

CREATING A NATIVE GARDEN IN VICTORIA BC

From Design to Maintenance



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Presentation prepared for a Master Gardeners Workshop
'Gardening with Native Plants'**

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PROLOGUE

The information provided in this document is based on the personal experience gained by the author over a 7-year period, while developing an extensive native garden, based primarily on salvaging native plants from construction sites. This information is not meant to duplicate what is very knowledgeably provided in the GOERT's *Garry Oak Gardeners' Handbook* (http://www.goert.ca/gardeners_restoration/garryoak_gardener.php), which you should consult for additional details and direction. Rather, this document highlights some of the opportunities and challenges associated with building a large native garden from salvaged plants.

My objectives were threefold:

- to create a year-round beautiful garden that could be used **for educational purposes**, by organizing native plant garden tours each year;
- to **salvage and protect** plant species (over 180 plant species planted over 2,500 sq. feet) from woodland and Garry Oak ecosystems, the latter which are endangered in B.C.; and
- to **learn** about native plants and to **help others** protect these plants and their habitats, by contributing hundreds of native plants and thousands of seeds and small bulbs to native habitat restoration projects and small native gardens being developed by community groups.

The largest portion of my native garden was developed on south-facing slopes and some flat areas below these slopes, where rich garden soil was added after construction. After the extensive landscaping associated with building a new house, only three trees remained from the previous south-facing garden. The front yard went from a flat, square traditional garden with a large lawn and a few linear ornamental beds, to a 'sloped to level' garden with varied habitats. These include a woodland (on the E side of the house), south-facing deep-soil meadow, small pond and creek, south and north-facing slopes, shallow-soil rocky outcrops, partial-shade areas behind remaining trees and newly added boulders, as well as a gently-sloping liner-created moist area.

This document was developed for people who know little about native plants or even gardening. My objective is to help anyone who is interested in growing native plants, so they can contribute in some ways, no matter how small, to protect and propagate the threatened as well as common native plant species found in our area.

The advice provided in this document is my own. Many people would probably disagree and use other techniques. So please, use your judgement with regard to what you think is appropriate for your own garden. I welcome your suggestions to improve this document to benefit other people gardening with native plants.

Louise Goulet

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November 14th 2015, Victoria, B.C

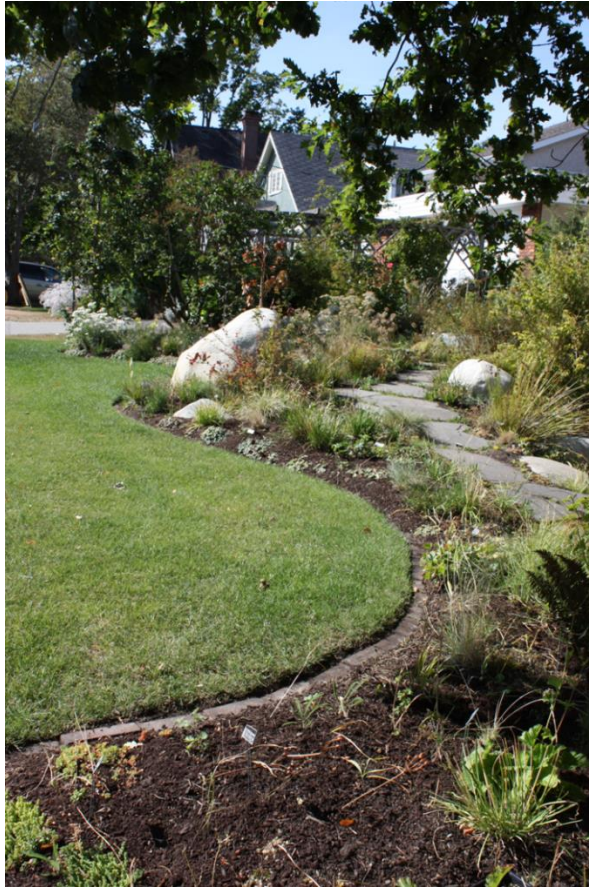
INTRODUCTION

For most gardeners, creating a new ornamental garden is a challenge - even more so to **create a native garden that is attractive year-round**, which is what I tried to do on my property. Most people picture a Garry Oak meadow as a fleeting event, with a profusion of flowers and colours for about two to three months of the year, followed by nine months of often drab colours. It does not need to be so! Judicious landscaping and an appropriate selection of native plants and garden features can make an incredible difference. Still there are special challenges working with native plants, which hopefully this document will help you overcome.

Key issues are addressed for garden design, plant selection and securement, planting and maintenance, including watering, weeding, mulching and controlling some garden pests.

GARDEN DESIGN

- **Scope your project**, with a clear understanding of what you want to achieve. This does not mean that you cannot have grandiose, long-term plans and objectives. Just start with one piece of your plan, which will allow you to learn much that can then be applied to future garden expansion. It is better to start small and do a great job of creating a new native garden bed than to start too big and get overwhelmed, ending in lots of work, expense, frustration and possibly poor results.
- Start with **creating 'the 'hardscape'**.
 - Where will you put the new bed/garden? How large will it be?
 - What do you have in terms of **existing vegetation** there? What should stay or go?
 - Should you modify the **garden/bed size and shape** to make it look more attractive visually, even through the winter months? I personally favour curves or irregular shapes rather than linear, square beds - which does not mean that you cannot achieve something beautiful for the latter. Just ask yourself, how can I improve the way it looks right now?
 - What 'hard feature' can you add that would reduce the area to be planted and improve its looks? It does not need to be permanent, just to make your life easier for now. Rocks, stepping stones/pavers, a beautiful piece of wood found on the beach, a garden ornament? Is it in keeping with the style of the garden you have in mind?



A curving bed, large rocks and pathway create visual interest during the winter months



Large tree burl (top right) picked up on the beach, which cost nothing



Use pavers to create visual interest and reduce the planting surface

- **Plants can also contribute to the 'hardscape'** if they remain year-round, for example trees, shrubs, perennial grasses and evergreen forbs and ground covers. Plant these first to get a preview of your garden during the winter months. Seasonal plants such as bulbs, perennial forbs and annuals will be added to this framework in the space that remains.



Seasonal plants (Shooting Star, Spring-gold) fill in amongst evergreen plants

- Use fine **mulch to cover the soil** between your plantings, for looks as well as weed control.

SELECTING NATIVE PLANTS

Several designs for native plant gardening are provided in *The Garry Oak Gardener's Handbook* (http://www.goert.ca/documents/GOERT_Gardeners_Handbook.pdf), including designs for Garry oak meadows, woodlands, containers, rock outcrops, moist-soil gardens, pond edges and wet areas, hedgerows, shrub tickets and for gardens that will attract butterflies and pollinators

However should you want to design your own native garden, based on the plants you managed to salvage or to select primarily low-maintenance or evergreen plants, follow these steps:

- Identify your **site conditions** regarding slope, aspect, shade, moisture, depth and type of soil to identify plants that will thrive in this location.
 - However we **do not know native plants needs** to the same extent as we know them for ornamental plants, although more information about native plants is steadily coming out (App. 1, 2). Native plant books provide general habitat information but unless you are a plant ecologist, you may not know what it means in concrete terms.
 - Another challenge – when we create a new garden bed in a **different setting** (for example, changed drainage or slope resulting from new landscaping), we do not always know what to expect in terms of the new site's conditions.
 - The solution: if possible, **plant a given species in three different locations**, so you should not lose them all and will know what the best site is for that species.
- Identify the **plant species** and **approximate number** you will need to plant the bed/garden, seeking advice from friends, nursery staff or landscapers as needed (App. 1 and 2).
- Develop a **planting plan**. It helps as you consider height and size of mature plants. Drawing a plan will help avoid costly mistakes and make it easier to document changes in the garden later on.
- Make sure to select some **evergreen** trees, shrubs, perennial bunch grasses, forbs and ground covers. These should be planted first to assess the overall look as they will be part of your garden's 'hardscape'. Deciduous trees and shrubs also provide a visual element in the winter months, but to a lesser degree usually. Seasonal plants such as annuals and bulbs will be placed last within your 'hardscape' framework. (App. 1. See the Capital Regional District website for a list of native evergreen plants (www.crd.bc.ca/education/natural-gardening)).



Evergreen Shrub: Tall Oregon Grape

Evergreen Ground Cover: Woodland Strawberry

- Make a point of selecting some suitable species for the site that **bloom longer and bloom later** (Fool's Onion, Yarrow, Harvest Brodiaea, Oregon Stonecrop, Coast Penstemon, Common Harebell). This way you will extend your flowering season. Seed heads and/or colourful berries can also add interest for a longer period (See Appendix 1 for more information).



July 2012 – Fool's Onions, Nodding Onions, Oregon Stonecrop, Yarrow, Ocean Spray (in background)

- Give consideration to **ease of maintenance** and the **size of your garden** when selecting native plants. Some plant species will take your garden over given half a chance, such as species that grow vigorously into adjacent areas through **rhizomes** (Douglas Aster, False-lily-of-the-valley, Yarrow, Thimbleberry, Tall Oregon Grape, etc.). If you use these, make sure it is what you want, for example to quickly cover a large open area. Or, contain them by planting them where they will be already confined by the garden configuration; or, by using a physical barrier around them, up to the final area you are prepared to give to these plants. Similarly, consider the **final size of a mature plant**, especially for trees and shrubs. Is your garden large enough for these? Do you want a few large plant specimens or a greater diversity of plants?
- One of the reasons to use **perennial native bunch grasses** is that they will not invade adjacent areas via rhizomes, as other types of grasses will. They look beautiful and provide interest through the winter months. It is easy to remove seed heads before the seeds fall to the ground (Cut handfuls of seed-stem tops and leave the remainder of the cut stems. In mid- to late-fall, you will be able to easily pull these stems by hand, without having to go into the plant to cut them with scissors. Or 'comb' the grass plant with a small rake – dead leaves and stems will easily come out.) (Saanich Native Plants specialises in native grasses (<http://saanichnativeplants.com/>).



California Oatgrass (centre of picture), Small-flowered Alumroot (front left), Nodding Onion and Western Buttercup (front right), White Shooting Star (top right)

WHERE TO GET THE NATIVE PLANTS YOU NEED?

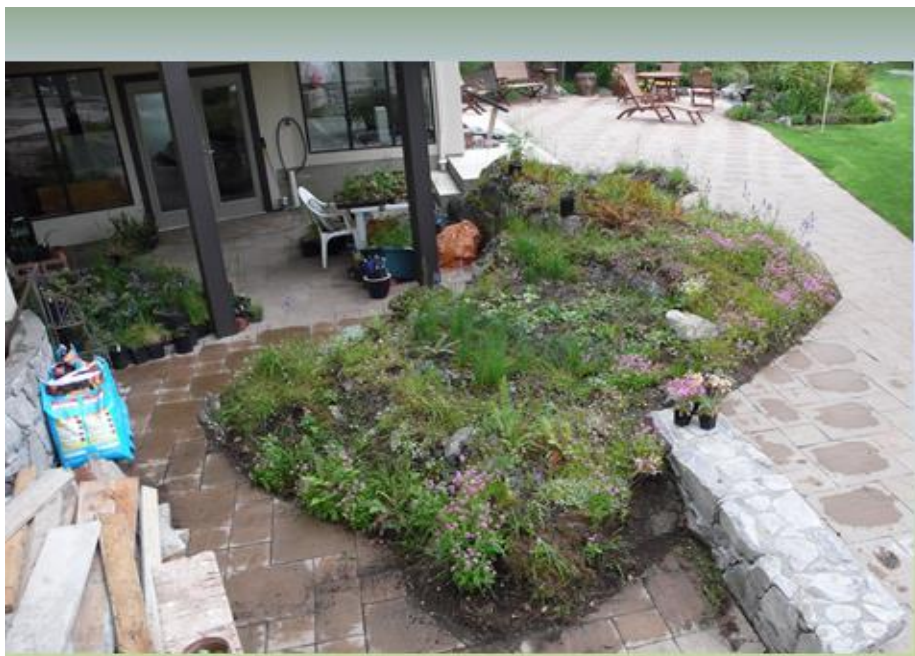
There are several ways to secure the plants you need:

- You can **buy** native plant from several nurseries. If you have a substantial plant order, contact nurseries that offer a large native plant selection as well as wholesale prices; they may be willing to give you wholesale rather than retail prices (App. 2, and for a longer list, http://www.goert.ca/gardeners_restoration/buying_native_plants.php).
- You can **grow** native plants **from seeds** you purchase (App. 2), or from seeds and cuttings obtained from fellow gardeners. The GOERT website provides Propagation Guidelines for many dozens of native plant species (http://www.goert.ca/gardeners_restoration/introduction.php).
 - Or, you can **collect seeds in the wild**. For this, you **MUST** follow suitable collection guidelines (http://www.goert.ca/gardeners_restoration/guidelines_native.php), least you contribute to the loss of native species.
 - Growing from seed can be daunting however. Terms such as ‘stratification’ (to expose seeds to the cold) or ‘scarification’ (to make the seed covering thinner so it germinates more easily) are not familiar to many. And not everyone has the time, space and equipment to grow these seeds inside.
 - There is **an easier way**. In mid- to late-fall, sow the seeds in shallow, well-draining trays.. Put the trays outside out-of-the-way. If possible during the winter months, put the trays on the ground under a deck or in a more protected area, keeping the soil moist but not wet - cold and wet is a bad combination for seeds and seedlings alike. Cover the trays with a tarp if the temperature reaches minus 5 or 6 degrees Celsius. Make sure emerging seedlings also get appropriate moisture. Some seeds may not germinate for 2 or 3 years – they need to have the right weather conditions before they do. But at least, you will not have spent space and hours putting seeds in the fridge and misting seedlings once they have emerged. Make sure to keep some seeds, so you can try to grow them ‘the proper way’ if the rough and tumble method does not work.



Lomatium seedpod (Spring Gold or Consumption Plant)

- With the owners' permission, you can **salvage** native plants from construction sites, in areas that will be disturbed or covered by buildings. Some of your friends may be building a new house. The Municipality of Saanich has a formal native plant salvaging program which you can participate in (<http://www.saanich.ca/living/natural/stewardship/npsp.html?ref=shortURL>), although the opportunities are few and far in between. You can contact your own municipality to encourage them to develop such a program.
 - If you **salvage in the winter**, you will not always know what you are getting. So pick up **pieces of sod**, 6` to 8` thick. Stockpile these in your driveway or on a large rock until the plants bloom so you know what these plants are and where to plant them in your garden.
 - You should also **check for larger bulbs below the sod**. Bulbs such as camas or fawn lilies can grow quite deep, down to 6 inches or more. Plant these bulbs in a pot or, if you know what they are, plant them directly in your garden. In both cases, amass lots of the soil where you found them to replant them in.
 - **Weed salvaged sod** when you first get it and again before you plant it in the garden; keep an eye on it for more weeds afterwards as seeds embedded in the sod germinate. The advantage of 'planting the sod' is that the plants are not unduly disturbed, have everything they need in terms of soil type and organisms. You are not likely to lose your plants, especially for those that do not transplant well.
 - If you can, grow, salvage or purchase plants ahead of planting and **stock pile** these until you have what you need. It will be easier to move sod, plants and pots around to implement your planting plan - rather than to have possibly to pull some plants out to rearrange things. (Note: Put landscaping cloth and a thin layer of soil before you stockpile sod on a hard surface. This will allow roots to grow further and you will be able to cut pieces of the landscape cloth, and associated plants, to move these more easily to your garden when comes the time to 'plant' a piece of sod)



Stockpiling salvaged sod and bulbs

- If you cannot come up with all the plants you need in a reasonable time, plant the ones you have – you can get them out later and **replace** them with more appropriate plants once you have secured these. Put **mulch** around what you have planted to keep the weeds out.



February 2009 - Islands of sod in a sea of mulch

- If you **salvage in the summer** and you know what kind of plants you have, put them directly in your garden. Again, I prefer planting pieces of weeded sod rather than individual plants (except for large bulbs, which need to be planted on their own).
- Use **surplus plants or seeds** from your garden or from salvage sites **to trade** with other native garden owners to secure the native species you still need. If you join the NPSG (Native Plant Study Group (<http://www.npsg.ca/>)), you will meet other native plant gardeners once a month, hear interesting presentations and get many tips on how to deal with your native garden and plants.
- Regardless of where your plants come from, **document provenance** so the people to whom you provide plants later also know if those plants are local or not. This is particularly important if you provide native plants for restoration projects.

PLANTING YOUR NATIVE GARDEN

GENERAL RULES

- **Start with locating trees, shrubs, and native bunch grasses**, in their pots to be able to make needed position adjustments before planting, matching your planting plan. The trees and shrubs (particularly the evergreen) will complement rocks and pathways to provide your garden overall framework. This is your garden at its bare minimum. If needed, move the pots to a different location for maximum appeal and health of the plants.
- **Put evergreen forbs and ground covers**, where you think they should be located. Then also locate **all other plants**, in their pots or with naked roots, on top of the soil to complete your planting plan. Finally, also put **groups of bulbs** on top of the soil. Make **final decisions** regarding the location of all plants, including trees, shrubs, forbs and bulbs, by moving pots/plants to take into account all factors with respect to light, moisture, plant size, visual appeal, etc.
- **Mark each plant/pot location** with a temporary species marker (Note: Lee Valley sells cheap wooden labels which are ideal for this purpose. Identify plants and location in the garden with a simple number if your helpers do not know their native plants.).
- **Put all pots/plants to the side.** The markers will now allow you and your helpers to start planting from hard-to-reach locations to the easy ones, without mistakes being made. This will also enable you to plant over several days, without forgetting where each plant is supposed to go.
- It is preferable to **plant dormant trees, shrubs and bulbs in the fall.** Use bone meal at the bottom of the planting hole.
- For better survival, **plant all other plants and bulbs already growing in very early fall or very early in the spring**, so there is enough warmth and rain to help new roots grow before the cold sets in. In addition to bone meal at the bottom of the planting hole, use liquid starter fertilizer (10-52-10, or similar) to promote rapid root growth, while minimizing leaf and flower growth.
- Use **transplanting fertilizer** when planting any recently salvaged or newly purchased plant/bulb **during the summer.** (I very rarely lose new plants as a result of doing this).
- If possible, for salvaged or other plants for which you are **not really sure of the best location** to choose, plant each species in **three different sites** with different conditions. You are less likely to lose all plants and you will know where it grows best.
- You may wish to **encircle plants that produce rhizomes** with a barrier below ground to keep them contained. Examples of such plants are Douglas Aster, fireweed, long-stoloned sedge, yarrow, pearly everlasting, and goldenrod.

- Do you need to improve **soil conditions** to ensure the survival of some plants? For example, native bulbs need to dry out to survive cold, wet winters - which means no or little watering during the month of August, before the fall rain starts; and improving soil drainage if necessary.

For my Garry oak meadow, where many bulbs are growing, I removed and put asides the top 6 inches of the soil and mixed it with 50% gritty sand. I then added 6 inches of gritty sand to the lowered garden bed, and topped this sand layer with the soil/sand mixture, increasing overall drainage and elevation by 1 foot. I also stopped all sprinkling in August (if it rains) or reduced it to 10 minutes twice a week if I had newly planted forbs. (I have not had rotting bulbs or dying plants).

A **dry site** is also required **for the seeds of annual species** to survive – if unable to do this, for example when sprinkling is needed for the larger garden, collect the seeds of annuals and spread them out the garden in the spring. (**Do not mulch** areas that have annual plants or you will lose them)

PLANTING BULBS

- As a rule, **plant bulbs and corms** at a depth of two to three times the bulb/corm's width. There are exceptions to this rule, for example in the case of shooting stars (App.3). Never plant a bulb/corm at a depth less than $\frac{1}{2}$ to $\frac{3}{4}$ inches though, to prevent freezing in the winter or drying up of the soil in the summer when the bulb is actively growing.
- When planting bulbs, **start with the bulbs to be planted the deepest** (App. 3, Garry Oak Gardeners' Handbook p. 36), then continue with other bulbs in descending order of planting depth.
- Dig a hole in loose, well-drained soil. Add a bit of **bone meal** at the bottom of the hole, and mix in with the soil. Plant the bulb "pointed" end up, cover with soil.
- If the **bulb is actively growing**, dampen the soil around the bulb with water first and immediately **add liquid transplanting fertilizer**. Skip this step if the bulb is dormant.
- **Identify the site of planted bulbs** by covering the soil **with dark mulch**, so you do not damage the bulbs when planting other bulbs or plants nearby. Fine, dark mulch such as SeaSoil or Black Gold works well for this purpose. These mulches also allow native plant seeds to germinate.
- **Do not plant camas bulbs too shallowly** - no less than 2-3 inches even for small bulbs. If planted too shallowly, small camas bulbs will spend a year or two growing a large 'taproot', with the bulb eventually developing at a 6-inch depth or more. You can take advantage of this when growing camas bulbs from seed in shallow trays – the camas will bypass the 'taproot' stage and be ready to bloom in 2 to 3 years instead of 4 or 5 years.
- When planting small, **expensive bulbs** (tiger lily, chocolate lily, etc.), **plant them in a clay pot** and sink the pot in the ground in your garden. You are less likely to lose or damage your bulbs. (Beware of slugs though – they will mow these plants as soon as they start getting off the ground in the spring).

MAINTENANCE

A native garden in an urban environment is still an 'ornamental' garden as far as your neighbours are concerned. It needs to be maintained so as not to look like a wild hay field. Guidelines are provided below that should allow you to have a natural-looking native garden, while also respecting the needs of your neighbours and creating some much needed wildlife habitat.

Watering

It is possible to create a **native meadow without watering** during the summer, if you plant in early fall and/or very early spring, as your plantings should benefit from enough rain and warmth at those times to develop new roots. Take weather patterns into account however. If you had planted this past early spring and had not watered afterwards, you probably would have lost your new plantings or even established plants due to the long drought.

I did use watering in my garden during the summers as I was frequently salvaging and planting through the year. Creating a garden based primarily on salvaging is a lot of work; there was no way I wanted to lose new plantings. I was however much more conservative with water use in my native garden than I was in the ornamental garden.

I outline below the **guidelines** I developed for my native garden in terms **of watering for the first two or three years** of its existence – after which most of the planting was over. So in subsequent years, I significantly reduced summer watering (10 minutes twice a week; which was not enough this past summer) and individually watered the few new plantings I had. Hopefully this information will help you, but again use your own judgement. You know your own garden and take current weather into account as a matter of course. So you can adjust as needed.

- Given the fact that my native garden is south-facing, some of it on steep slopes, I felt that **newly planted native plants** should remain **moist during the first two summers**, to allow them to establish a good root system.
 - Plants should not be allowed to dry out completely for long periods of time.
 - During the summer, watering must be of a sufficiently long duration to encourage the plants to develop deep roots, so they can withstand drought afterwards.
 - The garden should no longer be watered once the fall rains become frequent.
- There is however a need for a **`drought` period during the month of August** each year to allow bulbs to dry so they can withstand the winter rain and cold without rotting.
 - August (and sometimes September) watering must continue to some extent, although less frequently and to a more shallow depth, so plants with shallow roots are kept moist while deeper bulbs are kept dry. During this period, I watered roughly **10-15 minutes once a week**.

- If possible, **watering should be adjusted** to take into account each bed amount of insolation/shade and the surrounding soil moisture.

The overall watering regime used during the summer of 2009 (first year of planting) is given below as an example:

- From **April to June**, if it had not rained sufficiently, the garden was watered twice a week for 15 to 20 minutes each time, via a sprinkling system.
- In **July**, the garden was watered once a week for 20 to 30 minutes with adjustments being made for beds in the shade (less time) or in full sun (more time). (To encourage roots to go deeper)
- During **August and September** (was a dry month), watering was reduced to ~ 10-15 minutes a week, but the top 4 inches of soil was not allowed to dry out completely.
- **After September**, regular rains started and the garden was no longer watered.

Weeding

- Given the large size of the garden, mulching and creating **extensive ground cover during the first 2 or 3 years** of the garden establishment were advantageous to control weeds, while new plants grew and started to propagate themselves, slowly filling the garden beds.
- As well as more permanent slow-growing ground covers such as Dull Oregon Grape or Kinnikinnick, **woodland or coastal strawberry ground covers** were used respectively for shaded and sunny areas. These ground covers grow fast to cover large areas. They are also easy to remove to be replaced with new plants once these become available.
- As much as possible, **weeds must be controlled with suitable mulching**. If this is not successful, they must be removed soon after they appear and definitively **before they go to seed**. However, it can be difficult to differentiate between a young weed and a young self-seeded native plant. In this case, one should wait till the plant is large enough to be clearly identified; or, ask for technical advice if in spite of waiting, it is still not known if the plant is a weed or not.

Removing or Keeping Native Seeds

- In a home garden, **most of the seed heads for grasses** such as **Roemer`s Fescue** (dry, sunny sites), **California oatgrass** (shady and moist, dry and sunny sites) and **Alaska Onion Grass** (shady) **should be removed**, lest you want a field of grasses. Seed heads should be left long enough on the stems for you to see what they look like (they are beautiful), but most stems must be removed before the seeds fall to the ground. (I personally do not let **brome** grasses self-seed at all – in my opinion, they are far too prolific and too large for a home garden).
- The **one or two grass seed stems you keep** should be allowed to mature until the seeds drop. The following year, you will find grass seedlings around the ‘mother’ plant, which you can plant elsewhere in the garden or use to trade for new plants.

- If you think you **cannot correctly identify grass seedlings** in your garden, instead of leaving some seeds on the 'mother' plant, collect them when mature and grow them in a tray away (need good draining soil, ID label and date) from the garden. If not propagating the seeds right away, keep them in the fridge in an airtight container until you can plant them (See GOERT website, Gardening, Propagation, for Guidelines).
- If **dormant grass stems** must be cut for aesthetic purposes, preferably do so in the spring or late fall as you may be able to simply pull the stems away by gently pulling on them.
- Generally, **let other native plant species drop their seeds**, and/or collect seeds for tray growing, until you think **you have enough** of these plants in your garden. Leaving seeds also **benefit wildlife** such as birds and small rodents. Leave some **'messy' spots** (ungroomed) in corners so they can enjoy these, in ways we may not even appreciate ourselves. But you must avoid leaving seeds on species that have **airborne seeds**, like the Douglas Aster. If you do not do this, you will have lots of aster in your garden as will your neighbours!
- If some native plants keep **showing up in a spot where you did not plant them** and they do not interfere with the plants you did put there, let them be. It means it is a good location for them, which has the conditions they need. Why fight it? Enjoy it instead.
- If your native bed is located immediately **adjacent to your neighbour's property**, create a mulch or native moss strip between the two properties. It will catch many seeds from both gardens and these seeds may or may not grow. If some grow, they will be easy to remove helping to keep you and your neighbour happy.

Mulching

GOERT provides an extensive paper on his website on how to mulch to favour Garry Oak habitats. Please refer to it for details (<http://www.goert.ca/documents/GOERT-Mulch-BMPs.pdf>).

In my garden, for the **first two years**, I used about 1 to 1.5 inch of **SeaSoil mulch once a year in late fall**, and on other occasions when weeds seem to be winning in a particular area. I chose this mulch for the following reasons:

- SeaSoil is well composted, with a low nutrient value.
- SeaSoil has a fine texture that allows **native plant seeds to easily establish themselves** and helps fill the garden with new plants, while it also helps to control weeds. [Not too much mulch is put on the soil so native seedlings can easily reach the soil itself]
- SeaSoil is **very dark** for several months after application - it **makes any garden look great**, even when you still have few plants. In my case, I felt it was important since I opened my garden to the public and interested groups starting less than three months after I finished my first planting (Page 9 picture, Islands of sod in a sea of mulch).
- Mulching areas with SeaSoil where bulbs had just been planted made it easy to **avoid damaging the bulbs** when adding more plants nearby, as the area was darker than the surrounding soil.

Whatever mulch is to be used, hopefully it can meet some of the objectives and properties outlined above, at least for the **first two years** while new plants establish themselves via self-seeding.

Afterwards, mulched oak leaves should be used. Mow oak leaves into a mower bag; remove them from the bag, spread the broken leaves on the lawn and mow them again. Store the shredded leaves in a large container until needed.

Mulching once a year in the fall has been my preferred approach. In addition to preserving soil moisture and keeping weeds out for months afterwards, it helps protect the plants from the cold and prevents soil compaction from the winter rain. While I mulch around plants, I also **inspect** the underside of plants to **remove hidden slugs and remaining weeds**.

CONTROLLING PESTS

Slugs

Slug control is usually required in the spring for species such as Red Columbine, Spring Gold, Menzies' Larkspur, lupine, buttercups, annuals and violets. When the plants are young, slugs can devour them as fast as they come out of the ground. Slugs will often hide among Nodding Onions or under Small-flowered Alumroots and Graceful Cinquefoils, which keep their foliage through the winter months.

To help control slugs **without the use of chemical bait**:

- Place a small piece of wood (driftwood looks nice) on the ground in the garden and check under it regularly for the presence of slugs. They can then be removed manually.
- Some people put **sand or copper wire** around susceptible plants to attempt to keep slugs away.
- Sink an empty can in the ground, level with the soil, and pour some **beer in the can**. Cover the can with a piece of wood, roughly half an inch up from the ground. This will prevent dilution from watering or rain and will further attract the slugs. They love dark places AND their beer!
- For those of you who are clearly committed to protecting your native plants, you can go out on a warm, moist night, flashlight in hand, and collect the nasty beasts for disposal.

If you decide to **use chemical bait**, make sure that it is in a container that will keep pets, young children and other small animals away from the bait.

Deer

- Deer love to eat Satin Flower and Fawn Lilies; usually taking off every flower as they bloom (they may also like trillium). They will also occasionally nip the tips of Nodding Onions and Camas leaves, which does not prevent these plants from flowering later. They love Fool's Onion leaves and flowers. Spraying preferred plants with **Bobbex or Plantskydd** usually stops this for a few weeks and allows the plants to flower and produce seeds. Other gardeners spread **blood meal** at the base of the plants, which I have been told can keep deer away for up to 3 weeks or, send deer on a pawing frenzy around the plant (!).
- Deer will also browse keenly on young trees and shrubs. Covering small trees in a cage or planting deer-resistant plants nearby should help. See the GOERT website for useful information on how to control deer damage (http://www.goert.ca/gardeners_restoration/dealing_with_deer.php).

Appendix 1

LIST OF PUBLICATIONS/HANDOUTS

Prepared by Ms. Pat Johnston, Victoria, B.C, February 2015
for Gardening with Native Plants Workshop

GARRY OAK ECOSYSTEMS RECOVERY TEAM PUBLICATIONS

(www.goert.ca/publications_resources as well as www.goert.ca/gardeners_restoration)

- The Garry Oak Gardeners Handbook: Nurturing Native Plant Habitat in Garry Oak communities
- Native Plant Propagation Guidelines
- Native Plant Flowering Times
- Native Plant Seed Collection Times
- Multi-Species at Risk in Garry Oak Woodlands
- Restoring British Columbia's Garry Oak Ecosystems –Principles and Practices
- Best Management Practices for Garry oak and Associated Ecosystems
- Quick Guide to Native Plant Gardening
- Buying Native Plants
- Dealing with Deer
- Ethical Guidelines for the Collection and Use of Native Plants

CAPITAL REGIONAL DISTRICT PUBLICATIONS/HANDOUTS

(www.crd.bc.ca/education/natural-gardening)

- Native Plant Resource List (Designers, Consultants, Gardeners, Suppliers)
- Common Edible Native Plants
- Container Gardening with Native Plants
- Creating a Butterfly Garden
- Evergreen Native Plants
- Common Plants of Garry Oak Ecosystems
- Native Plant Ground Covers
- Native Plant Meadow Flowers
- Notes on Attracting Wildlife to your Garden
- Native Plants to Attract Wildlife
- Native Plants by Flower and Berry Color
- Native Plants for Moist, Wet Sites
- Native Plants for Rock Gardens
- Native Plants for the Seashore
- Native Plants for Seasonal Interest
- Native Plants for Sun-loving Thickets
- Native Plants for Woodland Gardens
- Native Plants for Selected Conditions (Sun)
- Native Plants for Selected Conditions (Shade)
- Lawn Replacement – Methods for replacing lawn
- How to Make a Meadow

Appendix 1, continued

BROCHURES/PAMPHLETS (included in handout package)

- Native Plants for the Home Garden – South Coastal British Columbia
- Wildflowers of Garry Oak Ecosystems
- Grow Me Instead (www.bcinvasives.ca for other resources)
- Native Plant Study Group (www.spsg.ca for other resources)
- Gardening With Native Plants (www.hat.bc.ca for other resources)
- Back To Our Roots Program – Gardening for nature. A GOERT's landowner program.
- *Creating a Native Garden in Victoria B.C. - From Design to Maintenance*. Louise Goulet, 2015. 16 pp. + appendices.

NATIVE PLANT IDENTIFICATION GUIDES AND GARDENING BOOKS

Plants of the Pacific Northwest Coast Washington, Oregon, British Columbia, Alaska, Pojar and MacKinnon, ed., Lone Pine Publishing, Van BC, 2nd ed. 2006

Trees, Shrubs & Flowers to Know in BC and Washington, C.P. Lyons & B. Merilees, Lone Pine Publishing, Vancouver BC, 1995

Native Plants in the Coastal Garden A Guide for Gardeners in BC and the Pacific Northwest, 2nd ed., April Pettinger/B. Costanzo, Whitecap Books, Van BC, 2002

Gardening with Native Plants of the Pacific Northwest, 2nd ed. Revised and Enlarged, Arthur R. Kruckeberg, University of Washington Press, 1996

Propagation of Pacific Northwest Plants, Rose, Chachulski & Haase, Oregon State University Press, Corvallis, Oregon, 1998

Deerproofing Your Yard & Garden, R. Hart, Storey Publishing, North Adams, MA, 2nd ed. 2005

E-Flora BC – Electronic Atlas of the Flora of BC – www.geog.ubc.ca/biodiversity/eflora

BC Species & Ecosystems Explorer – www.env.gov.bc.ca/atrisk/toolintro./html

A NEW BOOK:

Thomas Rainer, 2015. *Planting in a Post-Wild World*. 'Relates to this topic and to landscape design based on native plants. His blog, <http://landscapeofmeaning.blogspot.ca/>, shows a deep understanding of ecological systems'- as related by one of the Victoria Master Gardeners.

Appendix 2

RESOURCES LIST

Prepared by Ms. Pat Johnston, Victoria, B.C, February 2015
for Gardening with Native Plants Workshop

NATIVE PLANT NURSERIES - Where to Get Native Plants and Seeds

Russell Nursery, Sidney, 250-656-0384, russellnursery@telus.net

Saanich Native Plants, 778-679-3459, <http://saanichnativeplants.com/> (retail and wholesale)

Gardenworks, Blenkinsop, 250-721-2140, Colwood 250-478-2078 www.gardenworks.ca

Thimble Farms, Salt Spring Island BC, 250-537-5788, www.thimblefarms.com

Streamside Native Plants, Courtenay, 250- 338-7509, www.streamsidenativeplants.com (retail and wholesale for larger order)

Nature's Garden Seed Company, www.naturesgardenseed.com

DEMONSTRATION GARDENS - Where to see Native Plants Growing

Non-residential gardens:

Glendale Gardens, Native Plant Demonstration Garden

Swan Lake Nature Sanctuary

Royal British Columbia Museum

Oak Bay Native Plant Garden (corner Margate and Beach Drive)

Beacon Hill Park, Uplands Park, Summit Park and many other Parks throughout the regional district

Residential gardens (Please, look from the street):

2203 Kinross Avenue, off Cadboro Road, S of Estevan, Oak Bay

2646 Cranmore Road, off Beach Drive, Oak Bay

961 Pembroke Street, S of Crystal Pool, Victoria

1201 Judge Place, near Playfair Park, Saanich

1709 Carnegie Crescent, E of Shelbourne, S of Feltham, Saanich

1119 Chapman Street, E of Cook, N of Park Blvd, Victoria

1325 Kings Road, near Roseberry Avenue, Victoria

1843 Crescent Road, W of Foul Bay, Victoria

325 Plaskett Place, S of Munro St., Esquimalt

Appendix 3

GUIDELINES FOR PLANTING A FEW NATIVE BULBS

[Most of the planting depth information is taken from *The Garry Oak Gardener's Handbook*, page 36]

Brodiaea (Fool's Onion – previously *Triteleia*, and Harvest Brodiaea) - 1 inch maximum for small bulbs, no more than 3 to 4 inches for large bulbs. Leave at least 1 inch between bulbs. The dry seeds will drop and small bulbs will readily start growing between the larger bulbs. Harvest Brodiaea will also produce small bulblets. Deer are very fond of the flower heads for the Fool's Onion. But if you let this species self-seed, you will eventually have so many of them, that some flowers will be left no matter what.

Common and Great Camas - 6-inch maximum depth for large, mature bulbs. Leave at least 4 to 6 inches between bulbs. The dry seeds will drop and small bulbs will start growing between the larger bulbs. As a rule, Great Camas bulbs grow larger than Common Camas bulbs and can be planted deeper, to a maximum of 8 inches. Also plant small bulbs quite deep (3 to 4 inches); if not, they will spend energy growing a tap root to reach deeper soil and will form a new bulb at the end of this root.

If you want to propagate, collect the seeds when the pods are dry. Scatter a large number of seeds in a shallow tray; cover with ~1/4 inch of light soil, water as needed. Put trays outside in mid-fall, when it starts raining. You may also want to add a thin layer of sand after the shoots come out of the soil to prevent damage by slugs. Keep the tray outside in a sunny spot for 2 to 3 years and you should have small bulbs to plant in the garden. Sink the tray in the ground if possible; this will keep the soil warmer during cold winters and cooler during the summer. (Same procedure for other bulb species, except for the position in the sun or shade that is different for individual species, e.g. lilies would need a partial shade placement.)

Deer will eat the tip of the leaves, which does not prevent the flower to come out later on.

Fawn Lily - 6-inch maximum depth for large mature bulbs, less for small ones. Make sure that the soil above the bulb is light and not compacted. In nature, these bulbs are very deep in the soil but the top 3" to 4" of the soil strata is usually composed of loose organic debris such as moss, dead leaves, small branches, cones, etc. Deer love the flowers! If you want seeds, you will have to protect them. Ditto for Satin flower.

Menzies Larkspur - Plant at same depth as that observed in the field or in the pot where it was growing. If planting in the fall, add ~1 inch of fine mulch to the surface for protection. If propagated from seed, keep in pot for one to two years to improve survival when planted in the garden.

Nodding Onion - 2-inch maximum depth for mature bulbs, less for smaller bulbs. Leave at least 2 to 3 inches between bulbs – they will fill in readily as seeds fall out and germinate. If planting "groups" of bulbs, leave at least 12 inches between these groupings. Seldom eaten by deer but slugs love them.

Red Columbine – Not a bulb, but rather a tap root. When transplanting, place growing tip at the surface of the soil as in other herbaceous plants. Slug bait is beneficial for young seedlings and even older plants. Deer love them, but the plants will survive due to their strong taproot. It is beneficial to keep new seedlings in a pot for at least one to two years to allow the tap root to develop further so they can better survive transplant and deer grazing.

Broad-leaved Shooting Star – Plant spider-leg shaped root/bulb, with growing tip itself (brown and conical above white 'legs') no more than $\frac{3}{4}$ to 1 inch deep. White roots can go deeper. Cover with about 1 inch of fine mulch. Seem to be mostly slugs and deer resistant, plus will keep other plant species away due to their large leaves growing flat on the surface of the ground.

Spring-gold – Not a bulb. Plant large roots just below the ground surface – no more than $\frac{1}{2}$ to $\frac{3}{4}$ inch deep for the "growing" tip. Rest of the plant can go deeper. Keep mulch thin near the centre of the plant. Deer resistant but put out slug bait before they emerge in very early spring.

Trillium – As a rule, plant bulbs at a depth of two to three times the bulb width. Plant large bulbs to 4 to 6 inch in depth. If propagating from seed, make sure to pick up the seeds before they grow dry. Collect and plant the seeds when you think they are maximum size but are still sticky. Deer have sometimes eaten the seed pods but have generally left the leaves and flowers alone.