



NEWS

Native Plant Study Group

A TALE OF TWO CAMAS

ETHNOECOLOGY OF AN INDIGENOUS ROOT FOOD

NATIVE PLANT STUDY GROUP

(Sub-group of the Victoria Horticultural Society)

The NATIVE PLANT STUDY GROUP 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. The group is guided by a volunteer steering committee. Members are encouraged to volunteer for this committee. Participation in outside events, by the group, or by individual members using the NPSG name, is dependant on approval of the steering committee or, where indicated, by the at-large membership. Activities requiring funding must receive approval by the general membership.



Brenda Beckwith, who carried out research on camas for her doctoral thesis led a lively presentation at the September meeting. Since there was no newsletter in October,

we have included her presentation in this edition, with apologies for any omissions or mistakes.

Camas is in the lily family, of which there are two species in our local region, *Camassia quamash* (common camas) and *C. leichtlinii* (great camas). There is another camas (*C. quamash* "azurea") that is found in bog like conditions in Bamfield and on the Brooks Peninsula. Another lily family member that closely resembles the *Camassia* and which grows in similar conditions is death camas (*Zygadenus venenosus*), which is highly poisonous and potentially fatal if ingested.

Brenda quoted Tim Ingold, "The landscape tells - or rather is - a story" and Brenda told a compelling story of camas as part of the cultural landscape of local First Nations peoples. Productive camas harvesting grounds were owned by families, carefully tended and used as food and/or trade goods. Camas contains inulin, which

when slowly cooked, converts to fructans (e.g. fructose), an easily digestible and nutritious simple carbohydrate. Camas cultivation began with the use of a digging stick to pry the bulbs out of the hard ground, most often after they had set seed. Intentional harvesting tilled and aerated the soil and likely resulted in high rates of bulb division. Camas beds were also weeded and bulbs were transplanted into new locations. The final step in camas cultivation was the intentional burning of the fields, which would reduce thatch and control invasion by firs and shrubs.

Brenda had study sites at Mill Hill, Witty's Lagoon (including Tower Point), and Devonian Regional Parks (incidentally all CRD Parks) that she monitored and conducted research within, including burning the one metre square sites. Brenda also conducted a nursery study from 1998-2002 on camas bulbs rescued from the Costco site in Langford. From these studies she was able to find that offsets were produced on 25% of the bulbs, that the number of plants and the flowering rate increased over this period. She found a weak correlation between bulb size and the number of flowers and the number of leaves.

As many know who attend plant rescue, camas transplants well and for those who collect seeds, camas germinates easily, especially if planted in the fall.

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WHAT'S UP?

SEEDY SATURDAY. Sat Feb 19th from 10-4 at the Victoria Conference Centre in aid of James Bay Market. Please consider donating native plant seeds if possible. If you volunteer to work at the event you will receive a free pass. Seeds may be brought to the event. Contact Pat McGuire @ patmcgu@telus.net

An Evening of Pacific Baroque to support The Land Conservancy
Friday, January 28, 2005 8 pm Alix Goolden Hall Tickets \$35 call 598.8096 for more details.

Maple Juice Workshop! Feb 5th at Wildwood by Ladysmith. To support the TLC Call 250-254-5540 for info.

Chocolate Potluck and Valentines Dance Feb 12th to support TLC. Nanaimo. Call 250-254-5540 for info

SCHEDULE OF SPEAKERS

SPRING 2005

Jan. 20 - The Gorge Restoration Project
- Paula Hesje, Project Manager

Feb 17 - Environmental Law, The Skagit Valley and Glencoe Cove - Calvin Sandborn, University of Victoria, Environmental Law Centre

March 17- The Nature Conservancy of Canada - An Overview - Tim Ennis

April 21 - Rithet's Bog Restoration Project
- Sharon Hartwell, Project Mgr.

May 19 - Sylvia Pincott - The Beauty of Small Things

WELCOME AND THANKS

Welcome to Valerie Elliott, our new co-chair and person responsible for publicity. I notice that Chris Curran has taken over from Pam Sinclair the shared coordination of Plant Rescue. Many thanks to all retiring volunteers for their many years of commitment and service to this organization. Pam Sinclair has worked with David Cohen on Plant Rescue for some years now and her commitment to informing the many volunteers, getting consent forms signed and incidentally obtaining new members has been greatly appreciated. Jean Forrest spent many an hour hunched over a keyboard writing our newsletter and giving us an invaluable archive of past speakers, news items and events. Lynn Woodgate, former volunteer for publicity, supplied us with beautiful eye-catching posters to announce our presentations and often made the long, dark, wet journey from Duncan to be with us. Hopefully we will continue to enjoy their presence, experience and expertise for years to come.

FEBRUARY MEETING DATE
Feb. 17th, 2004 at 7 p.m.
Room D116
MacLaurin Building, UVic.

VOLUNTEER OPPORTUNITIES

Devonian Regional Park, Metchosin, Broom Removal on the 2nd Sunday of the month, contact Moralea for details: moralea@telus.net or 478-3838

Saanich Garry Oak Restoration Projects. For more information, contact Pat Johnston @ 595-5600 or patj@islandnet.com

Sat, Jan 22 - Mt Tolmie - 10:00 to Noon
- Removing Broom

Sun, Jan 30- Little Mt Doug - 10:00 to Noon - Broom removal

Sat, Feb. 12 - Camas Park - 11:00 to 1:00
- Invasive species removal

Sun, Feb. 13 - Mt Doug Summit - 10:00 to Noon - Invasive species removal

Sun, Feb 20 - Feltham site - 10:00 to Noon - Ivy removal

NATIVE PLANTS SOUGHT FOR LANDSCAPING PROJECT

Plants, plants, plants!

That is the current theme for the landscaping partnership project the Compost Education Centre is working on in Sidney.

Called Homes and Habitats, the goal is to design and create an ecologically friendly landscape at homes being built for low-income families through Habitat for Humanity.

For all native plant gardeners out there this is a great time to donate native plants from your yard and share the joy and benefits that native species can bring to a garden.

We are looking for the following:

sword fern, licorice fern, salal, red flowering currant, sea thrift, wooly sunflower, potentilla, nodding onion, Oregon grape - tall and dull,
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FAVOURITE PLANTS

SPRINGOLD (*LOMATIUM UTRICULATUM*)

AND ITS SISTER GENUS

COUS OR INDIAN CONSUMPTION PLANT
(*L. NUDICAULE*)



With the earliest blooms occurring in December and January and with the last ones unfurling in July in wetter protected sites (Clark 1973),

springgold brings brilliant yellow vibrancy to our landscape and garden. Members of the carrot family (Umbelliferae), both species grace open sunny, rocky sites that dry out in summer. I have found that cous, the original First Nations name for *Lomatium nudicaule*, seems more appreciative of hibernal (winter wet) seepage areas.

The rocky meadow and gravel pathway around my new home are graced with thousands of springgold plants, presenting a carpet of cheerful yellow bloom throughout the spring. The seedheads later stand ramrod straight and brittle, easily scattering underfoot or in the wind, releasing their dill flavoured seeds.

Cous seems to be more restrained in its exuberance and blooms much later with a more subdued palette. Its distribution also appears more restricted in our vicinity, with the populations on my property occurring at higher elevations.

If you love anise swallowtail butterflies, you will want to incorporate into your garden or preserve in situ these plants as they are the native host plant or caterpillar food for these lovely creatures. The anise swallowtails are the darker looking swallowtails with a thick black colouration on the leading edge of their forewings. I have seen them fluttering and dancing

above a beautiful patch of cous on Chatterton Hill, no doubt in the throes of reproductive delight!

The leaves, roots and seeds of both species are edible and indeed tasty and springgold is said to be the wild carrot of the First Nations. Seeds of cous or Indian consumption plant were chewed to counteract colds, sore throats and tuberculosis and the leaves are said to be high in vitamin C.

Both species are easy to grow from seed but problematic to successfully transplant from the wild. They have a long, slender to



CONFUSED PLANTS AND BIRDS!

On January 6th on Camas Hill, in Metchosin, springgold (*Lomatium utriculatum*) in bloom. Also the tiny ruby jeweled lipstick cladonia (*Cladonia macilenta*).

Spied in December on Langvista Drive in Langford, an oceanspray (*Holodiscus discolor*) in leaf and bloom.

In East Sooke Park in late November, truly gorgeous dark pink blossoms on Nootka rose (*Rosa nootkana*).

Heather Pass has camas bulbs up 4-6 inches in her pots.

As Lynn Woodgates husband David finished installing the outdoor Christmas light on a foggy December afternoon he flicked the switch to make sure the lights were in working order. A desperate humming bird immediately flew to a red bulb but left soon after, no doubt in disappointment. They have since refilled their humming bird feeder.

In October I had a white Zebra finch collide with my window. I tried to rescue it, knowing it couldn't withstand even our mild wet-coast winter, but it mistook my generous spirit for certain death and flew away before the recovery operation was successful.

stout root which is very difficult to remove from rocky areas without breaking. Although the seeds germinate easily, often emerging not long after the fall rains begin, they are highly attractive to slugs and I wonder how any survive in the wild. One night of inattention and the slugs usually have eaten all my seedlings.

Buckets of Thanks

to James Miskelly for the use of his photos and to Madeline Milne, graphic designer extraordinaire for volunteering to help her mom with this newsletter.





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SOMENOS GARRY OAK

PROTECTED AREA RESTORATION PROJECT

Congratulations to Dave Polster, who was awarded the EcoStar award for Research and Technology from the Lieutenant-Governor in December. We were privileged to have him speak to us about the restoration of the Somenos Garry Oak Protected Area in November, before his new found star status makes him the “must-have” speaker of the season. Dave is the provincial authority on soil bio-engineering, the practice of using living plant material to create engineered structures, for use on steep, erosion prone terrain.

The Somenos Garry Oak Protected Area is located in the Cowichan Valley, adjacent to a large body of freshwater and has the distinction of being one of the few remaining deep soil (several metres deep) Garry oak meadows. It is home to rare plant species such as yellow montane violet (*Viola praemorsa*) and Howell’s triteleia (*Triteleia howellii*). 1989 saw the move towards preservation of the area with Protected Area status being achieved by 1997. This designation was chosen over the more rigorously defined ecological reserve in order to better manage the area.

A group of experts who included Brenda Beckwith, Nancy Turner and Hans Roemer decided to attempt to restore the site to pre-contact

conditions which had been altered by disruption of the natural and/or cultural disturbance regimes, such as burning and digging. Fire suppression led in turn to dense smothering thatch and the invasion of many species, especially English hawthorn (*Crataegus monogyna*) and common snowberry (*Symphoricarpos albus*). Since there was no “books of rules” and much uncertainty on the course of action to take, an adaptive management approach has been followed.



The site was mapped and 12 permanent 50 m transects and some 20 x 50 cm plots were established to give baseline information. There are four treatment blocks: control; mowing; mowing and burning and mowing and burning twice. Before fires could be permitted it was necessary to remove any ladder fuels. A brush mower owned by the Garry Oak Ecosystems Recovery Team (GOERT) was pulled behind a quad after seeds had been set, sometime in July/early Aug. The *Viola praemorsa* responded well to this treatment, possibly because of the reduction in thatch and competition and the increased availability of nutrients. Bare soil was a concern due to the probability of invasion by weedy species

and so to rebuild the “fabric of the ecosystem” 19,000 plugs of native species, chiefly grasses were planted. Grass species collected, processed at Yellowpoint Seed Nursery and grown at Sylvan Vale included Roemer’s fescue (*Festuca idahoensis* “roemeri”), California brome (*Bromus carinatus*), oatgrass (*Danthonia* sp.), and Lemmon’s needlegrass (*Achnatherum lemmonii*).

In addition to these restoration techniques, many large truckloads of English hawthorn were also removed as well as some Douglas fir (*Pseudotsuga menziesii*), which engendered many a contentious discussion. Some firs near the wetland were left as wildlife trees or snags. As can be imagined, unanimity in drastic decisions was difficult to achieve. A variety of techniques are employed to combat invasive species. Broom (*Cytisus scoparius*) is removed in spring, when it is about to flower and its energy reserves are at their lowest. It is cut at or below ground or if the stem diameter is smaller than a pencil, pulled carefully. They try to not disturb the soil as the well endowed seedbank is viable for decades. Other invasive species include ivy (*Hedera helix*), orchard grass (*Dactylis glomerata*) and cheatgrass (*Bromus tectorum*). The orchard grass can be burned with a tiger torch in winter. Snowberry, a native species, invaded the site and it has been mowed to the ground and is resprouting. Further mowing will be necessary to control its range.

We look forward to additional reports from Dave on the restoration of the Somenos Garry Oak Protected Area.



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IDENTIFICATION BLUES

Have trouble with identification of grasses and their allies? How about mosses and lichens? This will be a new column describing my attempts to sort these difficult but fascinating plant families.

Grasses, Sedges and Rushes

Overall differences between them are simplistically described in the following saying: "Sedges have edges; rushes are round; grasses are hollow right up from the ground" by anonymous.

I found an excellent description of sedges online. "These plants have edges because their stems are triangular rather than being round like grass or rushes. Sometimes the sedge edges are very sharp due to a row of tiny teeth along the stem angles (sedge leaves also have these saw-toothed margins). In fact, the name of the genus *Carex* derives from the Greek word meaning

"cutter." Sedge leaves grow in three rows, one along each side of the stem, so that looking down on a sedge plant from above you see leaves extending outward in three distinct directions.

Grass and rush leaves, by contrast, grow in two rows. Furthermore, sedge stems are solid, not hollow, like grass stems" (Mastrogioseppe, 1999).

The most common of the sedges associated with our Garry oak ecosystem that I have encountered in our area is long-stoloned sedge (*Carex inops*) (*inops* is Latin or perhaps ancient Greek for weak or poor). It is a delicate little sedge which creeps across the dry landscape through its rhizomes or stolons. The article mentioned above states that many sedges respond vigorously to low intensity fire, with long-stoloned sedge being one which increases in cover.

It is low growing, 20-50 cm tall, although I don't think I have ever seen it at the

higher end of this height and very grass-like in appearance. The leaves are thin, 1-3 mm wide with short, rather shredded-looking reddish-brown leaves at the base.

It appears to be a useful subject for restoration work, with its ability to spread through its roots and its affinity for fire, which is often indicative of easy growing plants. How about a *Carex inops* lawn?

REFERENCES

Mastrogioseppe, J. 1999. Nature Notes, Vol. XXX. Crater Lake National Park. Website: <http://www.nps.gov/crla/notes/vol30d.htm>

CAMAS CONTINUED...

These final remarks are from Brenda's presentation to Environment Canada, fall 2004:

In closing, in terms of endangered ecosystems, many scientists talk about what has been added to the landscape (e.g., exotic species, agricultural expansion, urban development), and we tend to lump together what was taken away and call it "habitat loss" – but so much more is missing.

The suppression, and elimination, of Indigenous resource use and management, has contributed to significant landscape change.

For cultural landscapes like Garry oak ecosystems we need to start looking at how they are culturally endangered, not just ecologically endangered.

For example, the camas lily is culturally endangered because:

- Most of the sites where families harvested
 - o No longer exist,
 - o If they do, cannot gain access,
 - o If they could, perhaps they wouldn't want to because of ground pollution and questionable site histories;
- As well, soils are hard digging with many weeds and rocks;
- Bulbs in natural areas are small and the sites are unproductive.

But, through collaborative research initiatives that contribute to and support the re-implementation of traditional management practices, and good reconstruction studies that incorporate both Indigenous science and western science, there is a future for productive and accessible camas landscapes.





NOTES

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Native Plants Con't...

goldenrod, bleeding heart, false Solomon's seal, honeysuckles, false lily of the valley, twinflower, vanilla leaf, twinberry, falsebox, evergreen huckleberry, alumroot, oceanspray, elderberry (both), Indian plum, camas (any), fringe cup, pearly everlasting, gaillardia, yarrow (all colours), Douglas aster, stonecrops, Pacific dogwood, red osier dogwood, Nootka rose, kinnikinnick, hairy manzanita and/or X media, beaked hazelnut, lupines, native grasses (or seed), mock orange, penstemon, shooting stars, Easter lilies, tiger lilies, trillium, fool's onion, harvest brodiaea, trailing blackberry, snowberry (both), native rhodo, starflower, Siberian miner's lettuce, sea blush, blue-eyed Mary, buttercup

Herbs: lavender, echinacea creeping thyme - various colours, rosemary, thyme, parsley, fennel, sage, plus any other drought tolerant options.

In addition, we are looking for the following materials:

big rocks, coarse woody debris (logs etc.), (lawn) edging material, Altwood recycled plastic lumber, rain barrels, drip irrigation components to service vegetable beds, timers for drip irrigation, pond liner, pond pump, solar panel to power pond pump.

To donate, or for more information, call Lynn Elliott at 386-9676 or Linda Beare halcyon@telus.net

THANK YOU!

