

# Welcome!

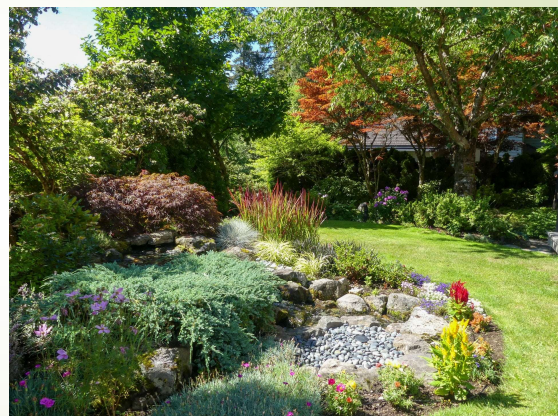


## Vancouver Avian Research Centre Bird Friendly Gardens Workshop

"A hidden conservation opportunity staring us in the face!"

## Designing a bird friendly garden

- Design / Layout
- Water features and Feeders
- Nesting habitat and boxes
- Plants
- Maintenance
- Why?



## Why a bird friendly garden?



- Birds are in decline - as are insects and mammals
- We need to conserve & protect them
- With our gardens, we have the opportunity (if not the obligation) to recreate some of the habitat that is being lost to development and degradation
- To provide food and shelter for breeding birds in spring/summer
- To help over wintering birds survive the cold months
- To provide food, shelter and water for migrating birds in Spring and Fall
- A bird friendly garden is a wildlife friendly garden - you will be amazed!

## Why a bird friendly garden?

**29 billion**

- All driven by landscape-scale habitat loss

-1,000,000,000 +

- With our gardens, we have the opportunity (if not the obligation) to recreate some of the habitat that is being lost to development and degradation

1970 1980 1990 2000 2010  
Courtesy of the Cornell Lab of Ornithology. Source: Stracey, 2010

## Design/ Layout

### Elements

- Man made structures
- Lawn
- Accommodate diverse planting



## Design/ Layout

### Man made structures

- Window strikes
- Remove glass balconies
- Protect windows



- *Must be spaced 5 cm apart across the entire glass surface!*

## Design/ Layout

- Reduce lawn – it is a biological desert



## Design/ Layout

- Areas for diversity – habitat layers
  - Large canopy trees
  - Shrubs & small trees
  - Herbaceous plants
  - Shade areas
  - Deciduous & coniferous
  - Brush pile / Dust bath area?





## Design/ Layout

### Additional Elements – It's not all about the birds!

- Bees / Mason bee houses
- Bug houses
- Butterflies / Moths
- Dragonflies
- Bat boxes
- Frogs, toads, salamanders, garter snakes



## Design/ Layout

### Additional Elements – Attracting Insects to your garden

- Plant pollinator friendly
  - flowering plants rich in nectar
- Flowering herbs
  - Allow some herbs and vegetables to flower
- Blooms all season
  - Pay attention to bloom times
- Think Big
  - Trees & shrubs flower too!
- Ground cover
  - Minimize soil disturbance
- Leave Some Weeds!



Bumblebee



Mason Bee

## Water / Feeders

- Water features
- Feeders
- Hummingbirds



## Water / Feeders

- Water features – Types
  - From very simple DIY



## Water / Feeders

- Water features – Types
  - To Store Bought
  - With or without misters
  - With or without heaters



## Water / Feeders

- Water features – Types
  - To custom built streams and gurglers



## Water / Feeders

### Water features

#### Placement

- Ground level
- Shade
- Trees nearby

#### Watch for cats and other predators

#### Water depth - sloping $\frac{1}{2}$ " - 2"

#### Add stones/pebbles

#### Cleaning



## Water / Feeders

### To Feed or Not To Feed?

### Risks

### Feeders – Set Up

- Place feeder in a quiet area
- Place close to natural cover
- Place far away from windows or within a meter
- Place 10' away from strong branches
- Rodents / Squirrels
- Join Project FeederWatch
- Great Backyard Bird Count





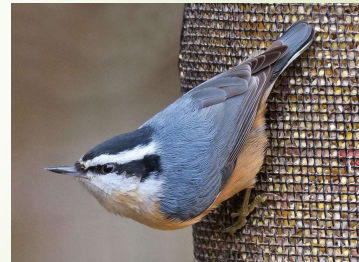
## Water / Feeders

- To Feed or Not To Feed?
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## Water / Feeders

- Food types – what to provide
  - Flaked maize, sunflower seeds, and peanut granules
  - Black sunflower seeds / sunflower hearts
  - Nyjer seeds
  - Peanuts
  - Fat balls / suet
  - Mealworms
- Food types – what NOT to provide
  - Salted or dry roasted peanuts
  - Polyunsaturated margarines or vegetable oils
  - Milk
  - Whole nuts / wheat & barley (not recommended)



## Water / Feeders

### ■ Attracting Hummingbirds

- Flowers
- Nectar feeders
- Perches
- Insects
- Water



## Water / Feeders

### ■ Nectar Feeders Do's & Don'ts

- Hang several feeders spread apart
- 4:1 solution water/sugar
- Hang feeders in shade
- Clean feeders

### ■ Maintaining feeders

- Remove in fall OR maintain year-round



## Water / Feeders

- Hummingbirds

- Visit the VARC website – Attracting Hummingbirds to Your Garden
- Water!



## Nesting

- Natural habitat
- Boxes
- Nesting material



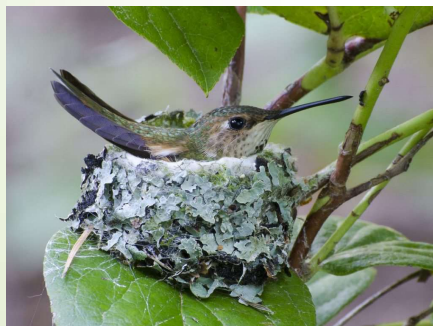
## Nesting

- Birds nest in different locations and use different nest types
  - Tree/Canopy nesters
  - Ground nesters
  - Cavity nesters



## Nesting

- Natural habitat
  - Trees, shrubs, densely vegetated areas & cavities
  - Think natural, not perfect!



## Nesting

### Boxes

- Well constructed
- Keeps birds dry
- Helps regulate temperature
- Keep out predators
- Right entrance size
- Help fledglings leave nest
- Make placement & maintenance easy



## Nesting

### Nesting material

- Twigs, small sticks
- Leaves
- Straw / Moss
- Grass clippings
- Native plants

### Avoid

- Human hair
- Yarn/String
- Dryer lint

### Containers





## Planting basics

### ■ Soil

Examine soil type in each area to determine which plants likely to thrive

Do simple DIY soil test (Gardener's Supply Company)

### ■ Sunlight

What areas receive most sunlight – some plants love sun, some don't

### ■ Surrounding Area

Consider neighbouring gardens or adjacent green space – what plants grow there – you may want to increase plant diversity or build on nearby features

### ■ Birds Canada Plant Selector

Enter: Plant type (Tree, Shrub, Herb); then Garden Zone (e.g. 4); then Sun (Full, Partial, Shade); then soil type (Clay, Coarse, Loam, Sand, Organic); then moisture (Dry, Moist but well-drained, Wet); then hit search!

**PLANT SELECTOR - SHRUBS**

Bird search  
 Tree search  
 Shrub search  
 Herb search  
 Vine search

Reset filters

1

2

3

4

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22

BIRD GARDEN ZONES

☐ 1
☐ 2
☐ 3
☒ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10
☐ 11
☐ 12
☐ 13
☐ 14
☐ 15
☐ 16
☐ 17
☐ 18
☐ 19
☐ 20
☐ 21
☐ 22

SUN

☐ Full
☒ Partial
☐ Shade

Labrador Tea  
(*Rhododendron groenlandicum*)

Oval-leaf Blueberry  
(*Vaccinium ovalifolium*)

Squashberry Viburnum  
(*Viburnum edule*)

SOIL

☐ Clay
☐ Coarse
☐ Loam
☒ Organic
☐ Sand

MOISTURE

☐ Dry
☐ Moist But Well Drained
☒ Wet

SIZE

☐ Small Tree
☒ Small Shrub
☐ Medium Shrub
☐ Large Shrub

EVERGREEN OR DECIDUOUS

☒ All
☐ Evergreen
☐ Deciduous

WILDLIFE FEATURES

☐ Fall/Winter Berries/Chupes
☒ Flowers - Insect Pollinators
☐ Flowers - Nectar For Birds

FLOWERING SEASONS

☒ Spring
☐ Summer

## Plants – 2 keys: Native & Diverse

- **Maximum Native Plant Diversity**
  - Plant species that occur naturally in your region (native species)
  - Avoid non-native and/or invasive exotics
- **Why native?**
  - Wildlife will be more accustomed to native plants
  - It will encourage pollinators, birds and other wildlife
  - Gradually add more native plants and remove exotics – especially invasive species



## Plants – 2 keys: Native & Diverse

- **Structural Diversity**
  - An outdoor space with plenty of diversity – a variety of native plant species, various heights, mix of densely planted and open areas, dust baths, or brush piles
- **Shelter**
  - Provide sheltered habitat where birds can nest and roost



## Plants – 2 keys: Native & Diverse

### ■ Seasonal Diversity

- Some species of plants produce seeds or fruit during the spring and summer, and others hold onto their fruit and seeds into fall and winter



## Plants – 2 keys: Native & Diverse

### ■ Examples of native and diverse plants (Zone 4)

#### What to Plant in Zone 4

This table is meant to provide only general information about plant characteristics. Some plants may tolerate different soil types and conditions. Please consult a local native plant nursery or visit BirdGardens.ca for more species-specific information.

Common Name (Botanical Name)	Plant Type	Sun	Soil	Moisture	Bird Features
Western Red Cedar ( <i>Thuja plicata</i> )	Tree	☀️	Flexible	💧💧💧	🌿
Arbutus ( <i>Arbutus menziesii</i> )	Shrub	Flexible	Flexible	💧💧	🌿🌿
Pacific Crab Apple ( <i>Malus fusca</i> )	Tree	☀️	Flexible	💧💧	🌿🌿
Garry Oak ( <i>Quercus garryana</i> )	Tree	☀️	Coarse	💧	🌿
Vine Maple ( <i>Acer circinatum</i> )	Tree	☀️	Loamy	💧💧	🌿🌿
Bearberry, Kinnikinnick ( <i>Arctostaphylos uva-ursi</i> )	Shrub	Flexible	Coarse	💧	🌿
Common Camas ( <i>Camassia quamash</i> )	Herbaceous	☀️	Flexible	💧💧💧	🌿
Pacific Bleeding Heart ( <i>Dicentra formosa</i> )	Herbaceous	☀️	Flexible	💧💧	🌿
Woolly Sunflower ( <i>Eriophyllum lanatum</i> )	Herbaceous	☀️	Flexible	💧	🌿
Douglas Aster ( <i>Symphyotrichum subspicatum</i> )	Herbaceous	☀️	Flexible	💧💧	🌿

#### Legend

- deciduous tree
- evergreen tree
- shrub
- herbaceous
- full sun
- part sun/shade
- shade
- wet
- well-drained/moist
- dry
- cones/cone-like structures
- small seeds
- berries/drupes
- nectar/pollinators
- nuts/large seeds





## Maintenance

- 'No Mow May'
- Leave fall clean up until spring to provide cover for birds over winter
- Raking leaves



## Maintenance

- 'No Mow May'
- Leave fall clean up until spring to provide cover for birds over winter
- Raking leaves
- Keep seed heads on perennials throughout the winter (cone flower)
- Woody debris (piles of brush or log pile)
- Remove invasive plant species



## What You Can Do

### ■ 7 simple ways to help birds and the environment

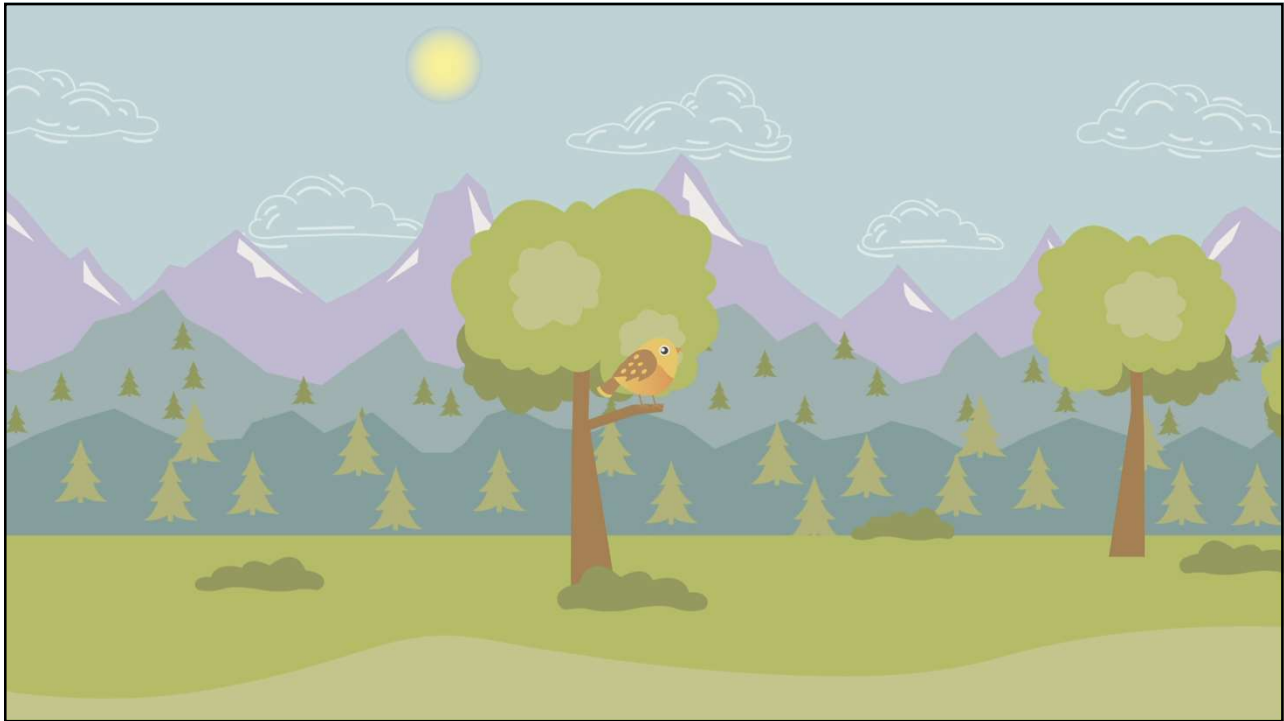
1. Windows
2. Cats and birds
3. Consumer choices – coffee
4. Reduce lawn
5. Avoid pesticides
6. Plastics
7. Share what you see

## 7 Things YOU Can Do

### 1. Make windows safer day and night



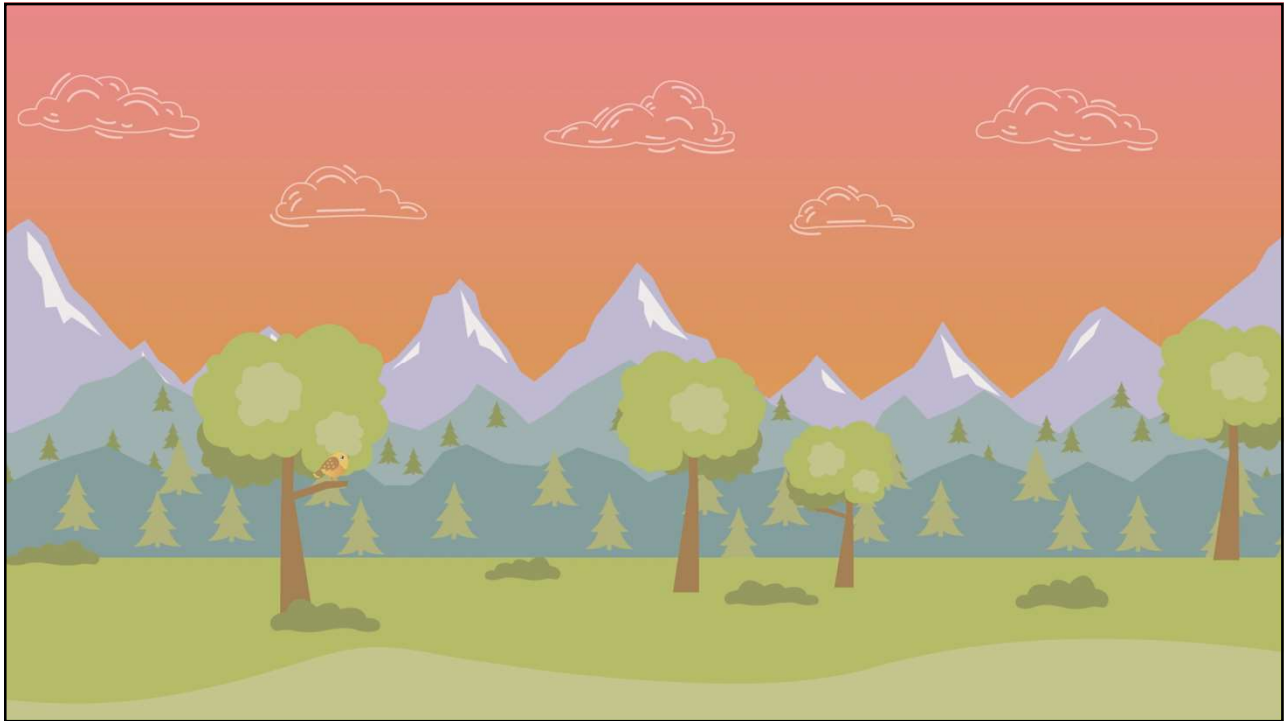




## 7 Things YOU Can Do

### 2. Keep Cats Indoors





## 7 Things YOU Can Do

### 3. Reduce Lawn By Planting Native Species



## 7 Things YOU Can Do

### 4. Avoid Pesticides



## 7 Things YOU Can Do

### 5. Drink Coffee That's Good For Birds



## 7 Things YOU Can Do

### 6. Protect Our Planet from Plastics



## 7 Things YOU Can Do

### 7. Watch Birds, Share What You See







## Additional Resources

### ■ Vancouver Avian Research Centre: [birdvancouver.com](http://birdvancouver.com)

- Window strikes
- Cats and Birds
- Purchasing for the planet
- Bird friendly gardens
- Attracting Hummingbirds
- Feeding birds



### ■ VARC Events

- Bird Identification Workshop (May)
- Bird Monitoring and Banding Workshop (May)
- Drawing Birds (March)
- Guided Bird walks (Monthly)



## Additional Resources

- Birds Canada: [birdscanada.org](http://birdscanada.org)
- Cornell: [nestwatch.org](http://nestwatch.org) / [feederwatch.org](http://feederwatch.org) / [birdcount.org/](http://birdcount.org/)
- Audubon: [audubon.org](http://audubon.org)
- Stewardship Centre for BC: [stewardshipcentrebc.ca/](http://stewardshipcentrebc.ca/)
- Wild Birds Unlimited: [vancouver.wbu.com](http://vancouver.wbu.com)
- WBU Stores: Vancouver & North Vancouver

***Be part of the solution!***



