anyone wanting to visit the Cardinal Divide from the south will have to come by the Forestry Trunk Road to Coalspur (a rough road, with heavy use by logging trucks, etc.) then south to Cadomin, or from Highway 16.

ANPC Feature Plant Series

ANPC is desperate for new Feature Plants for our website. Please share your season's favourite photos. If you like to take photos of native plant species and like to write, please consider submitting text (200-300 words) and 2 or 3 related photos for ANPC's website.

For ideas, please visit <http://www.anpc.ab.ca/content/index.php>. Points could include location of species; signature characteristics; interesting adaptive, morphological, geographical features; conservation status or threats; and why you took the photo. Please submit your article to s.mcandrews@shaw.ca

Requests for Contract Botanists

From time to time, ANPC receives requests for names from prospective employers who need to hire contract botanists. ANPC maintains an email list of members who want to be notified about these requests. All botanists on the list are notified each time. This service is available to ANPC members only. If you are a member and would like to be on this list, please contact Sandy: s.mcandrews@shaw.ca

ANPC Workshop 2015

We're looking for suggestions for topics, locations and volunteers to help present ANPC's annual workshop. Email s.mcandrews@shaw.ca, ANPC WORKSHOP in the subject line. Hope to hear from you.

Rare Vascular Plants of Alberta

Copies of ANPC's definitive reference on Alberta's rare plant species are available for \$35.00 plus shipping. For purchasing details, please contact Leslie at lesliemonteleone@hotmail.com

Call for *Iris* Submissions

ANPC publishes the *Iris* newsletter three times per year to provide information on all issues botanical in Alberta and further afield. We are always looking for guest contributors to submit announcement, articles, features, photos, etc. to *Iris*. ANPC welcomes your submission to the *Iris* editor, bush.eco@telus.net for consideration. Please submit your articles with the subject heading IRIS SUBMISSIONS.

Alberta's Limber Pine Recovery Plan

Following its formal approval on 3 September 2014, the Alberta whitebark pine recovery plan is now available on ESRD's website <http://esrd.alberta.ca/fish-wildlife/species-at-risk/species-at-risk-publications-web-resources/plants/>, in the limber pine section. The limber pine plan joins the whitebark pine plan on the same page.

LinkedIn ANPC Group – Link

After logging in to LinkedIn, enter Alberta Native Plant Council in the search box in the top right corner of the screen. You should be directed to the "Discussions" tab on the ANPC page and the "Join Group" button is on the left side. The "Join Group" button also appears at the bottom of our "Group Profile" page (under the More tab).

If all else fails, try this link:

http://www.linkedin.com/groupsDirectory?itemaction=join&anetid=4416741&impid=&pgkey=group_most_popular&actpref=leena-anet-home&csrftoken=ajax%3A8381199944088986224&trk=leena_join&goback=%2Egmp_4416741

Iris is published three times a year by ANPC. The Council aims to increase knowledge of Alberta's wild flora and to preserve this diverse resource for the enjoyment of present and future generations.

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.

The editors reserve the right to edit submissions, but will review changes with the authors whenever possible. Disputes will be resolved in favour of the audience.

Copyright remains with the authors except where noted. Permission to reprint is generally granted, but please contact the editors for details.

Submission deadline for the next issue:
November 15, 2014

A subscription to *Iris* is included with membership in the ANPC. To join, contact the secretary, or check our website, www.anpc.ab.ca.

Project Outreach Displays Unveiled at Spring Workshop



Those who attended the 2014 workshop and AGM in Drumheller in April got the first look at ANPC's four new displays. The new logo and colourful new materials met with an enthusiastic response.

Banners, table covers, and the backs of our new business cards showcase the botanical photographs of generous ANPC members who donated their images for Project Outreach.

Thank you to Ashley Easton, Laurie Hamilton, Marsha Hayward, and Janine Lemire for donating the photos that you see on these display materials. Graphic design was done by Georgina Ivan and her colleagues at Mr&Mrs Design in Edmonton. ♦



Each display includes a banner, table cover, and varied collection of business cards, plus educational handouts, which are nearing completion. The displays will be stored in Cold Lake, Edmonton, Calgary and Lethbridge.

If you know of an event where a volunteer (perhaps you?) could set up the ANPC display, please contact Jacqueline Redburn, who coordinates our display booth volunteers. Email Jacqueline at mjredburn@hotmail.com

