

# GARRY OAK: YOUR GOOD FRIEND

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*Garry Oak Meadow Preservation Society*

Main features:

Aesthetic: prominent “meadow” tree;  
: legacy of First Nations’ gardening practices.

Habitats: dry rocky to stream/oceanside

Food source to both Natives and animals

Wood for carpentry, tools, heat, etc.

“MEADOW” GARRY OAK & CAMAS



# BIOLOGY:

Slow grower; roots first; tolerates stressful habitats; long-lived  
Habitats for many plants and animals important to First Nations' cultures: Camas major food element.

Associated plants: 121 "flowering" species (EX moss, lichen, etc.).

"Species at risk": 112; 67 "flowering", 3 mosses.

Flowering period: Feb. (Indian plum) – Sept. ("Tomcat" clover).

Associated animals: many birds – 4 owls!; 12 butterflies; misc. other insects – some pollinators NOT bees! Also, some "soil builders" (other than worms).

*"..each tree is a planet.."* summarizes Garry oak well





## BENEFITS 1: HABITAT FACTORS

Shade: temperature reduction

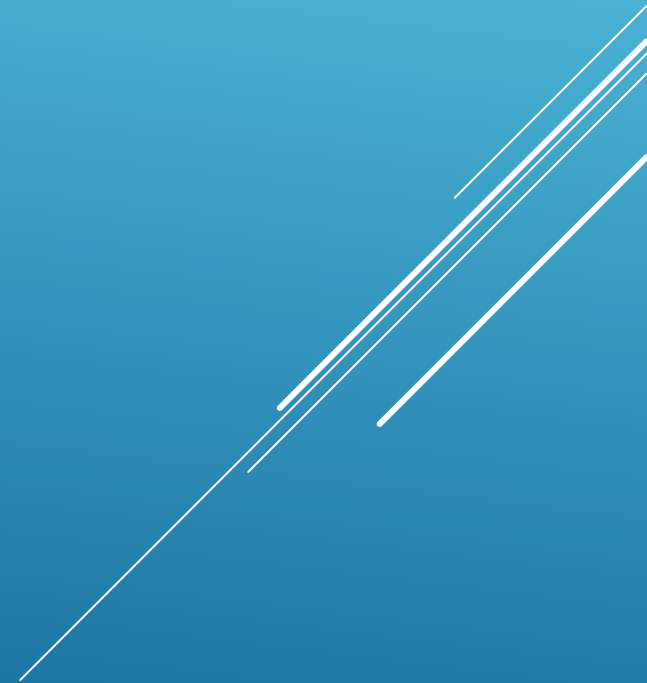
Dust, pollen interception

Air quality: “Team” Chlorophyll – hemoglobin

Soil improvement: fauna and root activity

Water interception and dispersion; air moisture supplemented

“System services” by above-ground fauna



## BENEFITS 2: HUMAN HEALTH

Stress reduction:

Reduced arterial contraction

“ “ “ “ heart rate

“ “ “ “ blood pressure

“ “ “ “ stress hormones

“ “ “ “ worker absences

Increased worker productivity

Improved mental health

“ “ “ “ patient recovery

# PHOTOSYNTHESIS, RESPIRATION AND OXYGEN RELEASE

“PS”:  $n \text{ CO}_2 + n \text{ H}_2\text{O} + \text{light} \rightarrow n(\text{CH}_2\text{O}) + n\text{O}_2$

“RES” :  $n(\text{CH}_2\text{O}) + n\text{O}_2 \rightarrow n(\text{CO}_2) + n(\text{H}_2\text{O}) + \text{ENERGY}$

Source: “Oxygen Production by Urban Trees in  
the United States”

By: David Nowak, Robert Hoehn and Daniel E. Crane

Arboriculture and Urban Forestry 33(3): 220-226, 2007

## DETRIMENTS:

Pipes, drains, etc. conflicting; sidewalk heaving  
DANGER!

Overhead wires/transmission towers,

Falling limbs, branches, etc.

Bothersome twigs, leaves, nuts, pollen, insect  
droppings, etc.

Unwelcome “resident” animals: raccoons, squirrels, etc.





## CRD URBAN CANOPY TREND 1998 – 2011

Loss “Leaders”:	Hectares
Saanich	585*
Langford	452
Colwood	429
CRD Total	1038

\* MUCH around Royal Oak/Broadmead

## FUTURE ACTIONS:

CLIMATE: Upward trend = stress on plants and animals

Current “adapted” organisms’ stress upward; failures predicted

PLANT Suitable Native plants:

- Garry oak
- Arbutus
- Cherry
- Maritime pine
- Juniper

**NB: NO MONOCULTURES!!**



