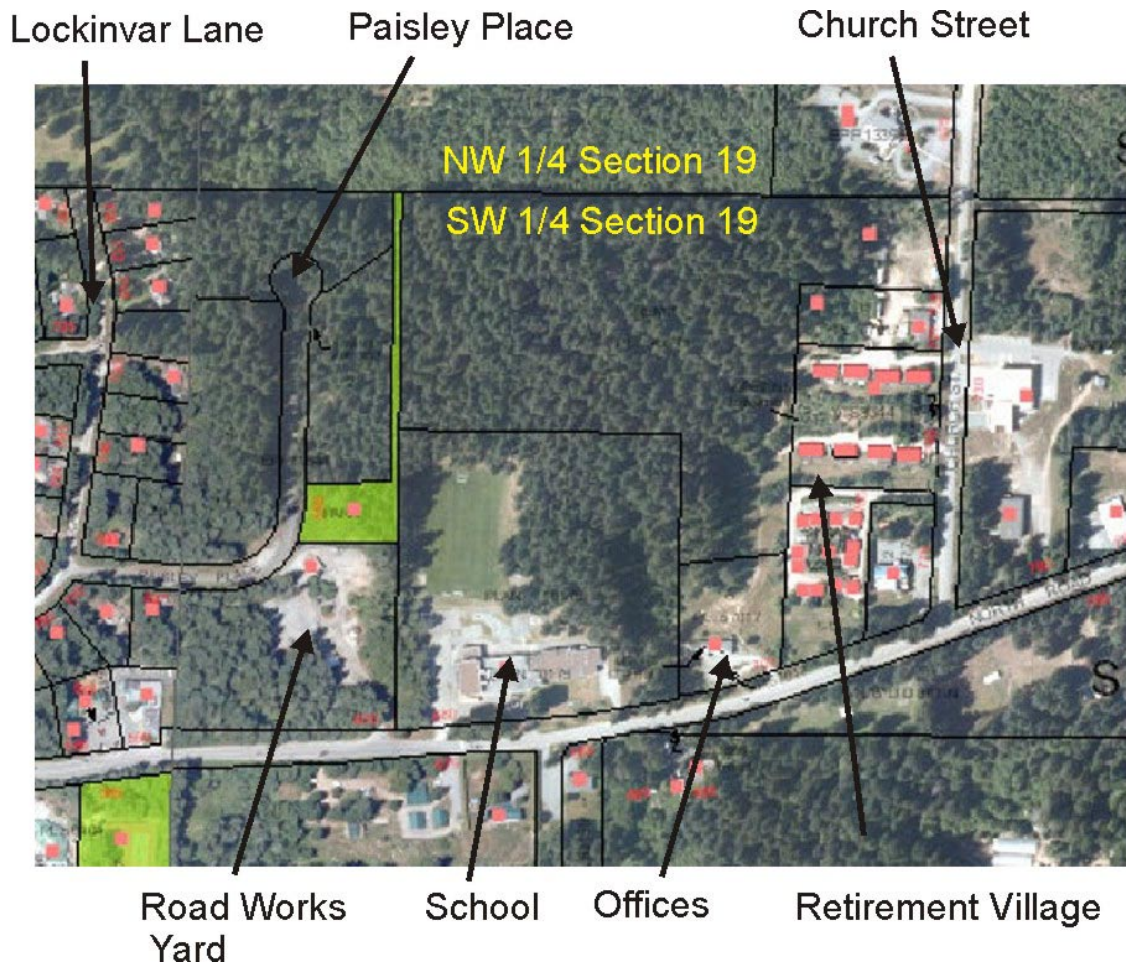
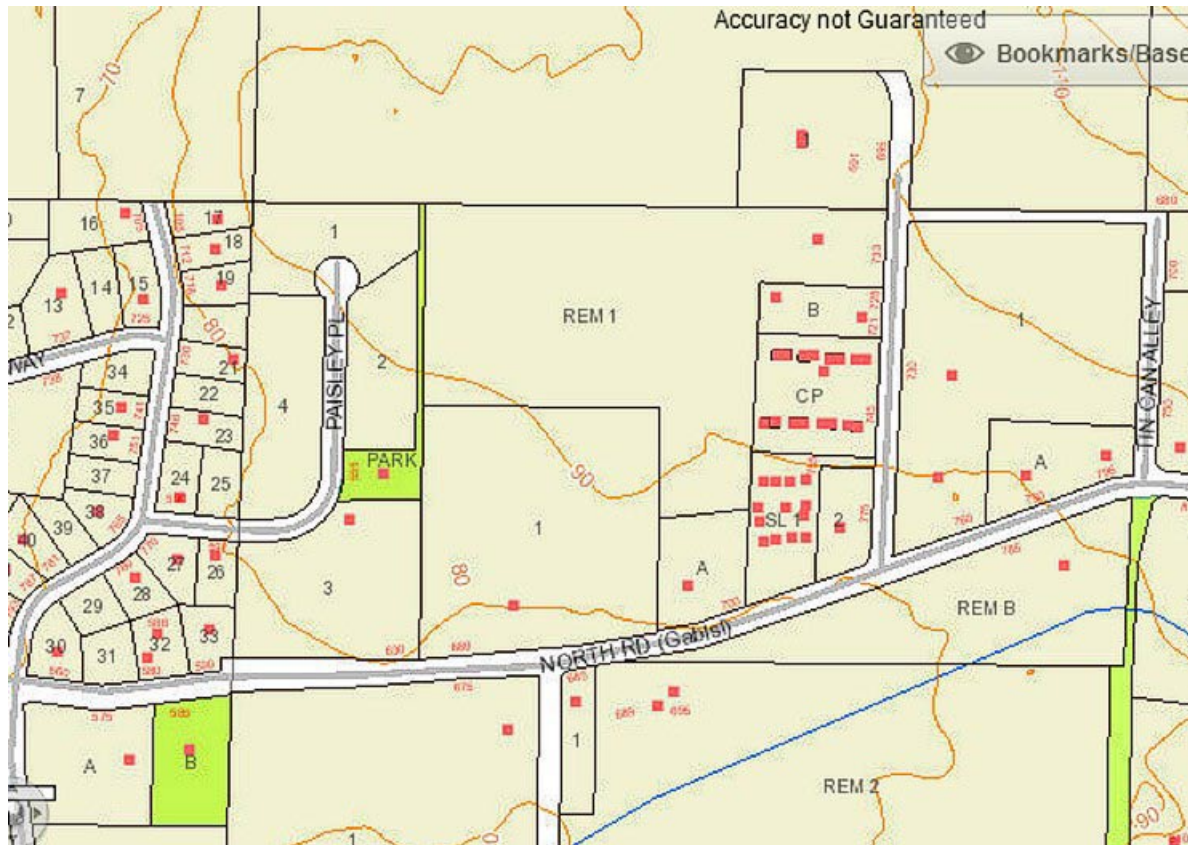


Notes on woods in the SW ¼ Section 19 Gabriola Island



These notes are personal observations and are not intended to be detailed, systematic, professional-grade accounts of the forest ecology of the area. It has been noted for example that my assertion that two sets of trees now in the 0.45–0.9 metre DBH range are indicators of selective harvesting at different times in the past may be wrong, the alternative explanation being that the trees in this range are members of only one equal-age stand, the larger trees having assumed a dominant position in the overstory at an early age and thrived in especially good growing conditions. An annual-growth-ring count of a chain-saw cut of a 0.9 metre DBH tree would resolve the issue, but we'll have to wait for that.

My mother-in-law used to live in the Retirement Village and I visited her there regularly. When doing so, I always took the opportunity to take a walk in these woods. I observed them year round and in all weathers in contrast to professional ecologists who in preparing reports commonly have only the resources for a one-day visit and are forced to rely on background information extracted mainly from filing cabinets and analyses of aerial or satellite images that have had little or no ground-truthing especially for smaller ecosystems and riparian areas.



The woods are in the NW¼ of the SW¼ of Section 19, bounded roughly in the: north by the border with the NW¼ of Section 19 beyond which there was clear-cutting just a few decades ago and is now a mix of grassland with scattered trees and immature forest; east by the Retirement Village Complex and to the north of it, the Ambulance Centre, and Storage Facility off of Church Street (the whole of the east side of REM 1); south north of North Road by the Islands Trust (IT) Offices, School built-up area and playing field, and Paisley Place Park, which is north of the Road Works Yard (Lot 3); and west by properties along Lockinvar (*sic*) Lane. The Gabriola Housing Society (GHS) now owns the forested land Lots 1, 2, and 4 around Paisley Place

The co-dominant trees in the woods are coastal Douglas-fir (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*) of various ages including both saplings and some trees that are of considerable age. The soil is well drained with no creeks or ponding; technically gravelly Saturna soil over sandstone, the gravel being lag gravel from glacial drift.

Of special interest in these woods are forest floor areas devoid of a green-understory and composed of decomposing vegetation (duff), such as leaves, dead logs, bark, and twigs. The only visible flora there are fungi, saprophytes such as spotted coralroot (*Corallorhiza maculata*), and parasitic plants such as Indian-pipe (*Monotropa uniflora*). These are all very seasonal and so not always apparent, but they exist in great diversity when they are, possibly as much as or more than any other non-protected site on the island. These areas are perhaps surviving remnants, or

are at least evocative, of the forest floor that was here when the seral stage of the forest was old-growth.

Around the fringes of the bare forest floor areas the understory becomes somewhat greener with Oregon grape (*Berberis nervosa*) and carpets of moss (mostly *Kindbergia oregana*).

Where there are openings in the canopy, species seen are more numerous, examples are vanilla leaf (*Achlys triphylla*), red and evergreen huckleberries (*Vaccinium* spp.), and small clumps of sword fern (*Polystichum munitum*). Salal (*Gaultheria shallon*) is present but is restricted to where the canopy is open, and is not dominant in the way that it commonly is on Gabriola in young or early mature forests that were cutover or burnt sometime in the 20th-century.

To the casual observer, the forest on GHS Lot 4 is more open, trees are younger (or slower-growing) there and the old hand-logged stumps smaller, possibly a reflection of drier soil though there is no shortage of cedar trees there and at least one living tree has a diameter (DBH) of 1.5 plus metres making it as old as some on the other side of the road. Its understory does include patches of extensive salal (*Gaultheria shallon*). I am told that calypso orchids (*Calypso bulbosa*) which are vulnerable to trampling, grow or used to grow there in abundance but have not been seen in any numbers in recent years.

What makes these woods interesting is that in spite of having suffered at least two rounds of extensive logging, none of these assaults appears to have been a ruthless clear-cutting and pockets of the growth targeted for harvesting and some seed trees have been spared. Snags, decomposing stumps, and coarse woody debris on the forest floor are and is abundant. Red huckleberry (*Vaccinium parvifolium*), which thrives on rotting cedar, is more common here than in forests elsewhere on Gabriola. Western hemlock (*Tsuga heterophylla*), which often starts life on a nursery log or atop a decaying stump, can still be found here, including one very large one, this, despite being a species that sadly is fast disappearing from the island due to climate change.



The woods are testament of the fact that small pockets of undisturbed ancient forest can survive when logging sites are not attractive for commercial logging for economic reasons. It is no secret nowadays that clear-cutting takes away not only the trees and shrubs but diminishes the diversity of the particular organisms that depend on them from microbes, bryophytes, and fungi to insects, wildflowers, birds, and mammals.

Post-settlement fires too have not completely eliminated older growth, so the existing woods are a mix of small ecosystems, albeit fragmented, representing different seral stages ranging from shrubbery and saplings along the Paisley Place roadside to maturity deeper in the forest. That piliated woodpeckers, for example, are common in these woods is an indicator of the biodiversity that exists there.





An added attraction of these woods is that they are readily accessible for people living in the immediate area who are unwilling or unable to risk venturing further afield in the bigger forested parks on the island. It is also a delight to see school children playing there during breaks.

Age estimates

Good evidence of the age of the “original” trees in the forest is lacking.

Old stumps, hand logged with spring-boards, are always too decayed for rings to be observed yet alone measured, and the species are nearly all western red cedar, which often have a convoluted pattern of fused stems of equal age at the height at which they were cut. A handful of these larger very decayed stumps have diameters as near as one can judge in the 1.4 to 1.65 metre range after allowing for lost or detached

bark.¹ These could have been, at the time of cutting a century or so ago, around 300 to 400 years old.² This is not out of line with numbers in the GaLTT Big Tree Registry for exceptionally large living Douglas-firs on the island with DBHs of around 2.0 metres, making them by the same methodology, now, year 2020 AD, an estimated average 525 years old

¹ My empirical rule of thumb for judging bark thickness of large Douglas-fir on the island when it cannot or has not been observed is 8% of the diameter.

² My empirical rule based on dendrochronological measurements of chain-saw cut Douglas-fir on Gabriola is. Age = $70.8325x^2 + 117.23x + 12$ where x = diameter at breast height (DBH) including bark in metres. In this paragraph I have not distinguished between cedar and Douglas-fir because I don't have any figures for cedar. The derivation of this rule is described in [File 694](#). Annual growth rings of three of the trees used in this analysis were from these woods.



The oldest living Douglas-firs in these woods, those big enough to attract “do-not-cut” flagging, fall into a pattern of having a DBH of 0.85 to 0.95 metres, suggesting they were seedlings in the first half of the 1800s making them about 190 to 200 years old give or take a decade or two.

Many of the younger, but not obviously very young trees with DBHs in the 0.4 to 0.5 metre range, appear to have started life in the 1930s a decade when there were droughts, wildfires, and extensive



logging of old growth. Many trees that are very young with diameters less than 0.3 metres (poles), started life in the mid-1950s or later.

These woods are not “unique” but given their history, character, and location near the village centre, I would hope that some part of them at least could be preserved and that this preservation would be of natural areas of the woods and not focused on selected individual trees. Preservation should involve not only restriction of development, but light management of human recreation; invasive species; dangerous trees (widowmakers); harvesting of berries, plants, mushrooms, and firewood; dumping of trash; and so forth, also known as ‘preserving and protecting’. ◇

