



Native Plant Study Group

March 2010

Photos by Moralea Milne
Ribes sanguineum



The evolution and biogeography of Fawn-lilies

By: Kristen Harrison

Erythronium is truly one of B.C.'s most beautiful and esteemed genera. These graceful, nodding lilies encompass approximately 25 species, nearly all native to temperate North America. In the Pacific Northwest, approximately 10 species occur and of these, four are found within B.C., including *E. oregonum* (white fawn lily), *E. revolutum* (pink fawn lily), *E. grandiflorum* (yellow glacier lily) and *E. montanum* (white glacier lily).

This past February the Native Plant Study Group had the great pleasure of listening to Dr. Geraldine Allen speak about the evolution and biogeography of fawn-lilies. Dr. Allen is a leading expert in *Erythronium* taxonomy and co-authored the most current treatment for the taxa in the Flora of North America (Allen and Robertson, 2003). Using morphological and genetic tools Dr. Allen has begun to untangle the mysteries of fawn-lily evolution. For example, she has determined that fawn-lilies are closely related to the genus *Tulipa* (tulips), which is not surprising given their morphological similarities.

In North America, *Erythronium* consists of genetically discrete eastern (Great Plains eastward) and western groups (Rocky Mountains westward). For example, whereas most western species can produce plants with multiple-flowered scapes (flowering stem) eastern species only have a single flower. Additionally, the bulbs of western species vary from ovoid to slender and elongate, while all eastern species only have ovoid bulbs. Also, the pattern of leaf mottling in eastern species is random dappling, while in western species the pattern forms elongate lateral streaks or veining, such as we see in white fawn-lily (*E. oregonum*).

The four species of *Erythronium* that are native to B.C. are easily discernible and can be grouped into two broad groups based on their ecology. *E. grandiflorum* and *E. montanum* are both found at higher elevations and both have pale-green, mottled leaves, but *E. grandiflorum* has yellow flowers, while *E. montanum* has white flowers. *E. oregonum* and *E. revolutum* on the other hand, are found at lower elevations and have white flowers and pink flowers, respectively, with no mottled leaves. There are also subtle features that vary among *Erythronium* species in B.C.; for instance *E. oregonum* and *E. revolutum* have a leaf-shaped anther filament (stalk of the pollen producing male anthers), unlike any other *Erythronium* species.

While much is known about *Erythronium*, some very fascinating questions still remain unanswered. For example, why are some species hugely widespread (e.g. *E. grandiflorum*) while others are restricted to small discrete ranges (e.g. *E. elegans*)? Why are *Erythronium* species far more diverse in western North America than they are over their broader range? These questions are sure to drive future research and incite curiosity for years to come.

Dr. Geraldine Allen is a faculty member at the University of Victoria in the Department of Biology where she teaches courses in Plant Systematics and Evolution. She is also the curator of the Herbarium. Dr. Allen has worked on diverse topics in plant evolution and systematics. She is particularly interested in the process of speciation, the role of hybridization in plant evolution, and the genetic characteristics of newly arisen species. She is using DNA to construct a phylogeny of the *Erythronium* genus worldwide and is investigating the origins and relationships of selected endemic *Erythronium* in western North America.



Photo by Kristen Harrison of an *Erythronium grandiflorum* (yellow glacier lily) exhibiting its unusual fuchsia-coloured anthers.
Kindersley-Sinclair Pass, Kootenay National Park, B.C.



If you would like to learn more about Dr. Allen's work, please see below:

Allen, G. A. (2001). Hybrid speciation in *Erythronium* (Liliaceae): a new allotetraploid species from Washington State. *Systematic Botany* 26(2): 263-272

Allen, G. A. and K. R. Robertson (2003). *Erythronium*. In: Flora of North America Editorial Committee (eds.), *Flora of North America North of Mexico*. Vol. 26. Monocots. Oxford University Press, New York

Loewen, D. C., G. A. Allen and J. A. Antos. (2001). Autecology of *Erythronium grandiflorum* in western Canada. *Canadian Journal of Botany* (79): 500-509

Events & Outings

Victoria Natural History Society

Field Trips

LEVEL 2- Satin Flowers and Birds at Juan de Fuca on Sunday, Mar 28th

This is a chance to see the satin flowers (*Olsynium douglasii*) as well as other early spring flowers without the strenuous walk up Mount Wells. Bring a snack and a drink. No pets please.

Location & Time:

Juan de Fuca Recreation Centre- 10am
1767 Old Island Highway
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca

LEVEL 4- Satin Flowers on Mount Wells on Friday, Apr 2nd

See one of the best displays of satin flowers (*Olsynium douglasii*) in the area. Also witness an extensive display of early spring wild flowers and a chance to see a Golden Eagle soaring above us. Trail is steep and challenging but will be taken at a leisurely pace. Wear sturdy shoes, bring a lunch and drinks. No pets please.

Location & Time:

Parking lot of Park Entrance off of Humpback Rd.- 10am (sharp)
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca

LEVEL 2/3- Magnificent Wildflowers at Mill Hill on Monday, Apr 5th
Soak up the glorious colours of spring and admire the results of the restoration work by CRD Parks staff and volunteers. We are also hoping to see some birds, perhaps a Townsend's Solitaire at the top. Route is steep and rough on the way down but will be taken at a leisurely pace. Wear sturdy shoes and bring a snack and a drink if you wish. No pets please.

Location & Time:

Mill Hill Regional Park information kiosk on Atkins Ave.- 10am
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca

LEVEL 3- Leisurely Walk up Lone Tree Hill on Sunday, Apr 11th

The diversity of species on this hill is amazing, and so is the view. Listen for birds such as the Orange-crowned Warbler singing his heart out.

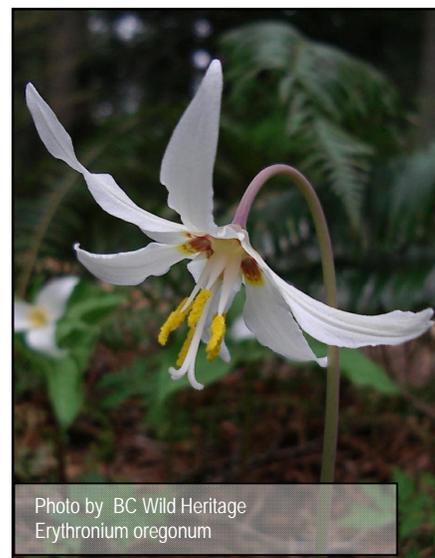


Photo by BC Wild Heritage
Erythronium oregonum

Trail is steep but not as challenging as some of the others. Wear sturdy shoes bring a lunch and drinks. No pets please.

Location & Time:

Park Entrance off of Millstream Rd.- 10am
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca



LEVEL 4- Enjoy All that Jocelyn Hill Has to Offer on Sunday, Apr 18th
Our goal is to see the Gold Stars (*Crocidium multicaule*) in bloom but we will not be disappointed if we miss them as there is an amazing array of other delights and great panoramic views from the ridge. Wear sturdy shoes and bring a lunch and drinks. No pets please.

Location & Time:

Go past Lone Tree Hill Park on your right and watch for Emma Dixon Rd on the left. The trail head is on Millstream Rd just past that intersection. Park on the right-hand side of the road.

Meet @ 9am

Contact Rick | 250-885-2454

LEVEL 3- Two for One Bargain: Horth Hill and Bear Hill Wildflowers on Friday, Apr 23rd

Despite the close proximity of these two areas, the flora is quite different.

Swan Lake Nature Sanctuary

Wonderful Wildflowers on Sunday, Apr 25th

A celebration of spring for the whole family. Walks, crafts, music and more.

Location & Time:

Swan Lake Nature Sanctuary- 12-3pm
Admission by donation

Horth Hill is sunnier and drier and the Chocolate Lilies (*Fritillaria affinis*) should be great there. Bear Hill is woodsier with less sun. Hopefully, we'll see some Pink Fairy Slippers (*Calypso bulbosa*). Trail is steep but not as challenging as some of the others. Wear sturdy shoes bring a lunch and drinks. No pets please.

Location & Time:

Parking lot at Horth Hill- 10am
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca

LEVEL 3- Enjoy the Wonders of Thetis Lake Park on Monday, Apr 26th
Enjoy the ferns, lichens, mosses, and other supporting cast as well. Our walk will only cover a small fraction of this fantastic park. Wear sturdy shoes bring a lunch and drinks. No pets please.

Location & Time:

Thetis Lake Park main parking lot- 10am
Contact Agnes Lynn| 250-721-0634 |

NPS BC Native Plant Society of
British Columbia

Hotspots for spring wildflowers on
Thursday, Apr 1st

Want to learn some of the best places to see fawn lilies, western trillium and other spring wildflowers in BC? Native Plant Society of BC members will show images

thelynns at shaw.ca

LEVEL 2- Plants of Cattle Point and Uplands Park on Friday, Apr 30th
This is an area of rare and endangered plants in an urban setting. Conservationist Matt Fairbarns will show you many reasons why it is special. Wear sturdy shoes bring a lunch and drinks. No pets please.

Location & Time:

Nature sign by the Cattle Point waterfront parking area - 10am
Contact Agnes Lynn| 250-721-0634 |
thelynns at shaw.ca

For all VNHS events:

No pets please.

Bring a lunch and drinks for
the all-day outings

Wear appropriate attire and footwear.

Contact Agnes | 250-721-0634 |
thelynns(at)shaw.ca | www.vicnhs.bc.ca



Photo by Jamie Fenneman
Crocidium multicaule

of spring wildflower species and share their knowledge about where and when to go for a great spring wildflower show.

Location & Time:

Van Dusen Botanical Garden, Cedar Room- 7pm
5251 Oak Street @ 37th Avenue
Vancouver, BC
Free Admission; Free parking
Contact Dawn | 604-831-5069 |
dawnhanna at telus.net

Reoccurring Events

Victoria Natural History Society

Botany Night3rd Tuesday of each monthGo to www.vicnhs.bc.ca to become a member and support our local Natural History Society!**Location & Time**

Swan Lake Nature Centre- 7:30 pm

Contact: Darren Copley | [dccopley\(at\)telus.net](mailto:dccopley(at)telus.net)
<http://www.vicnhs.bc.ca/>

Swan Lake Nature Sanctuary

Native Plant WorkshopsSat, Mar 20th Sat, Apr 10th
9:30am-12:30pm 9:30am-12:30pmSun, Apr 11th
1-4pm**Native Plant Sale**Sat, Apr 17th Sun, Apr 18th
10am - 3pm 10am - 3pm**Plant Nurseries in Victoria**Cannor Nurseries
4660 Elk Lake Drive
250-658-5415
www.cannor.comGardenWorks- Colwood
1859 Island Highway
250-478-2078
www.gardenworks.caGardenWorks- Saanich
4290 Blenkinsop Rd
250-721-2140
www.gardenworks.caIsland View Nursery (wholesale)
2933 McIntyre Road
250-544-4802Lochside Nursery
Lochside Drive
250-544-3100
www.csl.ca/lochside.htmlMarigold Nurseries
7874 Lochside Drive
250-652-2342
www.marigoldnurseries.comNature's Garden Seed Co.
Victoria, BC V8P 5S2
250-595-2062
www.naturesgardenseed.com**Volunteer Opportunities**The Anti-Ivy League of
Cadboro BaySeapoint Dr., Saanich
Volunteer for great camaraderie, loads of fun and a feeling of satisfaction every Wed. and Sat. from 9:00am-12:00 pm Start up early March and finish about early November. Currently working in Konukson Park on 10-Mile PointContact Harry Drage | T: 250-477-9544
[hdrage\(at\)shaw.ca](mailto:hdrage(at)shaw.ca)

Brodick/Bow Park

West of Univ. Heights shopping centre off of Cedar Hill Rd.
Invasive species removal and site restoration - every Monday 10:00am-Noon. Training, tools, and equipment provided.Contact Judy Spearing | T:250-472-0515 | [jandd_spearing\(at\)shaw.ca](mailto:jandd_spearing(at)shaw.ca)

Mt. Douglas Park

Alien, invasive species removal and site restoration. Schedule and location may vary.

For full details go to:
www.mountdouglaspark.ca/calendar.doContact Judy Spearing | T: 250-472-0515 | [jandd_spearing\(at\)shaw.ca](mailto:jandd_spearing(at)shaw.ca)

Glendale Gardens Native Plant

Demonstration Garden:

505 Quayle Road, Saanich
Meet every Wednesday morning,

snow, rain or shine. Before coffee we work in the Western Woods restoration project and after coffee we work in the native garden. Volunteers welcome.

Contact | T: 250-658-5740

Swan Lake Christmas Hill

Nature Sanctuary:

3873 Swan Lake Road, Victoria
Swan Lake has a wide range of volunteer opportunities involving plants: nature interpretation, gardening with native plants, and removal of invasive plants.Contact Robyn Burton | T: 250-479-0211 | [volunteer\(at\)swanlake.bc.ca](mailto:volunteer(at)swanlake.bc.ca)

The Native Plant Study Group meets on the third Thursday of the month from September through May at the MacLaurin Building, UVic.

Please join us!

The NPSG gratefully acknowledges the support of the Restoration of Natural Systems (RNS) program at UVic in securing the use of the rooms and facilities.

UVic parking policy--pay parking is in effect 24 hours a day. You must purchase a \$2 parking permit for the evening.

Save yourself the trouble by riding your bike or taking the bus!
(<http://www.bctransit.com/regions/vic/>)



Plant Nurseries in Victoria cont'd

Russell Nursery
1370 Wain Road
250-656-0384
www.russellnursery.com

Thousand Summers
Environmental Design
250-727-0229
thousandsummers@shaw.ca

Swan Lake Christmas Hill
Nature Sanctuary
250-479-0211
www.swanlake.bc.ca

Nursery information found at :
<http://www.goert.ca>

Local Native Plant Gardens

Glendale Gardens Native Plant Demonstration Garden

505 Quayle Road, Saanich
The native plant garden at Glendale Gardens was begun in 2000 by members of the Native Plant Study Group, and features rocky outcrops, native shrubs, trees, flowers and a Garry oak meadow. It covers nearly an acre, with a variety of habitats.

Contact | T: 250- 479-6162 |
info@hcp.bc.ca

Gonzales Bay Native Plant Garden:

1843 Crescent Road, Victoria
A residential seaside native plant garden that includes Garry oaks, western crab-apple, red-osier dogwood, woolly sunflower, mock-orange, sedum, western hawthorn, hairy manzanita, native grasses and bulbs. There is also a small Garry oak restoration area to the east of the Boyle property, beside the walkway to Gonzales Beach. The restoration area is accessible from the sidewalk along Crescent Road.

Contact Pat Boyle | T: 250-370-1812

Kings Road Native Plant Garden:
Kings Road at Roseberry Ave,
Victoria

This site is a residential native plant garden in the Oaklands neighbourhood of Victoria. Garry oak habitat was restored over a period of four years by volunteers meeting once a week.

Contact | info@goert.ca

Oak Bay Native Plant Garden: Beach Drive at Margate Street, Victoria

This Oak Bay landmark was donated by Mrs. Ada Beaven in 1939 for the purpose of developing a native plant garden. The site is of great ecological value as a green space and nature reserve. It acts as a preserve for plants indigenous to southern Vancouver Island, many of which are endangered by development. The garden includes more than 120 plant species from all areas of lower Vancouver Island as well as a restored Garry oak meadow.

Contact Carol Davies | T: 250-475-4412
| [ecdavies\(at\)uvic.ca](mailto:ecdavies(at)uvic.ca)

or
Contact Parks and Recreation,
Oak Bay | T: 250-592-7275

Saanich Community Church Native Plant Garden:

4566 West Saanich Road, Saanich
The garden is being developed under existing mature oak and fir trees and



Photo by Heinz Baum
Calypso bulbosa

aims to reintroduce species that may have grown on the site before it was developed.

Contact Burl Jantzen | 250-475-0406 |
info@saanichcommunity.ca |
www.saanichcommunity.ca

Royal BC Museum

675 Belleville Street, Victoria
One of the oldest Native Plant Gardens in western Canada (begun in 1967) and features approximately 300 native species.

Contact Ken Marr | T: 250-356-8176 |
[kmarr\(at\)royalbcmuseum.bc.ca](mailto:kmarr(at)royalbcmuseum.bc.ca)



Andy MacKinnon is here in April!

Andy MacKinnon is a local biologist and author of five plant identification guides including 'Plants of Coastal British Columbia'. His interests include BC's native plants, fungi and lichens, and sasquatch ethnobotany!

Andy specializes in ecosystem classification and mapping for coastal BC, land use and old growth issues, and forest conservation. He is currently working as Research Ecologist, Coast Region for the BC Forest Service.

Andy will speak about his newest book *Edible and Medicinal Plants of Canada* for the Victoria Native Plant Study Group April 15th 2010

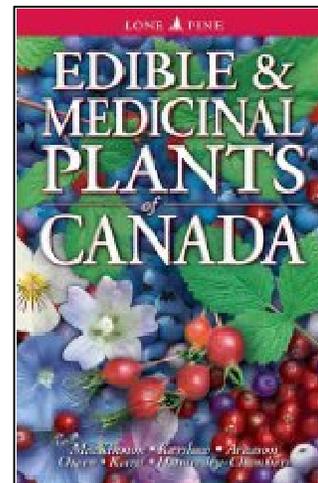


Photo by Ian Cumming
Erythronium grandiflorum

NATIVE PLANT STUDY GROUP (NPSG)

(Sub-group of the registered non-profit Native Plant Society of British Columbia and is guided by a steering committee)

The NPSG is a non-political group dedicated to learning about B.C. native plants as wild populations and in garden settings, and to supporting conservation of native plants and their habitats. Participation in outside events, by the group, or by individual members, using the NPSG name is dependent on approval of the steering committee or, where indicated, by the at-large membership. Activities requiring funding must receive approval by the general membership.

Co-Chair	Valerie Elliott co-chair@npsg.ca
Co-Chair:	Nathalie Dechaine co-chair@npsg.ca
Speakers:	Kristen Harrison
Treasurer:	Joan Varley
Newsletter:	Ilana Kronick Kristen Harrison Hilary Stead
Plant Rescue:	Todd Doherty
Membership:	Agnes Lynn
Publicity:	Valerie Elliott
Room Set-up:	Pat & Wayne Robertson
Plant Raffle:	Heather Pass
List-serve:	Linda Beare & John Olafson
Refreshments:	Pat McMahon
Archivist:	Brenda Pilon

Native Plant Study Group members are members of the Native Plant Society of BC.