RESTORING CADBORO BAY'S URBAN FOREST

Part 1

Presentation to Native Plant Study Group

Victoria BC

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YOU CAN MAKE A DIFFERENCE

Theme suggested by organizers of this
NPSG autumn 2018 presentation series

VICTORIA'S NATIVE PLANT STUDY GROUP (NPSG) HAS ALREADY MADE A DIFFERENCE

In 2014 NPSG contributed funds for purchase of Douglas-fir seedlings.

Planted in 2014, this 6-yr old Douglas-fir (2018) is now established in Goward woodland thanks to NPSG.

For scale, the red and white pole is 2 metres tall.

Acknowledgements and Thanks

Ivy Team:	Marcia Knowles, Merle Peterson, and Dane, Demaris & Zack Pritchard
Blackberry Team:	Michael Brooke, Merle Peterson, and Hugh & Trish Westwood
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Program ;	Rick Hatch, Don Illingworth & Jillian Tuson of Saanich Parks and Recreation .

Goward Woodland: A Labour of Love

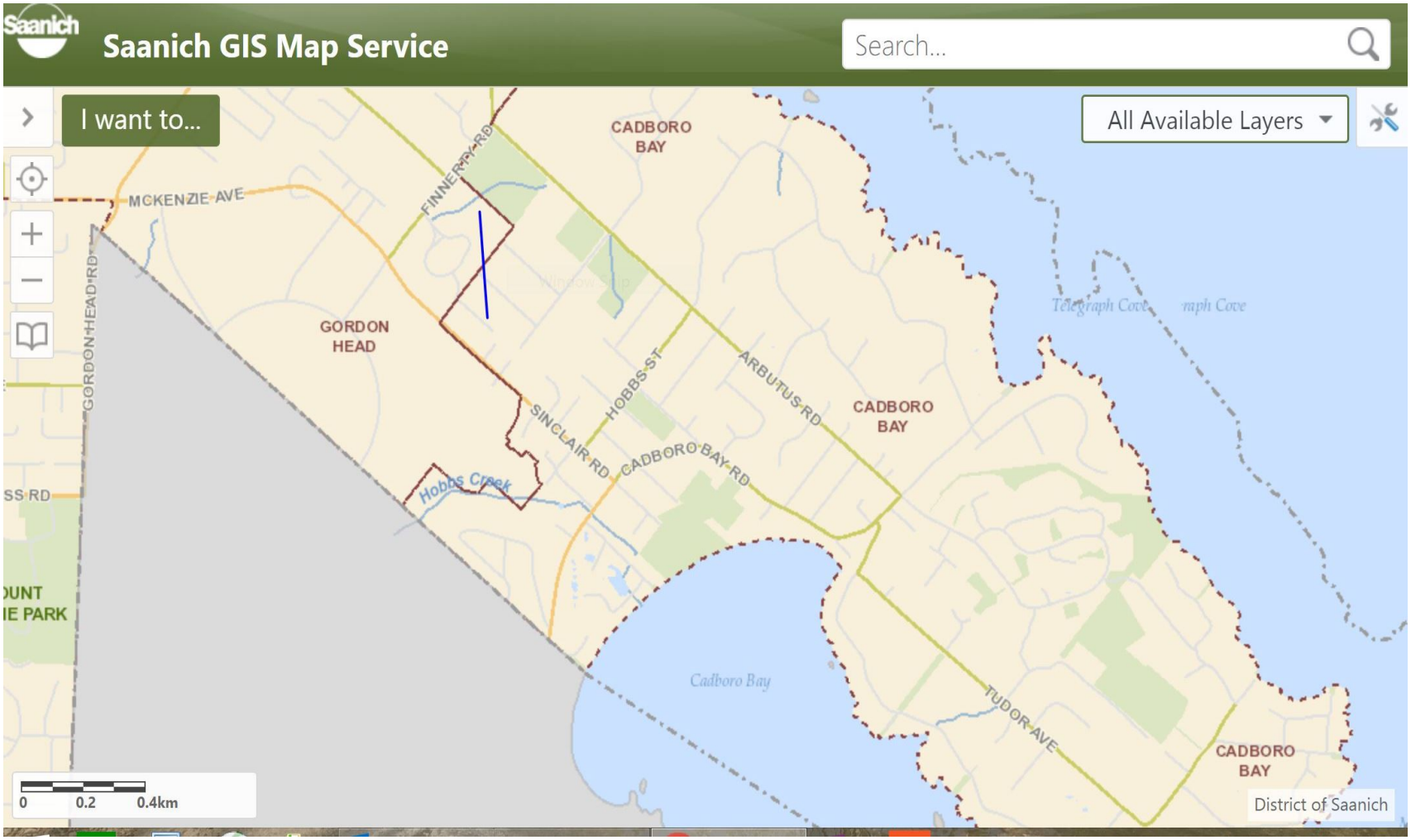
Between 1989 and 2018, 30 volunteers contributed labour to ecological restoration in Goward woodland. Some assisted on a single occasion; others returned repeatedly. We thank them all.

Our Volunteers

Robert Auger, Benita Blundel, Michael Brooke, Marilyn Davis, Darce Gillespie, Phyllis Greenaway, Bob Hamilton, Rick Homer, Jennifer Hopkins, John Hopkins, Marcia Knowles, Darren Morson, Eric Moyes, Henry Niezen, Eujin Park, Tricia Parker, Everett Peterson, Merle Peterson, Dane Pritchard, Demaris Pritchard, Wendy Pritchard, Zack Pritchard, Ken Robinson, Lin Shi, Pauline van den Driessche, Robert van den Driessche, Gary Weir, Hugh Westwoood, Trish Westwood, John Whitney.

Five Key Principles for Local Ecological Restoration

1. Respect local ecological conditions of project area
2. Adapt to circumstances beyond your control
3. Optimize use of natural regeneration processes
4. Choose steps that have immediate visual impact
5. Plan for repeat restorative steps



Locations of Goward woodland, Haro Woods, Mystic Vale, Phyllis Park and Konukson Park in relation to UVIC campus.

Three key external influences impact Goward woodland:

- Low summer rainfall from atmosphere
- Groundwater from U Vic upland
- High deer population from Queenswood

Respect Local Ecological Conditions of Project Area

For Goward woodland, the two key variables are:

1. surface expression of groundwater hydrology;
2. presence or absence of existing forest canopy.

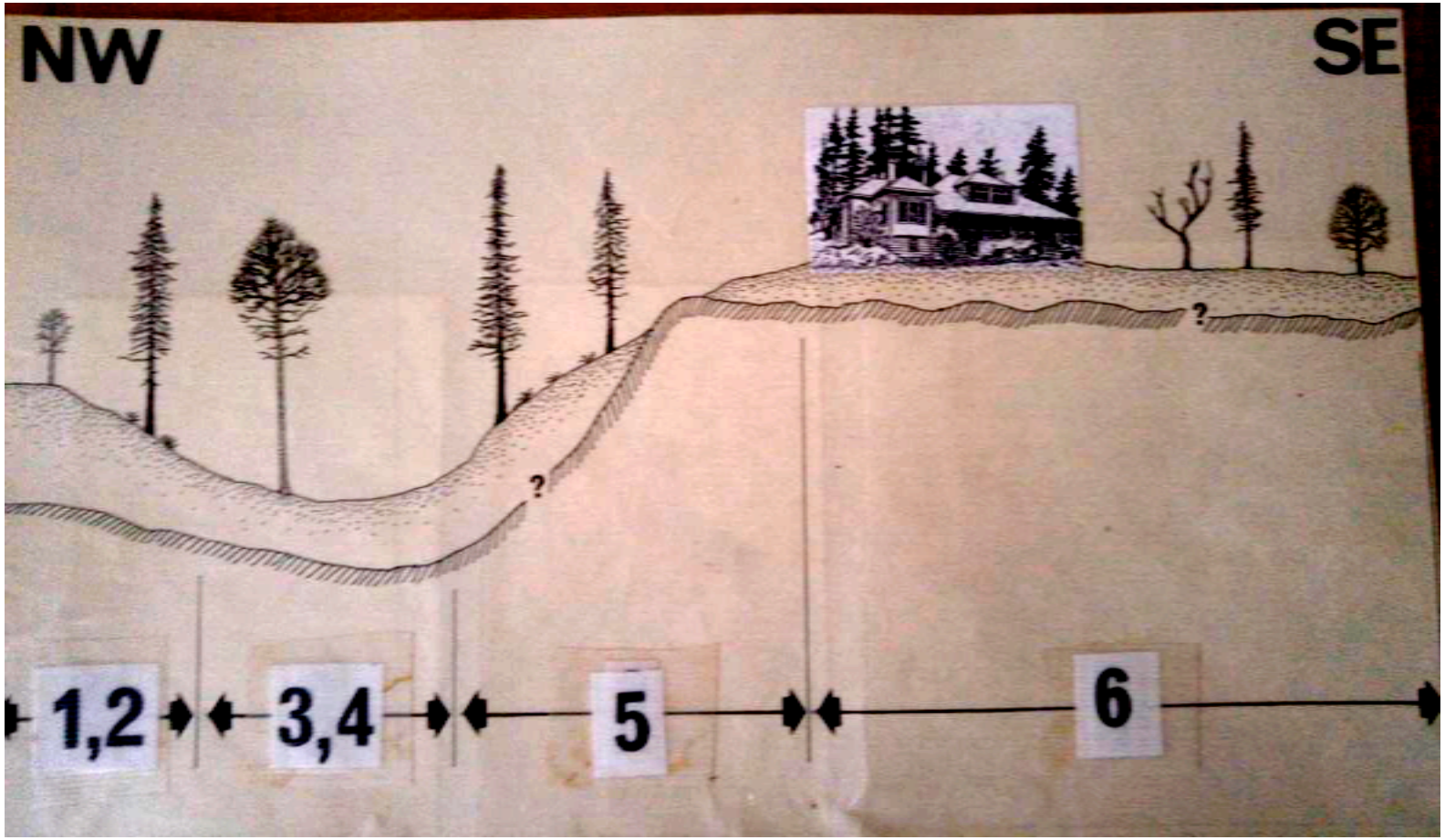
The Mount Douglas ‘Tail’

The drumlin-like ridge south from Mount Douglas is:

- the backbone of Gordon Head and UVIC upland
- a large water-shedding area
- the headwaters for several creeks:

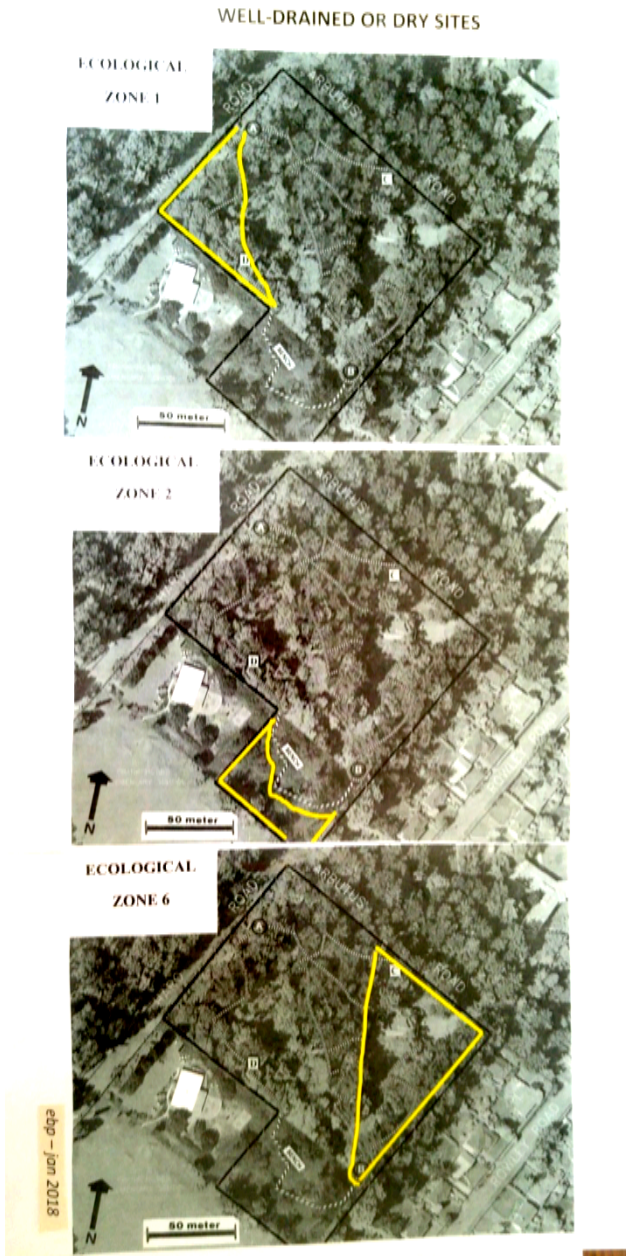
Creeks Fed From Mount Douglas:

- Bowker Creek into Willows Beach
- Hobbs Creek/Mystic Vale/ Mystic Ponds into Cadboro Bay
- Haro Creek via Goward woodland into Haro Strait
- Haro Woods drainage into Haro Strait

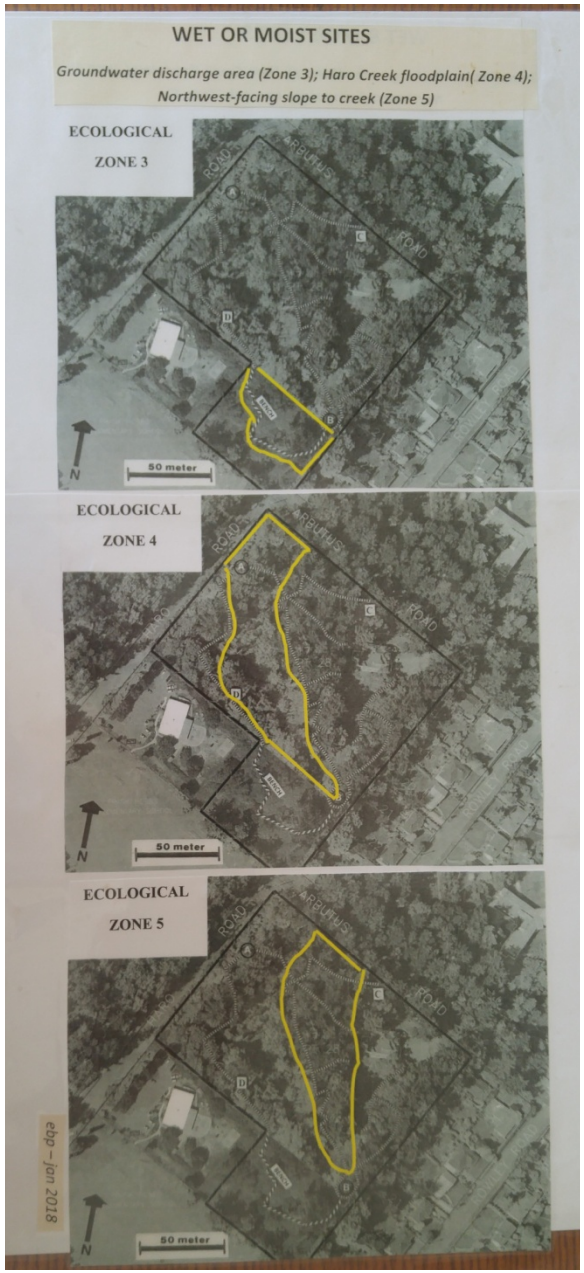


Six ecological zones in Goward woodland, based on water-shedding sites versus water-receiving sites.

The 6-acre Goward woodland is a P-4 Zone (Recreation and Open Space) with no perimeter fencing, open to deer, and to all public users.



Water-shedding sites on Goward woodland are represented by three relatively dry ecological zones.



Water-receiving sites in Goward woodland are represented by three moist or wet ecological zones.

Locations of groundwater discharge areas are a key ecological variable

Slough sedge (Carex obnupta) dominates in
groundwater discharge areas and on Haro Creek floodplain.

Newly transplanted slough sedge after blackberry clearing

Slough sedge and sword fern planted in seepage area.

Existing forest cover is also a key ecological variable.

Areas of existing forest cover require little or no new planting during ecological restoration.

This view from Mount Finlayson shows dense underground root ecosystem under existing forest cover

In Goward woodland, healed stump shows continued growth
after tree cutting because of underground connected root systems.

Salal successfully underplanted beneath forest canopy.

New Oregon grape planted beneath forest canopy.

Newly established red-flowering currant planted beneath existing forest canopy.

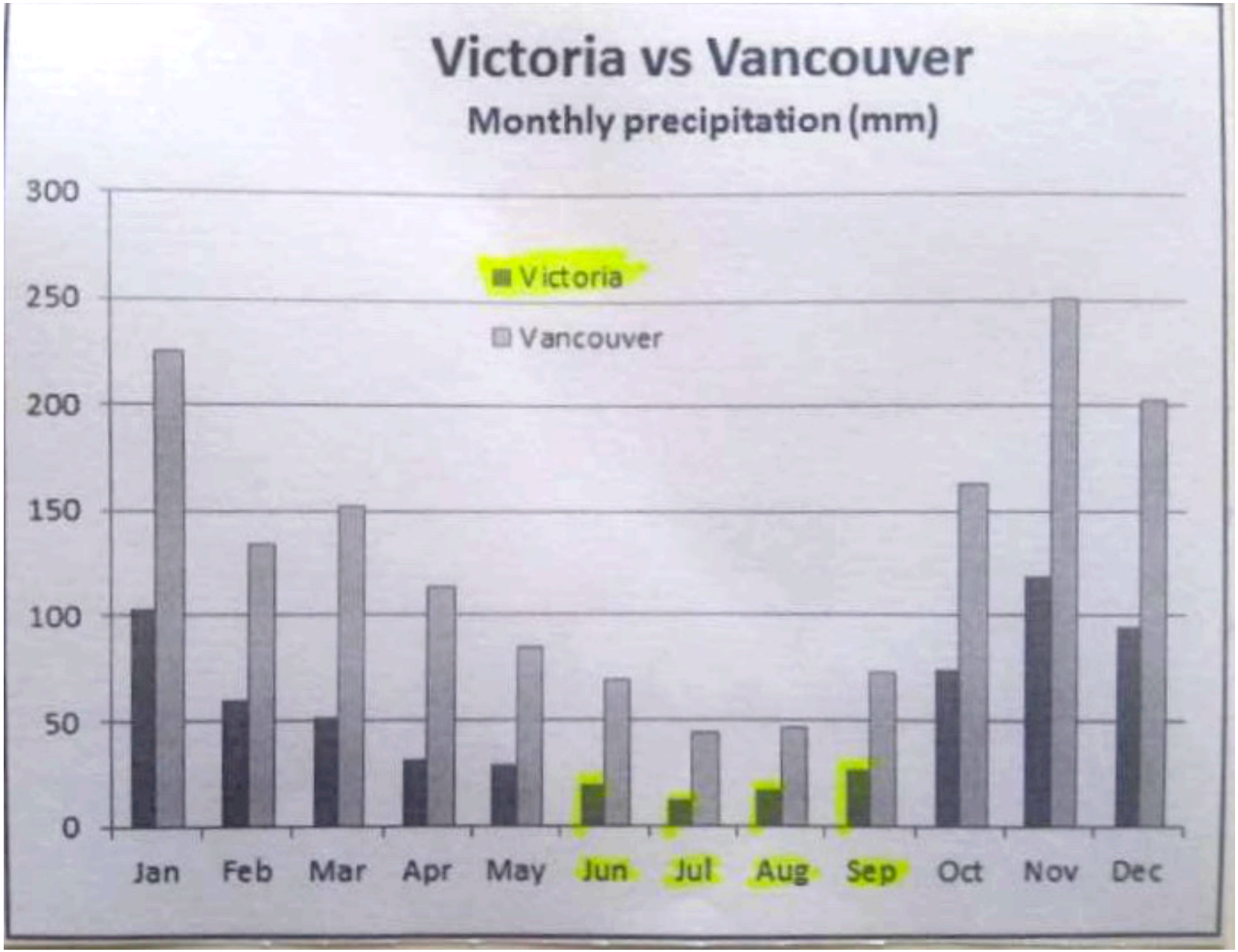
Sword fern also transplants successfully to locations beneath the forest canopy.

There are more choices for planting spaces
where there is no forest canopy.

Adapt to circumstances beyond your control

For Cadboro Bay area these are:

- lack of May – Nov moisture;
- heavy deer browsing


Victoria vs Vancouver
Monthly precipitation (mm)
300
250
200
150
100
50
0
Victoria
Vancouver
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Douglas-fir dying from drought

Arbutus seedling lost to drought

On left, dead Douglas-fir stump lost by deer rubbing.
On right inside wire, Douglas-fir lost to summer drought.

Water spike for summer irrigation
is an adaptation to summer drought.

Deer are prevalent in Goward woodland.
They live there .....

End of Part 1