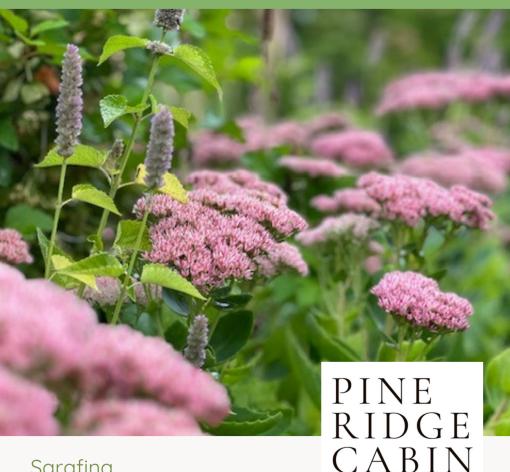
A HOW-TO GUIDE

CREATING AN ECOLOGICAL GARDEN

AND BRING NATURE'S BEAUTY TO YOUR HOME



Sarafina @pineridgecabin

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INTRODUCTION

Hi! I'm Butterfly Ranger & Gardenerd, Sarafina

Our gardens are meant to be places that feed our soul as we feed the soil. Gardens are to be enjoyed and sought of as a refuge from the busyness of all our lives.

But too often, our gardens become weedy and overgrown, and even a little chaotic. That's because we are not working with nature, but fighting against her. There is another way: create your own EcoGarden.

To be an EcoGardener, you need to consider the effect your gardening choices have on the environment around you and minimize any negative impacts you can. This goes a long way in helping both humans and wildlife alike.

This Green Guide includes some beneficial actions you can take to create a environmentally-friendly garden.

Not everyone has the time nor inclination to obsess over learning about how to garden sustainably and ecologically, let alone learn about native plants and how they interact with native wildlife.





Lucky for you, I'm that person. My mission is to help people help the planet, and one of the easiest ways to do that is by creating your very own EcoGarden.

I'm eager to help others find the peace and contentment that comes with sharing your outdoor space with wildlife.

Sarafina

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CHAPTER I

The Philosophy of Ecological Gardening

What is ecological gardening?

By integrating the principles of ecology with those of garden design, you can create attractive, ecologically-sound pollinator-friendly wildlife gardens.

One of my go-to rules for ecological gardening is to start slowly incorporating natives found on your side of the continent. If you are ready to expand your EcoGarden, try to then find plants that are rative to as close to your location as possible.

These gardens require no fertilizers, no pesticides and little-to-no irrigation to keep them healthy and vibrant. Even during severe heat and drought, native wildflower gardens continue to perform while other plants succumb to the weather.

By gardening with plants native to our region, you can have a garden that is not only beautiful and low-maintenance, but also provides habitat for local wildlife.

If you can't find regionally-native plants, then start with choosing plants that like the same **ecotype** as your property's conditions (such as bog, wetlands, meadow, prairie, woodland, grassland, scrubland, forest). You can learn your site's **ecotype** by paying attention to the site's conditions, grade, topography, solar aspect and intensity, average temperatures, average rainfall, etc. (I cover that in EcoGarden 201)

One native plant will quickly attract the specific native insects that have evolved with it. Add more and more native plants, and eventually you will help reconnect fragmented habitats and set you up for creating your own EcoGarden.

This doesn't mean transforming your whole backyard in one day. Great things are done by many small steps.

Start with a pollinator pot, then try a pocket prairie in the dry, sandy corner of your yard, next move on to replicating a woodland hedgerow in the shady, damp area against your north-facing fence.



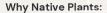
CHAPTER II

The Importance of Using Native Plants

The Benefits of Using Native Plants

Native plants have evolved over thousands of years, adapting to the local climate, soils and animals, so they can survive seasonal changes. They also provide the best food and shelter for beautiful birds, butterflies and other local wildlife.

Native plants do not require fertilizers, and require fewer pesticides and less water than lawns.



The deep root systems of many native Midwestern plants increase the soil's capacity to store water and it's ability to prevent erosion. Native plants can significantly reduce water runoff and, consequently, flooding.





- Native plants help reduce air pollution
- Native plantscapes do not require mowing
- Native plants sequester (remove) carbon from the air
- Native plants provide shelter and food for wildlife
- Native plants promote biodiversity and stewardship of our natural heritage
- Native plants are beautiful and increase scenic values
- Native plants often can thrive on little supplemental after they're established

CHAPTER III

Ecogarden Must-Dos



BIODIVERSITY BEGETS BIODIVERSITY

Increasing the plant diversity in a garden space by adding lots of different species of plants in turn increases the biodiversity of pollinating insects specific to those plants. Providing shelter and water balances the insects by inviting predators such as birds, toads, snakes, spiders, or bats into your garden.



BE A LITTLE MESSY

It's helpful to think like a small animal moving from one garden green space to another.

Wildlife needs shelter and cover in the form of bushy shrubs and interlocking tree branches, wildflower seed heads left over winter and ornamental grasses left to seed.

Don't rake up the leaf litter on the ground in the autumn so ground-nesting bees, butterfly caterpillars and burrowing insects have a warm layer of insulating leaves, twigs and stems to hibernate in. Birds like to use dry grass and vine tendrils to build their nests every spring!

Also, don't remove the leaves in the spring until the daytime temperature has been consistently above 10C and you start to notice pollinators flying around. If you can't handle not seeing bare dirt, then rake the leaves into a corner of your garden you don't use, and leave them there indefinitely.



CONSERVE WATER

Mulching with natural materials like wood chips, leaves and straw retains moisture in hot weather. Mulch also can suppress weeds, return nutrients to the soil as they break down and prevent soil erosion.

Having rain gutters drain at least 10f away into a raingarden depression is an aesthetically-pleasing way to soak rain into your garden. Make sure to also use rain barrels and water plants in the morning and at ground level, not on the plants' leaves.

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CHAPTER III ECOGARDEN MUST-DOS CONTINUED

6 Critical Necessities Required for Wildlife to Thrive



FOOD

Providing wildlife with the food they need is a great start in attracting them to your property

This can include nectar and pollen, fruit, nuts and seeds, leaves and buds



WATER

Water is another critically important element to many wildlife species

You can provide water with a shallow dish or stream for birds to bathe and drink or with an insect dish for certain beneficial insects

You can also add a pond for some amphibian, insect and fish species



SHELTER

Plants such as trees, shrubs and herbaceous vegetation are a great source of shelter for many animal species

But so too is open bare ground and hollow stems for certain native bees as well as tree cavities for many bird species



COVER

Structures such as rock and brush piles are also very useful to wildlife. Even letting a log rot on the ground can provide shelter – and feeding grounds – for a variety of species

Different heights of plants are needed by wildlife. This allows species that nest high up to share the same space as those who nest on the ground or in between

Cover is naturally provided when you refrain from cutting and pruning everything down to lollipops



PESTICIDE-FREE

Keep your garden soil healthy by adding compost and well-aged manure. These are better than chemical fertilizers

Many pests eat only certain plants. Growing a diversity of plants minimizes your garden's susceptibility to any pest invasion

Use non-chemical methods, such as hand picking pests, using plant barriers, or setting insect traps



BIODIVERSITY

Grow a variety of plant types, including regionally native ones, to support a diversity of species from songbirds to pollinators

Also important is to have some blooming plants from early spring to late fall for a continuous source of food

Ideally, pollen (which provides protein and fats) and nectar (sugar, an energy engine) are available from spring through to fall CHAPTER IV

ECOGARDEN DESIGN TIPS



Plant flowers and grasses together to create a natural meadow effect

Most wildflowers mix well with grasses, with the green of the grass foliage serving as an excellent background against the colourful flowers. Pick a series of wildflowers that bloom at different times and plant them in masses and drifts of colour blocks to create a stunning impact in the garden.

It's a good idea to add a relatively non-competitive grass such as Sideoats Grama or Prairie Dropseed to your mass plantings or drifts to help keep weeds down. The dense root systems of the grasses dominate the upper soil and help to squeeze out the weeds.

Many wildflowers have deep roots that grow far below grass root systems. This allows grasses and flowers to share the below-ground environment, utilizing water and nutrients efficiently, reducing open soil and so eliminating weeds.

And remember, the grasses will still provide a show in fall and winter when the flowers are gone.



CHAPTER IV ECOGARDEN DESIGN TIPS CONTINUED

Search for species that bloom at different times

Early blooming flowers such as wild columbine and prairie smoke provide spring nectar for butterflies and bees. Blue false indigo and beardtongue bloom late in the spring.

Blazingstars, purple prairie clover and coneflowers bloom starting at the beginning of July and ironweed and lavender hyssop appear later in the summer.

Asters and goldenrod make their appearance in autumn.

Use a combination of different sizes, colours and textures to attract all sorts of different pollinators

This technique is a great way to attract masses of pollinating bees and butterflies as well as aesthetically look very dramatic.

Select species to match the scale of your landscape

Use individual specimen plants as architectural focal points and surround them with lower-growing flowers and grasses such as clump-forming Little Bluestem, Sideoats Grama and Prairie Dropseed to really help them show off their special attributes.

Often 'tall' plants mature in the autumn, while 'short' plants tend to be spring or early summer bloomers. Unlike common advice, planting your short, spring blooming grasses and perennials in the middle of your garden bed, with some taller, fall-blooming plants in the front will cover the spent blooms of your spring flowers, so you don't need to deadhead or tidy up as often.

Truly a low maintenance garden!



NATIVE PLANT CHOICES

Here's a list of ten native wildflower species for the Lower Mainland of BC known for their broad geographic native range and generally thrive in diverse conditions.



Davidson's Penstemon Symphyotrichum Laeve



Smooth Blue Aster Symphyotrichum Laeve



Canada Goldenrod Solidago Canadensis



Showy Milkweed
Asclepias Speciosa



Wild Bergamot Monarda fistulosa



Douglas aster

Symphyotrichum subspicatum



Silky Phacelia

Phacelia Sericea



Common Woolly Sunflower



Western Columbine
Aquilegia formosa



Foxglove Beardtongue Penstemon digitalis





NATIVE PLANT CHOICES

Here's a list of five shade and five sunny ground-cover plant species for the Lower Mainland of BC known for their broad geographic native range



Western Ginger Asarum caudatum



Kinnikinnick Arctostaphylos uva ursi



False Lily of the Valley Maianthemum dilatatum



Woodland Strawberry



Bunchberry Cornus canadensis



Creeping Oregon Grape
Mahonia repens





Inside Out Flower Vancouveria hexandra



Broadleaf Stonecrop Sedum spathulifolium





Wood SorrelOxalis oregana



Creeping Juniper
Juniperus horizontalis







CHAPTER V

EcoGardening 101

How to become an ecogardener

- Get to know the plants, including their names. Use field guides and online resources like <u>iNaturalist</u> to learn about the native plants that grow near you.
- Match your garden to a wild spot nearby with similar conditions — the native plants that grow in that spot will likely do well in your garden, too.
- Include in your garden all the habitat birds, small mammals, reptiles, insects & amphibians need, such as protected perches, roosting spots, water sources, rotting logs & piles of rocks
- Planting berry-producing shrubs attract birds, which increases seed dispersal, eventually leading to a natural recruitment of plants elsewhere in your garden without having to plant them
- Pollen- and nectar-bearing plants will attract and nourish pollinators but don't forget, shelter and water is equally as important as food
- Plan for seasons and succession because timing is everything.
 Continuous blooming is a great way to attract pollinators.
- Think of your garden as a habitat that includes people. What role will humans using the garden play? Sitting still and just watching the wild interact with your garden is very rewarding.

Planting your first native plant gives you an easy win. For the best ecological benefit to birds, bees, and butterflies, look for straight species (not cultivar) at native plant nurseries.

And don't forget about trees!

Planting a native oak, for instance, builds habitat for hundreds of species of insects, birds and mammals while sequestering carbon, cooling the air, stabilizing the soil, helping manage water runoff, and literally transforming a landscape.



CONCLUSION

This is the beginning of something good.

You've succeeded in removing the weeds that spread by selectively cutting off their seed heads and now you notice much less weeds than ever before.

You've fostered native seedlings and other desirable plants that have popped up from the seed bank, that you sowed from seed or that you bought at the specialist nursery.

As a result, now your garden beds are dominated by the native species you've recognized, learned about and nurtured. And you do all this without pesticides while conserving water. Native plants attract native wildlife, so now you and your family love spending time outdoors and see all the little visitors that you welcome into your garden.

These actions may seem like small things but if everyone with a garden or bit of green space creates their very own EcoGarden, the positive impacts can be enormous.

