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Botany 2015



# Science and Plants for People





## July 25 - 29, 2015 The Shaw Conference Centre Edmonton, Alberta - Canada

## **Field Trips**

Field Trips are open to all registered attendees of Botany 2015 including spouses/companions and family members. (They must pay full trip registration fee.) All trips require pre-registration and are on a first-come and first-served basis. Fees include transportation, admission fees, field guides (if provided), water and where indicated, lunch.

Schedule subject to change...you will be notified by email. when registering please indicate your first and second choices. All efforts will be given to give your your first choice, and you will be notified before the conference.

Fees for Field Trips are non-refundable if cancelled after July 1, 2015. All trips will leave from the Shaw Conference Centre by bus unless indicated. All registration fees are in US\$.

## **Overview**

Day	Time	Title	Cost		
Friday - Sunday	July 24-26 Leave 8:30 am Return 5:00 pm on the 26th	FULL FT1 Rocky Mountain Transect 3 day trip - Sponsored by ABLS	\$315.00		
Saturday 8:00 am - 5:00 pm FULL FT 2 Ferns of Elk Island \$55.00					
Saturday	8:00 am - 6:00 pm	FT 3 Bryophytes and Lichens of Dry Island Buffalo Jump Provincial Park	\$75.00		
Saturday	8:30 am - 5:30 pm	FT 4 North Saskatchewan River: Full day Saturday Canoe Trip	\$120.00		

Saturday	8:30 am - 11:30 pm	FT 5 Food Tour of 104 St, Named Best Farmers' Market 2013 by National Geographic Traveler	\$75.00
Saturday	10:00 am - 1:00 pm	FT 6 Nisku Prairie	\$60.00
Saturday	11:30 pm - 4:00 pm	FT 7 CANCELLED Market Fresh Cooking Class with Gail Hall	\$220.00
Sunday	8:00 am – 1:00 pm	FULL FT 8 Botany in Action	FREE!
Sunday	8:00 am - 6:00 pm	FT 9 CANCELLED Paleocene flora of Munce's Hill	\$75.00
Sunday	8:30 am - 4:00 pm	FT 10 Mycological Society of America Foray to Elk Island	\$60.00
Sunday	8:30 am - 5:30 pm	FULLFT 11 North Saskatchewan River:Full day Sunday Canoe Rental andShuttles from Edmonton to Devon	\$120.00
Sunday	9:00 am - 4:00 pm	<b>FT 12</b> Restoration of Peat Extraction Industrial Sites: Focus on bryophyte reintroduction and native wetland plants	\$61.00
Sunday	10:00 am - 2:30 pm	FT 13 The Enjoy Center	\$30.00
Sunday	12:30 am - 5:30 pm	FULL FT14 Afternoon Canoe Paddle on the River	\$80.00
Sunday	1:00 pm - 5:30 pm	FT 15 Getting Down and Dirty with Plant Science: Agronomy in Action and Better Breeding	\$30.00
		Post Conference Adventures	
Thursday	8:00 am - 7:00 pm	FULL FT16 Go North for a Lichen,Bryophyte and Vascular PlantBiodiversity Blitz	\$35.00
Thursday	8:00 am - 5:30 pm	FT17 Mixedwood Boreal Forest near Coyote Lake with the Nature Conservancy	\$70.00
Thursday	8:00 am - 5:30 pm	FT18 CANCELLED Boats, Bison and Borscht- Elk Island National Park and Ukrainian Cultural Heritage Village	\$200.00
Thursday	8:00 am - 5:00 pm	FT19 East of Edmonton: Late Quaternary landscapes, paleoenvironments, and human history	\$75.00
Thursday	8:30 pm - 1:00 pm	FT20 CANCELLED Morning Canoe Shuttle: Emily Murphy to Capilano Park	\$125.00
Thursday	9:00 am - 4:00 pm	<b>FT 21 Devonian Botanic Gardens - Tour</b> of the Cultivated Gardens and Native Forest Habitat - Guided	\$90.00
Thursday	9:00 am - 4:00 pm	FT 22 Devonian Botanic Gardens Tour- Self Guided	\$80.00
Thursday	1:30 pm - 3:30 pm	FT 23 CANCELLED Segway through the	\$150.00

## **Field Trip Details**

## Friday July 24

## FT 1 - Rocky Mountain Transect (American Bryological & Lichenological Society)

In conjunction with the Botany 2015 meeting in Edmonton, Alberta, Canada - the American Bryological and Lichenological Society (ABLS) is sponsoring a 3 day, pre-conference field trip to the mountains west of Edmonton. Our field trip coordinator is Catherine La Farge (Director and Curator of the Cryptogamic Herbarium at the University of Alberta). The 3 day excursion transect route will include Hinton (3 hours), Mt. Robson vicinity (2hours), Jasper (1hour), Mountain Park (1 hour), and back to Edmonton (3 hours). We will travel by tour bus. Our focus will be montane and alpine sites that include moist interior forests dominated by cedar (Thuja) and hemlock (Tsuga) at the world heritage site Mt. Robson in BC. This site has an abundant epiphytic lichen flora as well as a diversity of bryophytes that do not extend to the drier regions located further east. In this moist valley there are also stream and bedrock outcrop sites to explore. The rare, disjunct Bartramia halleriana occurs in the vicinity of Mt. Robson Provincial Park - a protected species in North America. Lobaria, Peltigera, Cladonia, Usnea and Bryoria species are abundant. In the Hinton region (at the edge of Jasper National Park), the eastern portion of the transect, will provide a diverse range of meso-sites (~1160 m asl) that include an open rich fen, black spruce (Picea mariana) and Larix laricina dominated wooded peatlands, and upland sites with distinct cryptogamic communities in dry lodgepole pine (Pinus contorta) stands, white spruce (Picea glauca), and aspen (Populus tremuloides) canopies. Some of the taxa we will encounter include: Bryoria nigrescens, Peltigera aphthosa, Peltigera elizabethae, Sphagnum warnstorfii, and S. angustifolium,

The third and eastern-most portion of the transect will include a high elevation (2027 m asl) tundra site rich in arctic-alpine taxa – including some southern-most range extensions occurring at the Cardinal River Divide, Whitehorse Wildland Provincial Park. This site has previously been identified as a potential refugia for some of the more northerly cryptogamic elements. This site is rich in lichens and at the upper reaches of the tundra meadow, a rich calcareous cliff harbors a range of interesting bryophytes. At the edge of the adjacent subalpine fir forest (*Abies Iasiocarpa*) we will also find *Dactylina arctica, Thamnolia vermicularis, Cetraria spp.*, and *Cladonia spp.* 

Depending on interest we may also include a dip in the Miette Hot Springs at the end of the first day, as well as dining at the Jasper town site for a bit of relaxation after the day 2 field excursion. Come help us explore the cryptogamic treasures of western Canada!

Lodging and meal arrangements have been made at the Hinton Training Centre. Lodging detail – Please indicate preference for double or single occupancy sleeping accommodations to Johanne at. (johanne@botany.org)

Dinner the second night will be at the Jasper town site – Note: This meal is not covered by the field trip fee. Departure time: 8:30 am with lunch at the Training Centre

## Saturday July 25

## FT 2 - Ferns of Elk Island (Sponsored by The American Fern Society)

Full day field trip from 8 a.m. – 5 p.m.

Led by Donald Farrar (Iowa State University).

Located less than an hour away from Edmonton, Elk Island National Park of Canada protects the wilderness of the aspen parkland, one of the most endangered habitats in Canada. This beautiful oasis is home to herds of free roaming plains bison, wood bison, moose, deer, and elk. Also boasting over 250 species of birds, the park is a bird watcher's paradise. Vegetation is characteristic of northern boreal and grassland biomes, but the northern latitude and nearness to the Rocky Mountains add additional elements. Elk Island holds the only known co-occurrence of western *B. lanceolatum* and eastern *B. angustisegmentum*. More surprises can be expected. Attendees need to wear rugged footwear and be prepared for insects and hot weather. This is a National Park so no collecting will be permitted. Driving time is approximately 1 hr each way. Breakfast, Box lunch, Water & snacks will be provided.

## FT 3 - Bryophytes and Lichens of Dry Island Buffalo Jump Provincial Park.

#### Full day field trip from 8 a.m. – 6 p.m.

Led by: Peter Whitehead, Janet Marsh, Sandy Davis (Western Canada Bryophyte and Lichen Interest Group), and Darcie Thauvette (Alberta Biodiversity Monitoring Institute)

Join the Western Canada Bryophyte and Lichen Interest Group as they continue the inventory of this spectacular Provincial Park. The park is on the bank of the Red Deer River and boasts hoodoos, deciduous forests, and many provincially rare and/or tracked bryophytes and lichens. In addition, more than 150 bird species have been spotted in this park including turkey vultures, golden eagles, red-tailed and Swainson's hawks, prairie falcons, mountain bluebirds, belted kingfishers and several varieties of warblers. Please wear comfortable hiking shoes or boots, a hat, sunscreen, insect repellant and outer clothing, with rain wear if the weather dictates. The road from the view point to the river banks is steep and can be slippery if wet so be prepared to walk a km in hilly terrain. Driving time is approximately 2.5-3 hrs each way. You'll be on site from 11: 00 A.M. to 3:00 P.M. Continental Breakfast, Box lunch, Water & snacks will be provided.

# FT 4 - North Saskatchewan River: Full day Saturday Canoe Rental and Shuttles from Edmonton to Devon

Full day field trip from 8:30 a.m. – 5:30 p.m.

#### Led by Edmonton Canoe

After meeting in the morning at Emily Murphy Park on Saturday or Sunday, paddlers board our yellow bus for transport to Devon. At the river's edge the canoes and kayaks are waiting for the eager paddlers to start downstream back to the park. The stretch of the North Saskatchewan River is easily paddled by beginners, experience is not required. The abundance of wildlife and parkland so close to the northern most metropolitan city is astounding. Personal flotation devices will be provided for people from 30lbs (3 years old) and up. Please advise of any children registering as well as their ages. Please dress for the weather as it may be hot or raining. We suggest you bring the following: light shoes or sandals for in the canoe and extra shoes (dry) for the ride home (optional), hat, sunscreen, sunglasses, rain jacket and pants, swim suit, towel, insect repellent, fleece jacket or wool sweater, water or other beverages, snacks, lunch, camera, and binoculars.

Participants will be transported to and from Emily Murphy Park on the southside of the river Drive into the park and turn left at the T-intersection. We meet in the parking lot next to the Groat Road Bridge. From there we take you by bus to Devon, a drive of about 45 minutes. Here your 2-person canoe is waiting and you begin your journey down river at your leisure. No guide, box lunch is included. The shuttle will leave Emily Murphy Park at 9 A.M. and you typically will arrive back at the park by boat by 5-6 P.M. Trip happens both Saturday and Sunday July 26 and 27, 2015. Driving time is approximately 1.5 hrs total.

# FT 5 Food Tour of 104 St, Named Best Farmers' Market 2013 by National Geographic Traveler

Led by: Gail Hall (Chef, Writer, Educator and Owner of Seasoned Solutions' Loft Cooking School) Housed in the warehouse district, this walking tour is a culinary and historical adventure on one of Edmonton's

popular streets. Food samplings from 4 top retailers plus an Alberta cheese tasting. Open to ages 14 and up. Comfortable footwear and outer clothing, with rain wear if the weather dictates.

The walking tour will start at 9:30 A.M. and finish by 11:30 A.M. - Saturday July 25, 2015.As a group you will leave the Shaw and meet Gail at her loft at 10249 – 104 St, which is approximately a 15 minute (1.2 km) walk and meet Gail at 9:30.

### FT 6 - Nisku Prairie

Half day field trip from 10 a.m. – 1 p.m.

Led by: Patsy Cotterill and Cherry Dodd (Edmonton Native Plant Group)

Nisku Prairie is a 31- acre remnant of aspen parkland protected as municipal reserve by Leduc County since 1994, when botanists persuaded the municipality of the ecological significance of this remnant. Aspen parkland is a globally rare ecosystem type, with some of its best manifestations in central Alberta and Saskatchewan. Aspen groves are interspersed with grasslands, and it is this latter community, dominated by plains rough fescue (*Festuca hallii*) and habitat for numerous species of forbs, that is of the most interest. A total of 140 species have been recorded for the site. Visitors will learn of the several challenges associated with maintaining prairie grassland in a settled area. Conditions permitting, visitors will be invited to spend an hour or so weeding and transplanting native plants in a disturbed area close to the entrance. The rest of the field trip will be spent walking in the prairie and examining the flora. Limited collecting could be arranged and there will be time for photography. The terrain is flat but potential hazards are hidden rocks, hollows and uneven ground. Other potential hazards are heat and mosquitoes. Wear sturdy footwear, sleeves, hat. Bring extra water. Mosquito repellent is advisable, though some will be provided. Limited collecting could be arranged. The bus will leave from the Convention Centre at 10 A.M. and return by 1 P.M.- Saturday July 25, 2015. Driving time is approximately 40 min each way. Breakfast, Box lunch, Water & snacks are provided.

## FT 7 Market Fresh Cooking Class - 11:30 pm - 4:00 pm

Led by: Gail Hall (Chef, Writer, Educator and Owner of Seasoned Solutions' Loft Cooking School)

The market fresh cooking class has participants shopping at one of North America's best farmer's markets cited by National Geographic. We'll meet the producers and vendors to select our local ingredients and create a 3 course meal paired with wines.

Requirements & Expected conditions: Open to ages 14 and up. Comfortable footwear and outer clothing, with rain wear if the weather dictates.

Travel: The class starts at 11:30 A.M. and should finish by 4 P.M. - Saturday July 25, 2015. You will meet Gail at her loft at 10249 – 104 St, which is approximately a 15 minute (1.2 km) walk from the Shaw Conference Centre – leave yourself enough time to meet Gail at 12:00.

### Sunday July 26 FT8 - Botany in Action 8:00 – 1:00 FREE

Join the fun in giving back - at our annual service project. Continental breakfast, box lunch and T-Shirt provided as as feeling of doing good!!

#### Led by: Kailey Setter and Jaimee Morozoff (Nature Conservancy of Canada)

You will visit Golden Ranches, a Nature Conservancy of Canada Conservation Site. This 1,350 acre site is located along the east shore of Cooking Lake and is located approximately 40 km east of Edmonton. Located in the heart of the Cooking Lake Moraine (CLM), the site features an impressive 8 km of shoreline and provides an opportunity to view rare avian species, waterfowl and other water birds staging on the lake during migration. The upland habitat is a mixture of mature aspen forest and open grassland, providing habitat for wildlife

including white-tailed and mule deer, moose, grouse and a variety of small mammals and songbirds.

Restoration and enhancement of the property is currently underway through tree planting, habitat enhancement and weed control. Invasive tansy and thistle are invading the natural areas, and with your help we can control it! Thistle be awesome!

Requirements & Expected conditions: Golden Ranches has no amenities. Bring good hiking shoes, a hat, rain gear should weather dictate, insect repellant, water, a camera and binoculars. Collecting may be a possibility. Travel: Driving time is approximately 45 min each way.

## Cancelled FT 9 - Paleocene flora of Munce's Hill

#### Full day field trip from 8 a.m. – 6 p.m.

Led by: Ruth A. Stockey and Gar W. Rothwell (Oregon State University) The Munce's Hill locality in the Paskapoo Formation near Red Deer, Alberta has yielded abundant well-preserved plant fossils of Late Paleocene (Tiffanian, Ti4) age. The flora and the stratigraphy of the site reveal a wetland forest plant community that lived on a Late Paleocene floodplain. The plant assemblage is primarily autochthonous, and is notable for seedlings in growth position. The understory was dominated by *Equisetum* cf. *fluviatoides*, Onoclea sensibilis, and *Speirseopteris orbiculata*. Successive fossil-bearing layers show a change in dominance of the forest canopy from *Metasequoia foxii* to the betulaceous *Paleocarpinus joffrensis, Aphananthe* sp., *Wardiaphyllum daturaefolium*, *Joffrea speirsiae* and other angiosperms. We will collect compression/impression fossils from the roadcut. Sediments are fairly soft, easily fractured, and plant material is abundant.

Requirements & Expected conditions: Be prepared for rainy, cool conditions as weather in Red Deer is unpredictable, but we expect good weather. Bring sun screen, closed toed shoes, your own geologic hammer if you have one and a water bottle (we will have some tools on hand). Outcrop is a roadcut and easily accessible without walking. Box lunch will be provided.

Travel: The bus will leave from the Convention Centre at 8 A.M. and return by 6 P.M.- Sunday July 26, 2015. Driving time is approximately 1.5 hrs each way.

### FT 10 - Mycological Society of America Foray to Elk Island

Full day field trip from 8:30 a.m. – 4 p.m. Led by Martin Osis, Alberta Mycological Society

Explore Elk Island National Park and expect to find dung fungi! Originally established as a federal reserve for elk, Elk Island now serves as protected habitat for plains bison, wood bison, deer, and moose as well as elk. The park offers a unique opportunity to hike through a landscape sculpted by an uninterrupted history of grazing by the massive bison. Elk Island habitats include open grasslands, marshes, bogs with scattered spruce, and the largest intact and protected piece of aspen parkland in North America. Once common, most aspen parkland has been lost to agricultural use. For park information, see the Parks Canada website <<u>http://www.pc.gc.ca/eng/pn-np/ab/elkisland/index.aspx></u>. Bring a hat, sun screen, insect repellant, a water bottle, hiking shoes or boots, and rain gear. Lunch will be provided. Travel: The bus will leave from the Convention Centre at 8:30 A.M. and return by 4 P.M.- Sunday July 26, 2015. Driving time is approximately 1 hr each way.

## FT 11 - North Saskatchewan River: Full Sunday Canoe Rental and Shuttles from Edmonton to Devon

#### Led by Edmonton Canoe

After meeting in the morning at Emily Murphy Park on Sunday, paddlers board our yellow bus for transport to Devon. At the river's edge the canoes and kayaks are waiting for the eager paddlers to start downstream back to the park. The stretch of the North Saskatchewan River is easily paddled by beginners, experience is not required. The abundance of wildlife and parkland so close to the northern most metropolitan city is astounding. Personal flotation devices will be provided for people from 30lbs (3 years old) and up. Please advise of any children registering as well as their ages. Please dress for the weather as it may be hot or raining. We suggest

you bring the following: light shoes or sandals for in the canoe and extra shoes (dry) for the ride home (optional), hat, sunscreen, sunglasses, rain jacket and pants, swim suit, towel, insect repellent, fleece jacket or wool sweater, water or other beverages, snacks, lunch, camera, and binoculars. Participants find their own transport to and from Emily Murphy Park on the southside of the river Drive into the park and turn left at the T-intersection. We meet in the parking lot next to the Groat Road Bridge. From there we take you by bus to Devon, a drive of about 45 minutes. Here your 2-person canoe is waiting and you begin your journey down river at your leisure. No guide, box lunch is included. The shuttle will leave Emily Murphy Park at 9 A.M. and you typically will arrive back at the park by boat by 5-6 P.M. Driving time is approximately 1.5 hrs total.

# FT12 - Restoration of Peat Extraction Industrial Sites: Focus on bryophyte reintroduction and native wetland plants

#### Led by Line Rochefort (Université Laval)

The Seba Beach bog is a Sun Gro Horticulture industrial Peat Harvesting site located 100 km east of Edmonton. This excursion aims to demonstrate how peatlands can be restored after industrial disturbances. Emphasis will be on the understanding of why the focus is first on bryophyte reintroduction (Sphagnum peat mosses and *Polytrichum*) in order to facilitate a full ecological restoration of native peatland plants. Since 2009, Sun Gro Horticulture has restored two former peat extracting sectors of the peatland. Those two sectors will be visited and the restoration method will be presented from principles to the scaling up with mechanical operations. The well-regenerated donor site where material was collected to achieve restoration will also be visited, as well as the nearby natural peatland. Participants will be encouraged to collect plants from the natural sector and field guides will be provided for easier identification. Expect to find ombrotrophic peatland species (Ericaceous shrubs, wetlands herbaceous and Sphagnum species), minerotrophic peatland species (sedges, *Carex*, mosses) and different wetlands species. Boardwalks are installed to ensure an easy and comfortable visit. As terrain is wet and sometimes muddy, bring rubber boots if you plan on exploring a bit further than the boardwalks! Otherwise, regular hiking shoes will be fine. Depending on the weather, a raincoat, sun protection, a hat or insect repellent can be useful. Please bring a water bottle; box lunch will be provided.

### FT 13 Enjoy Centre

#### Led by: Jim Hole

A personalized tour of the Enjoy Centre presented by Jim Hole. A behind the scenes look at the one-of-a-kind building which is the Enjoy Centre –home of Hole's Greenhouses and Gardens.

Following the tour, you may shop the Centre and enjoy a light snack or Brunch at the Glasshouse Bistro. The inhouse ketchup is made from tomatoes grown on the green roof!

Walk over to the Lois Hole Provincial Park, to enjoy a walk on the boardwalk through the wetlands. The Lois Hole Centennial Park is recognized as a globally significant Important bird area for its abundant and diverse bird populations, especially waterfowl and shorebirds. Interpretive boardwalks educate visitors about the sensitive ecology and importance of wetlands.

Discover old stands of white spruce along the northeast shore of the lake and a deciduous forest on the south containing highly diverse vegetation. Some of the unusual and rare plant species include orchids and ferns and the Indian Pipe (monotropa uniflora; Monotropaceae).

Requirements & Expected conditions: Please wear good footwear, a hat, and bring rain gear. Meals are not covered in the cost of the tour so that you may choose your meal at the Glasshouse Bistro. Travel: Driving time is approximately 30 min each way.

### FT 14 Afternoon Canoe Paddle

#### Led by: Edmonton Canoe

Every Sunday afternoon from the beginning of June to the end of September we have a trip through the river valley past the University and the downtown highrises. There is so much to see, eight bridges to negotiate, meet

the Dragonboats and wave to the Edmonton Queen.

Requirements & Expected conditions: Personal flotation devices will be provided for people from 30lbs (3 years old) and up. Please advise of any children registering as well as their ages. Please dress for the weather as it may be hot or raining. We suggest you bring the following: light shoes or sandals for in the canoe and extra shoes (dry) for the ride home (optional), hat, sunscreen, sunglasses, rain jacket and pants, swim suit, towel, insect repellent, fleece jacket or wool sweater, water or other beverages, snacks, camera, and binoculars. Travel: Participants will meet at the Centre and ride the bus to Capilano Park at the foot of 50th St on the southside of the river, and board our bus for the 20 minute drive to Emily Murphy Park. Here you launch your 2-person canoe and you begin your journey down river at your leisure. 2 person canoes or kayaks and the necessary safety equipment included. This trip is our regular service as described on our website (www.edmontoncanoe.com). No guide, no lunch is included. The shuttle will leave Capilano Park at 1 P.M. and you typically will arrive back at Capilano via boat by 5-6 P.M.- Sunday July 26, 2015. Driving time is approximately 40 minutes total.

# FT15 - Getting Down and Dirty with Plant Science: Agronomy in Action and Better Breeding

Half-day field trip from 1 - 5:30 p.m.

Led by Sheri Strydhorst (ARD Cereal Agronomy), Robyne Bowness (ARD Pulse Research) & Stephen Strelkov (Canola Clubroot Research)

Ever wonder what goes on before a variety becomes a variety or how best management practices are determined? Get an in-depth look at the breeding and agronomic research programs in central Alberta. We will walk through field research plots and visit university farm buildings looking at wheat breeding, clubroot research, cereal and pulse agronomy. The majority of the tour will be outside. Please dress for the weather as it may be hot or raining. We recommend wearing long pants, closed toe shoes. Please bring a hat and insect repellant. Driving time is approximately 1 hr with multiple stops. Water and snacks provided.

## Thursday July 30

## FT 16 - Go North for a Lichen, Bryophyte and Vascular Plant Biodiversity Blitz

Full day field trip from 8 a.m. – 7 p.m.

Led by Diane Haughland, Darcie Thauvette, Mireille Martel (Lichens), Richard Caners, Krista Williams (Bryophytes), Varina Crisfield (Vascular Plants; Alberta Biodiversity Monitoring Institute)

"Alberta is home to stunning mature boreal forest, ranging from old-growth, lichen-rich jack pine stands, to black spruce –tamarack bogs and fens with *Sphagnum* hummocks to mature poplar-fir forests with high overall floristic diversity. We'll head to the Athabasca and Lesser Slave Lake region to visit examples of all three stand types, making multiple stops to walk, gawk, and collect (most of the sites we plan to visit are on Crown land). As most sites are undeveloped, there aren't any amenities on site, but we'll pass through towns for food and breaks as needed. Bring good hiking shoes, rain boots for walking through bogs, a hat, rain gear, insect repellant, sun screen, water, a camera and binoculars. Collecting is possible. The schedule of stops is also flexible, particularly given the small group size. Travel is by Royal Alberta Museum-provided trucks and vans. We will leave from the Convention Centre at 8 A.M. and return at approximately 7 P.M. - Thursday July 30, 2015. Driving time is approximately 2.5 hrs each way with multiple stops."

## FT 17 - Mixedwood Boreal Forest near Coyote Lake with the Nature Conservancy

#### Full day field trip from 8 a.m. - 5:30 p.m.

Led by Jaimee Morozoff (Nature Conservancy)

You will visit two Nature Conservancy Sites. Coyote Lake is located 100 kilometres southwest of Edmonton and is situated within one of the richest biological areas of Alberta. Nestled in a transition zone between the dry mixed wood boreal forest and the central parkland natural regions, the Coyote Lake area supports more than 22 mammal species, 154 bird species (nine of which are imperiled), 266 plant species (including a number of rare

and uncommon orchids and Columbian watermeal — a species first recorded in Alberta at this site). A resident herd of approximately 40 elk live here. In addition, nine wetlands of varying sizes support numerous waterfowl. Both sites have natural substrate trails; off-trail is rougher terrain. Coyote Lake has a rustic washroom facility and a picnic shelter. Busenius has no amenities. Bring good hiking shoes, a hat, rain gear should weather dictate, insect repellant, water, a camera and binoculars. Collecting may be a possibility. Driving time is approximately 1 hr each way with multiple stops.

# FT 18 - Boats, Bison and Borscht- Elk Island National Park and Ukrainian Cultural Heritage Village

#### Led by: Edmonton Canoe

Your guide begins the day with tales of Edmonton as the bus brings you to Elk Island National Park. The vast open spaces, aspen forests and kettle lakes so close to the metropolis of Edmonton may astound you; more amazing are the herds of bison roaming the park year round. After a brief introduction, join the National Park Interpreter on a short walk through this unique environment. An hour or two of canoeing on Astotin Lake can bring you through the collection of islands; home to a variety of birds. Back on the bus, drive through the Bison Paddock and bid farewell to Elk Island National Park. A traditional lunch awaits upon arrival at the Ukrainian Cultural Heritage Village. After lunch the animated Village staff will bring history alive as you explore the open air museum. Personal flotation devices will be provided for people from 30lbs (3 years old) and up. Please advise of any children registering as well as their ages. Please dress for the weather as it may be hot or raining. We suggest you bring the following: light shoes or sandals for in the canoe and extra shoes (dry) for the ride home (optional), hat, sunscreen, sunglasses, rain jacket and pants, swim suit, towel, insect repellent, fleece jacket or wool sweater, water or other beverages, snacks, camera, and binoculars. A traditional lunch will be provided at the Ukrainian Cultural Village. Driving time is approximately 1.5 hrs with multiple stops.

## FT 19 East of Edmonton: Late Quaternary landscapes, paleoenvironments, and human history

#### Led by: Alwynne Beaudoin & Diana Tirlea (Royal Alberta Museum)

This trip will examine postglacial landscapes and vegetation east of Edmonton, focussing on the North Saskatchewan Valley and the Beaver Hills (Elk Island Park). Our route lies mainly through aspen parkland, with outliers of boreal forest, where factors such as subtle topographic diversity and forest fires shape regional vegetation. We will also discuss the landscape context for the human history in this region. Our lunch stop will be the historic fur trade post of Fort Victoria near Smoky Lake. Much of our route lies through scenic Kalyna Country, with its distinctive cultural echoes of Ukrainian and east European settlement. If you want to explore the hidden beauty and diversity of an understated landscape, and enjoy lively and eclectic field experiences, this fieldtrip's for you!

Requirements & Expected conditions: Please bring raingear, closed-toe footwear (running shoes or hiking shoes/boots), sunscreen, insect repellant, hat, and a water bottle. An illustrated field guide, snacks, extra water and boxed lunches are included in the price of the trip, as well as admission to the various attractions. Driving time is approximately 3 hrs total with multiple stops.

### FT 20 - Morning Canoe Paddle on the River

#### Half day field trip from 9 a.m. – 1 p.m.

#### Led by: Edmonton Canoe

Experience Edmonton as you navigate your own canoes down the North Saskatchewan River. The river is easy flowing with few obstacles. Edmonton Canoe River Pilot joins the group and tells tales of Edmonton, shares secrets of the river valley and motivates paddlers. Paddling through the heart of Edmonton paddlers are amazed at the quiet and green found so close to the bustling downtown. Bring history alive as you explore the open air museum. By late afternoon you board the bus back to convention centre. Personal flotation devices will be provided for people from 30lbs (3 years old) and up. Please advise of any children registering as well as their ages. Please dress for the weather as it may be hot or raining. We suggest you bring the following: light shoes or sandals for in the canoe and extra shoes (dry) for the ride home (optional), hat, sunscreen, sunglasses, rain

jacket and pants, swim suit, towel, insect repellent, fleece jacket or wool sweater, water or other beverages, snacks, camera, and binoculars. Driving time is approximately 20 minutes total.

### FT 21 Devonian Botanic Gardens - Tour of the Cultivated Gardens and Native Forest Habitat

Led by: Elisabeth Beaubien (University of Alberta), Laura Caddy & Paul Swanson (Devonian Botanic Gardens) The University of Alberta Devonian Botanic Garden, established in 1959, is a 190-acre property made up of cultivated gardens, mixed woodland vegetation, wetland preserves and an extensive nature trail system. Participants will be offered the choice of 2 of 3 tours throughout the morning and afternoon. Laura Caddy, Head of Horticulture and Living Collections, will lead a tour of the main garden collections, including the Patrick Seymour Alpine Garden, Herb Garden, Primula Dell and Kurimoto Japanese Garden.

Elisabeth worked at the Devonian Botanic Garden (1991 to 2003) as coordinator of Alberta PlantWatch, and frequently hiked the trails to track plant phenology. Her tour will follow forested trails to the south part of the Garden. Native plant communities include vegetated sand dunes with jack pine, spruce, aspen and white birch, as well as fen wetlands including larch (Larix laricina) hoary willow, horsetails (Equisetum fluviatile) and Ribes hudsonianum. This forest may also reveal nesting red tail hawks and signs of moose, deer, and coyote pups.

Paul Swanson, Devonian Botanic Garden's Staff Photographer will lead a Photographers Workshop. This learning session and tour will provide the opportunity to explore the Garden with your camera. All levels of photographers welcome as well as digital and film cameras.

Requirements & Expected conditions: Please wear regular walking/hiking shoes, and bring insect repellant, sunscreen, camera. Lunch, water and snacks will be provided. Participants can partake in 2 of the 3 tours, and participation for each tour will be capped at 15.

Driving time is approximately 1 hr each way.

### FT 22 Devonian Botanic Gardens – Self-guided Exploration of the Cultivated Gardens and Native Forest Habitat

Led by: Elisabeth Beaubien (University of Alberta)

The University of Alberta Devonian Botanic Garden, established in 1959, is a 190-acre property made up of cultivated gardens, mixed woodland vegetation, wetland preserves and an extensive nature trail system.

Highlights include the renowned 5-acre Kurimoto Japanese Garden; a butterfly house; indoor tropical, arid and temp erate showhouses; ornamental flower gardens; an extensive alpine garden; herb and sensory gardens; rose garden; water features and extensive shrub and herbaceous borders.

Services include guided tours, group packages, patio café and gift shop.

Requirements & Expected conditions: Please wear regular walking/hiking shoes, and bring insect repellant, sunscreen, camera. Lunch, water and snacks will be provided.

Driving time is approximately 1 hr each way.

## FT 23 Segway through the River Valley to the Muttart Conservatory

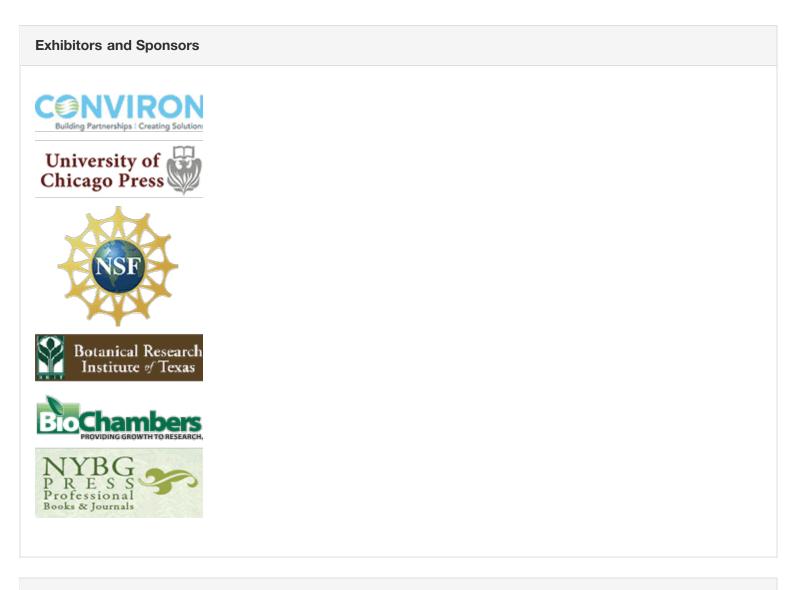
Led by: Chris Szydlowski (River Valley Adventure Co.), Elyse Williams (Alberta Biodiversity Monitoring Institute) Our store is located downtown along the North Saskatchewan River and the spectacular TransCanada Trail; the longest continuous trail in North America! Our Segway tours showcase our beautiful Edmonton River Valley as guests effortlessly glide through the park on the amazing Segway.

You will receive in-depth training, from one of our certified Segway trainers. They will go over the skill and drills for everything you will need to know before heading out on your adventure. After the training you'll have the chance to enjoy the beautiful scenery of the river valley like you never have before as we travel to the Muttart Conservatory. Once at the Muttart, join a knowledgeable interpreter for an hour-long guided tour of the gems of our collection. You'll explore the lush plant life of the tropical pyramid, discover unique plant adaptations in the arid pyramid and enjoy the changing of the seasons in the temperate pyramid.

Requirements & Expected conditions: Please wear closed-toe shoes and dress for the weather. The cost of the

trip includes Segway rental and instruction, as well as admission and a tour of the Muttart Conservatory. Must be 14 year of age or older to participate due to the Segway rental.

Travel: You mill meet your tour guides at the Convention Centre at 1:30 P.M. and return around 3:30 P.M. -Thursday July 30, 2015. From the Shaw, you'll walk about 10 minutes to the Segway rental location in Louise McKinney Park. Total time on the Segway is approximately 1 hour, total walking distance is approximately 1 km.



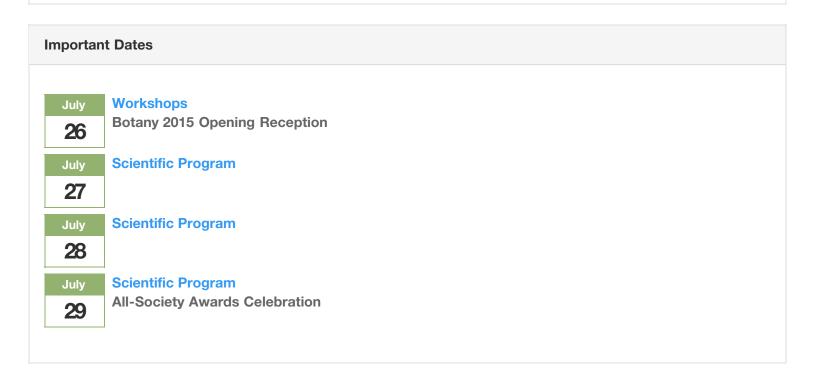
#### **Especially for Students**

#### - Need a roommate to share expenses - use our roommate matching service

- Thank you for your interest in volunteering at Botany 2015. As of right now all students chosen to volunteer have been contacted. If you have any questions, please contact Kathryn Bornhoeft at kathryn@botany.org.

- Sign up for WS 9 - Professional Development Workshop: Graduate School, How to Apply and What to Expect

- Don't forget to sign up for TE 5 - Careers in Botany: Interactive Career Panel & Luncheon and TE 11 Student Social and Networking Event. Sign back into the registration site and add them in!



Administrator Login

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