

To Members of the Resilient Saanich Technical Committee (RSTC)

My Critique of Parks in Saanich - 'The Tragedy of the Commons'

Saanich Council has committed to the UN Decade on Ecosystem Restoration. Councillor Brownoff has stated that: "*We are committed to restoring natural areas and biodiversity within our parks to benefit the long term health of our community*".

However, the extremely special and rare ecosystems that once covered Saanich Parks are now fully degraded and covered in invasive species. This is particularly true of Garry oak ecosystems, as well as Terrestrial Herbaceous (HT) sensitive ecosystems and Coastal Bluff (CB) sensitive ecosystems. Most of the latter two categories of ecosystems, the HT and CB are significantly impacted and mostly down to bare rock with small areas of deeper soil covered with invasive grasses and some native species. The cover of moss and lichen has long disappeared due to human and dog trampling as there has been no restrictions or fencing in these areas. Certain areas of these rare ecosystems have people throwing balls for their dogs daily, and have school classes running through the meadows, even while camas is blooming.

I see this as like 'The Tragedy of the Commons' (Hardin, see below) where public land is abused because no one individual is responsible for the consequences. This is true of most of the major parks in Saanich – Mount Douglas, Mount Tolmie, Christmas Hill, Knockan Hill, Glencoe/Kwatsech, etc. If you went to any of these parks in mid April this year, it appeared that the native cover was doing fine (except Mount Douglas) and the camas were flowering in all its glory. If you go now (mid May) you will observe that all these areas are dominated by invasive grasses, which includes many different grass species. Invasive grasses are a significant issue that is not being dealt with in Saanich Parks. However, to deal with these there will be a requirement to plant significant amount of native plant material. Invasive shrubs are also a major issue in many of Saanich Parks, right of ways and boulevards. Volunteers can only do so much.

If you want to look at just one park, go see Mount Tolmie Park. It is small enough to get a full appreciation of the degradation that has occurred over many decades, with only limited action to change the direction.

If Saanich Council is committed to restoration of what used to be glorious areas of biodiversity, significant action is required very soon. I am hopeful that your committee will provide Council with the understanding of what needs to be done to meet this important commitment.

The Saanich Parks Department, despite their strong commitment to biodiversity, do not have the resources to take care of all these areas. Yet some members of Saanich Council believe that all that is needed is more volunteers and that biodiversity in the Parks system has been maintained over the years.

I provide the following examples of actions that have occurred over the last decade:

- At a White Rock Street private property there is a location of Bearded Owl-clover, an Endangered species at risk in Canada. To build a house, the landowners were required by Saanich to hire a biologist, do shade diagrams from the proposed house, and fence the occurrence in a natural state covenant. Right adjacent to this property is an area of public land, Saanich property, where this occurrence continues, however, the area is mostly bare, as people can walk all over the area where it was – it is now down to bare rock, a small area of soil and no fencing. The landowners ended up paying significant funds to protect the species with no incentives or financial support from Saanich and no action by Saanich on the adjacent public property.
- Not far from this location, at Glencoe Cove/Kwatsech Park, there used to be a Bearded Owl-clover population of over 20,000 individuals. Now they are in the low hundreds spread out in small patches. There is no fencing, no sign about the species at risk and no restrictions for people and their dogs to walk all over this population and other SAR populations in Saanich Parks. Saanich used to allow weddings to occur at this site and may still. The whole park is also mapped as Sensitive Ecosystem and most of the park has been mapped as Critical Habitat for one of three Species at Risk.
- At the same park, the Macoun's meadow-foam, a federally threatened G2 species at risk which occurs in vernal pools, is present where paths go right through this area. There is no fence, no sign, no restrictions. Adolf Ceska said that there were 5 – 7 plants last year. There were approximately 50 plants at one time. It appears that the Endangered species Purple Sanicle has recently disappeared from this park.
- Landowner's have been required to place areas of Coastal Bluff Sensitive Ecosystems or Terrestrial Herbaceous Sensitive Ecosystems into Natural State Covenants in order to build, or put in a driveway or deck, on fully developed or degraded sites which happened to be mapped as Sensitive Ecosystems, while in Saanich Parks people and dogs walk all over these ecosystems and degrade them. No restriction, no protection, little or no signage.
- It appears to me that the Parks Department do not have the capacity or expertise for managing species at risk in Saanich Parks, even though many locations occur, and many areas have been mapped by Federal Government Recovery Strategies as being Critical Habitat.
- In 2016, in Saanich Gorge Park, Saanich planted over 20 species of trees in the park, and not one of these was a native species. This area was mapped within the EDPA area of Marine Backshore at the time. Private landowners, however, were required to plant native trees and shrubs on their own properties, if they were within the EDPA area and wanted to build a deck or driveway, where no natural vegetation occurred. Along the same vein is the refusal by Saanich to remove the remains of a holly farm in Brodick Park, while a very dedicated group

of volunteers remove invasive species, including holly, in the natural area of Brodick Park, just 50 metres away. Non-native species are commonly planted in medians, boulevards -see the boulevard tree list – and on Saanich municipal hall lands.

I raise these issues because I believe that there is presently little action or commitment by Saanich Council to protect, enhance or supplement ecosystems at risk and species at risk within Saanich. I believe Council do not have a full understanding of the issues in the Parks. I encourage the RSTC to inform Council of the state of Saanich parks and species at risk and request a financial commitment from Saanich Council to demonstrate that they are willing to deal with biodiversity in a meaningful manner within the municipality.

Ted Lea, Vegetation Ecologist



Tragedy of the Commons defined by Wikipedia

The **tragedy of the commons** describes a situation in economic science when individual users, who have open access to a resource unhampered by shared social structures or formal rules that govern access and use, act independently according to their own self-interest and, contrary to the common good of all users, cause depletion of the resource through their uncoordinated action.

Link to Garrett Hardin 1968 paper, entitled The Tragedy of the Commons
<https://science.sciencemag.org/content/sci/162/3859/1243.full.pdf>

Rapid Preliminary Assessment of Ecological Condition in Major Saanich Parks using Standard for Mapping Ecosystems at Risk in BC (WD is Garry oak Woodland Sensitive Ecosystem; HT is Terrestrial Herbaceous Sensitive Ecosystem)

Park	Ecosystem	Excellent	Good	Fair	Poor	Comments
Total All Large Parks	WD/HT	none	3.5% (3.2 ha)	0.37 % (0.34 ha)	96.15 % (87.5 ha)	Preliminary numbers – detailed mapping is required to confirm these numbers.
Knockan Hill	WD/HT	none	48 m ²	none	38,400 m ² 3.8 ha	The good condition portion is not mapped as WD or any SEI category - patches of camas under trees and in protected areas – some other natives in meadows – invasive grasses predominate
Cedar Hill	WD/HT	none	none	none	100 % 69,720 m ² 6.9 ha	Dominantly snowberry – English ivy community – fair number of camas in open areas however, invasive grasses predominate – some other natives occur
Panama Hill	WD/HT	none	none	none	78,270 m ² 7.8 ha	Extremely degraded by invasives – hawthorn, invasive grasses – very few native species remain.
Mount Douglas Park (PKOLS)	WD/HT Garry oak	none	none	none	380,000 m ² 38 ha	Extremely degraded by invasives – broom, invasive grasses – very few native species remain – significant degradation by overuse for recreation and expansion of trails through COVID
Christmas Hill	WD/HT Garry oak meadows	none	none	3380 m ² .34 ha	99,920 m ² 9.9. ha	Still patches of camas and other natives – invasive grass dominates all areas
Christmas Hill	WD/HT Licorice Fern	none	8370 m ² 0.84 ha	none		East side of Park – needs further delineation
Christmas Hill	WD Osoberry - snowberry	none	24,000 m ² 2.4 ha	none		North side of Park – needs further delineation
Vic Derman Park	WD/HT Garry oak	none	none	none	32,380 m ² 3.2 ha	Dominated by invasive grasses and shrubs and invasive hawthorn
Mount Tolmie	WD/HT Garry oak	none	None (may be some WD Osoberry – snowberry but need further detail)	None (may be some WD Osoberry – snowberry but need further detail)	179,750 m ² 17.9 ha	Still patches of camas and other natives, in parts of the park, but invasive grasses predominate throughout. Terrestrial Herbaceous (HT) areas are extremely degraded from overuse for many years.

Ecological Condition Classes from Standard for Mapping Ecosystems at Risk in British Columbia (pages 43-45) – following International NatureServe methods

Condition	Description (from Mapping Ecosystems at Risk in BC)
Excellent	<p>a. Typical climax vegetation.</p> <p>b. No anthropogenic disturbances or changes to natural disturbance regimes have altered the EO (including fire exclusion or flood control), no vegetation or soil removal has occurred. Forested ecological communities are generally late seral vegetation. Wetland and riparian communities have intact hydrologic regimes. There is minimal influence of domestic grazing.</p> <p>c. No alien species occur at the site.</p> <p>d. No artificial structures occur at the site.</p> <p>e. There is little or no internal fragmentation (< 5%) of the occurrence.</p>
Good	<p>a. Typical mature seral vegetation.</p> <p>b. For forested communities, there has been no soil removal or disturbance to soil surface; little or no influence of old road beds or skid tracks, no construction evidence, old selection harvesting only, minimal changes to natural disturbance regimes (including fire exclusion or flood control). Forested ecological communities are late seral or mature, or younger if originating from natural disturbance. Wetland and riparian communities have largely intact hydrologic regimes. There is low-moderate influence of domestic grazing.</p> <p>c. Minor cover of alien species (<5% except <20% in grasslands) may occur at the site. Some earlier successional species occur.</p> <p>d. Some artificial structures may occur at the site (< 2% of total area of occurrence).</p> <p>e. There is little or no internal fragmentation (<5%) of the occurrence.</p>
Fair	<p>a. Anthropogenic disturbances and changes to natural disturbance regimes have occurred. Forested ecological communities are young seral stages after harvesting. There is moderate to high influence of domestic grazing in grassland ecological communities. There may be significant alterations to the hydrologic regime in wetlands and riparian ecosystems.</p> <p>b. Significant cover of alien species occurs (5-20% in forests and riparian systems, up to 60 % in grasslands). Most of the plants in grassland communities are early successional species.</p> <p>c. Some artificial structures may be present (less than 10% of total area).</p>
Poor	<p>a. Significant anthropogenic disturbances have occurred, particularly removal or disturbance of soil materials and vegetation. There are significant alterations to the hydrologic regime of wetlands and riparian ecosystems.</p> <p>b. Alien species may dominate a vegetation layer or may total more than 20% (>60% for grasslands) cover overall.</p> <p>c. Significant artificial structures occur (>10% of total area of occurrence).</p> <p>d. The element occurrence is fragmented by artificial structures or barriers.</p>