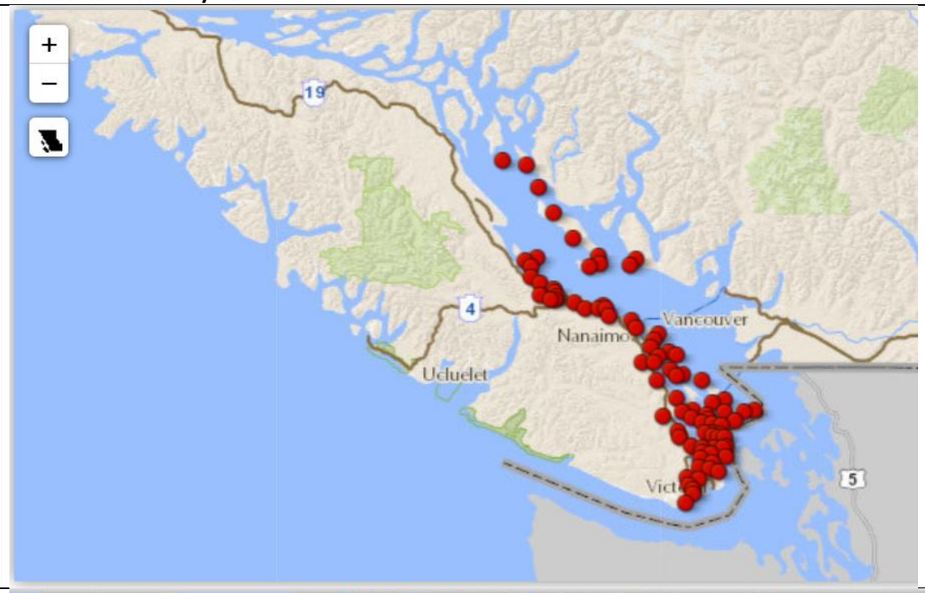
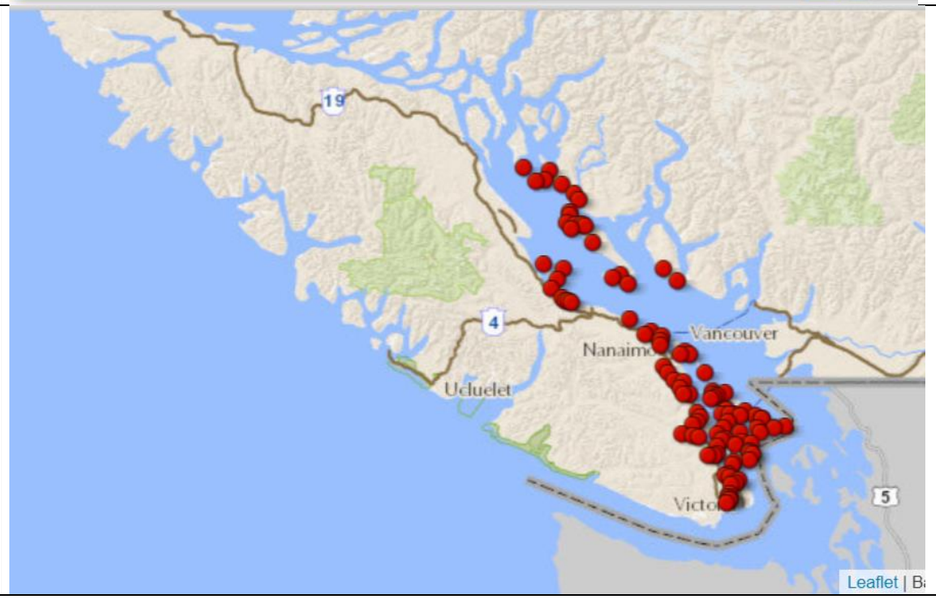
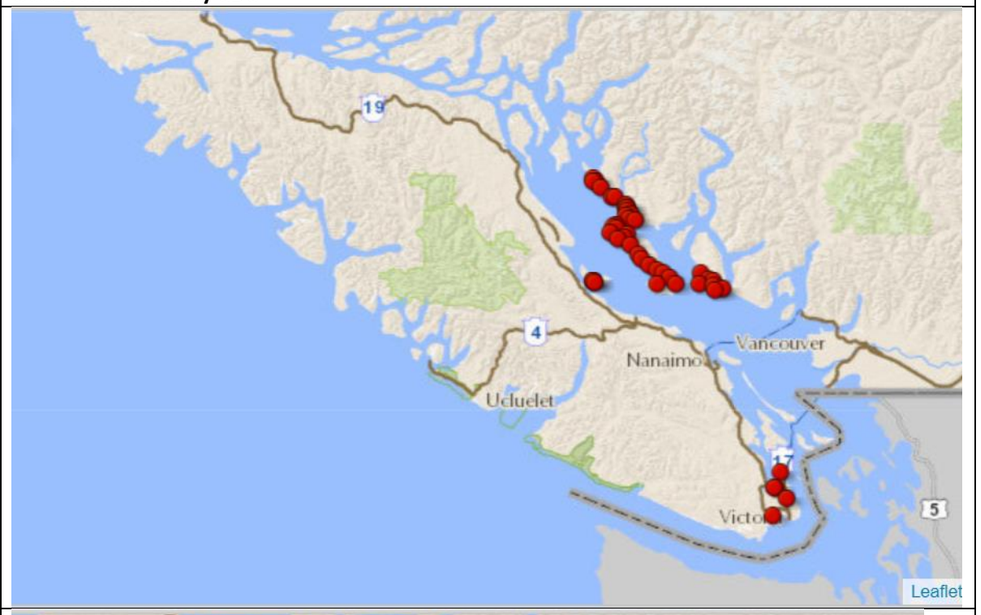
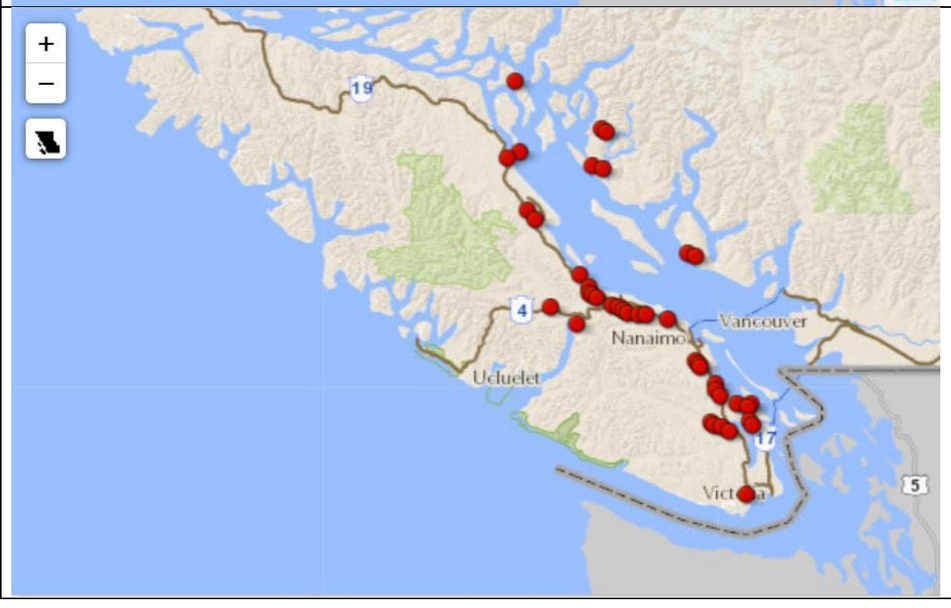
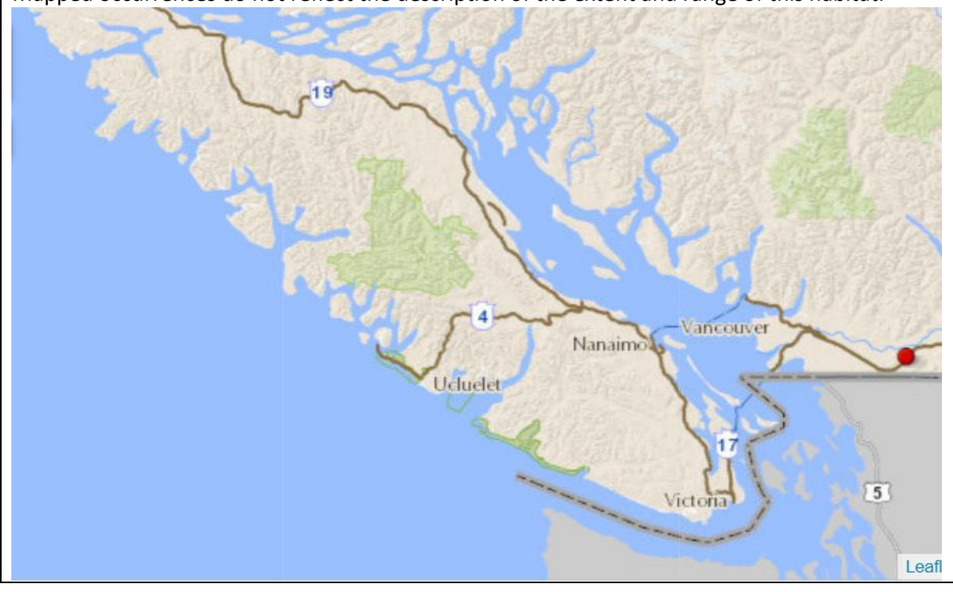
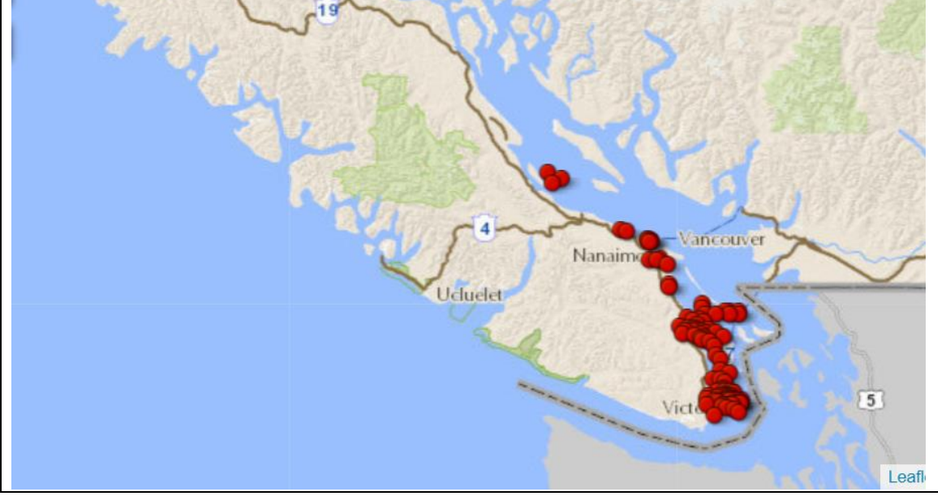
Ecological Communities within the Coastal Douglas-fir Conservation Partnership Boundary

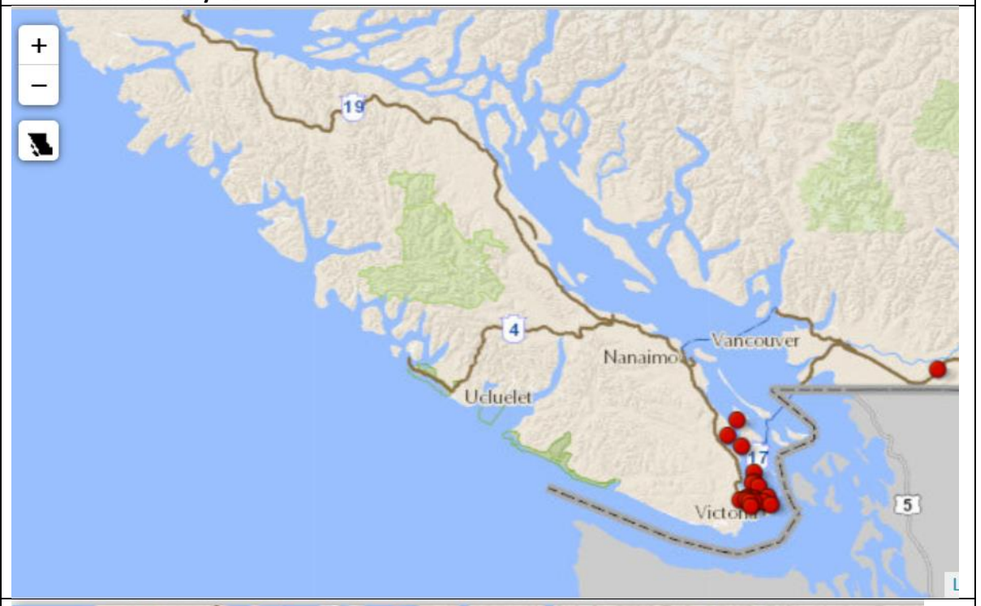
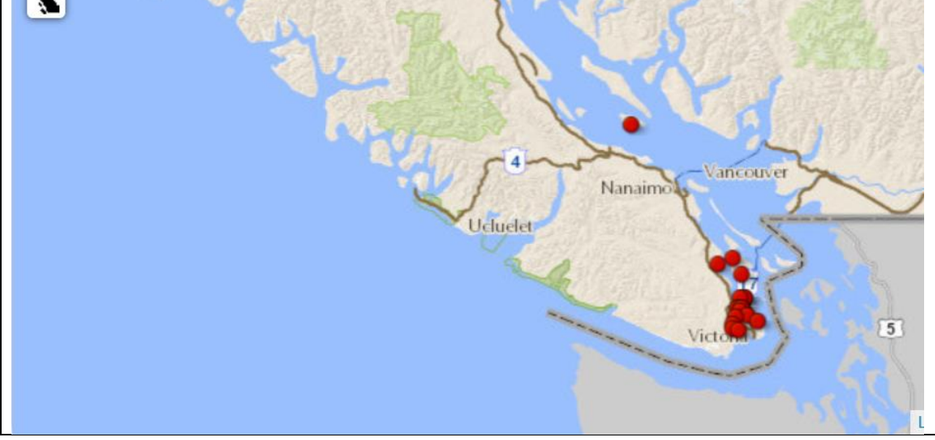
	English Name	Community Description	Occurrences held by CDC
Forest Ecological Communities	Douglas-fir / dull Oregon-grape	Douglas-fir / dull Oregon-grape is a coniferous mesic (moderate to well balanced supply of water) forest ecosystem found on southeastern Vancouver Island, the Gulf Islands and the Sunshine Coast. Historically, it formed the matrix forest (largest contiguous areas of forest) within its range and dominated the landscape. These forests usually have well-developed vertical structure, due to the presence of tall shrubs and trees of different age and height classes. However, human disturbance has caused habitat fragmentation and as a consequence the forest no longer functions as a matrix ecosystem. Mature and old forests are now uncommon. When present mature and old forests contain moderately open to closed stands typically dominated by Douglas-fir, with one or both of grand fir and western redcedar in the tree canopy. Bigleaf maple and red alder may also be present. In drier areas arbutus and shore pine may occur and grand fir and western redceder would be absent. Western flowering dogwood may occur in the tree canopy on some sites. The moderate to dense shrub layer would be dominated by dull Oregon-grape, salal and ocean spray. In drier areas baldhip rose, western trumpet honeysuckle, red huckleberry, common snowberry and trailing snowberry may replace dull Oregon-grape and salal. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	
	Grand fir / dull Oregon-grape	Grand fir / dull Oregon-grape ecological community are found on well drained soil that is rich in nutrients. Mature and old forests have a fairly closed coniferous canopy comprised of Douglas-fir, grand-fir and western redcedar. Western flowering dogwood, western yew, cascara and bigleaf maple may be present but with low cover. There is a dense shrub layer of salal, dull Oregon-grape, baldhip rose, oceanspray, red huckleberry and saskatoon. The herb layer is sparse with low cover of bearded fescue, sword fern, western trillium, three-leaved foamflower, sweet-scented bedstraw, vanilla leaf and twinflower. Dense moss layer of Oregon beaked moss and palm tree moss. A key indicator species of this community is Hylocomium splendens (step moss).	

	English Name	Community Description	Occurrences held by CDC
Forest Ecological Communities	Grand fir / three-leaved foamflower	Grand fir / three-leaved foamflower ecological community occurs on the lower slopes on east to west aspects over morainal (glacial till) and inactive fluvial (deposited by rivers) material. Mature and old forests are dominated by grand fir, western redcedar with a moderate cover to Douglas-fir and / or western hemlock. Western flowering dogwood, bigleaf maple and western yew are also present. The shrub layer is sparse and can include dull Oregon-grape and salal. The herb layer is dominated by sword fern, three-leaved foamflower, vanilla leaf and western trillium. The moss layer is dominated by Oregon beaked moss and palm tree moss.	
	Western Redcedar / Osoberry	Western redcedar / Osoberry ecological community is typically located at the bottom of southwest to northwest slopes or on flat ground. The community has a closed forest canopy comprised of western redcedar, bigleaf maple, grand fir and red alder. The shrub layer is dominated by Indian-plum with training blackberry and common snowberry forming low cover. The herb layer is dominated by sword fern, three-leaved foamflower, western trillium. Diagnostic species include wild gooseberry and fringecup. The moss layer includes Kindbergia praelonga and Plagiomnim insigna.	

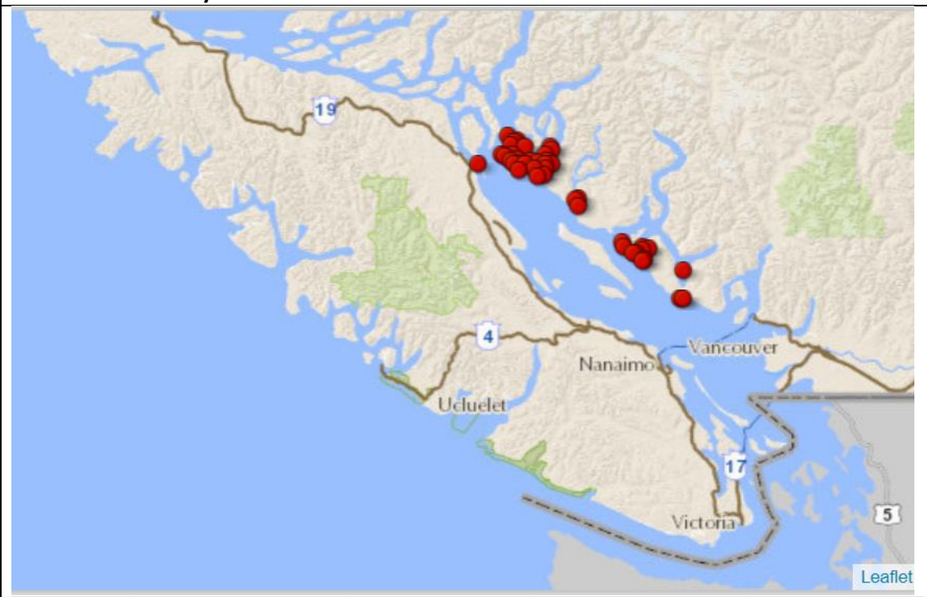
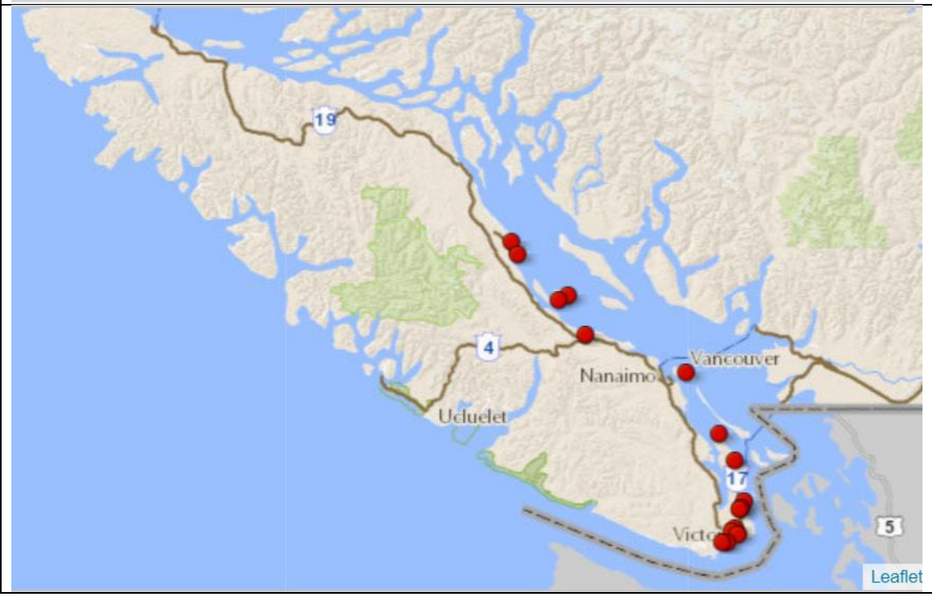
	English Name	Community Description	Occurrences held by CDC
Forest Ecological Communities	Western redcedar / vanilla-leaf	Western redcedar / vanilla-leaf ecological community occurs on flat ground and in depressions with a fluctuating water table. The soils are usually very moist in the winter and slightly dry in the summer. It is a mixed forest with a canopy dominated by western redcedar, bigleaf maple, grand fir and sometimes Douglas-fir. Western flowering dogwood and cascara may be present in the tall shrub layer. The shrub layer usually includes a consistent low cover of dull Oregon-grape, salal and baldhip rose. The herb layer is dominated by sword fern, three-leaved foamflower and vanilla leaf. The moss layer is well developed and includes Oregon beaked moss, palm tree moss, Kindbergia praelonga and Mnium spp.	
	Western redcedar / salmonberry	Western redcedar / salmonberry ecological community occurs on level ground that floods in winter due to poor drainage. The community has an open canopy of western redcedar and red alder. The shrub layer is dominated by salmonberry, trailing blackberry and red huckleberry. The diverse herb layer is dominated by sword fern and vanilla leaf.	

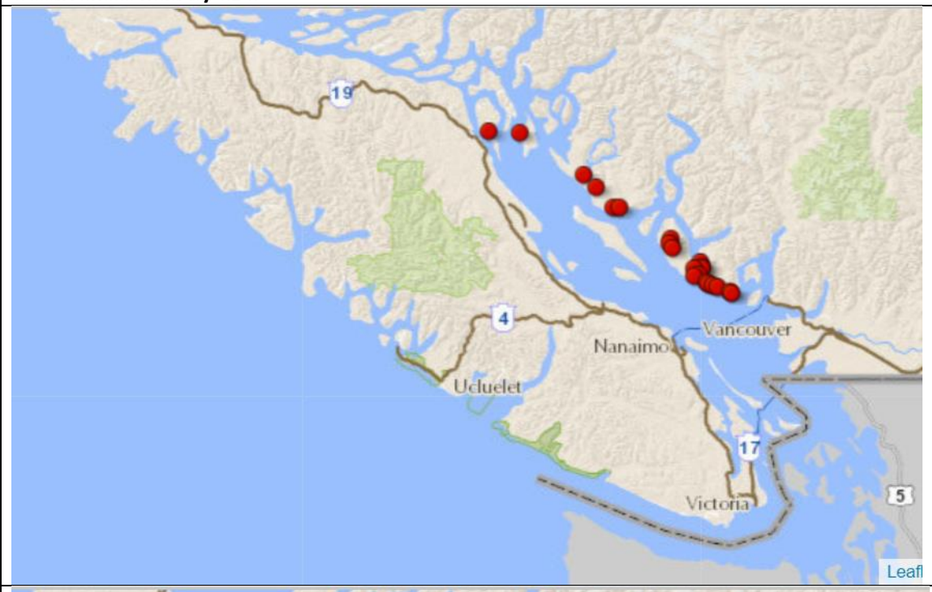
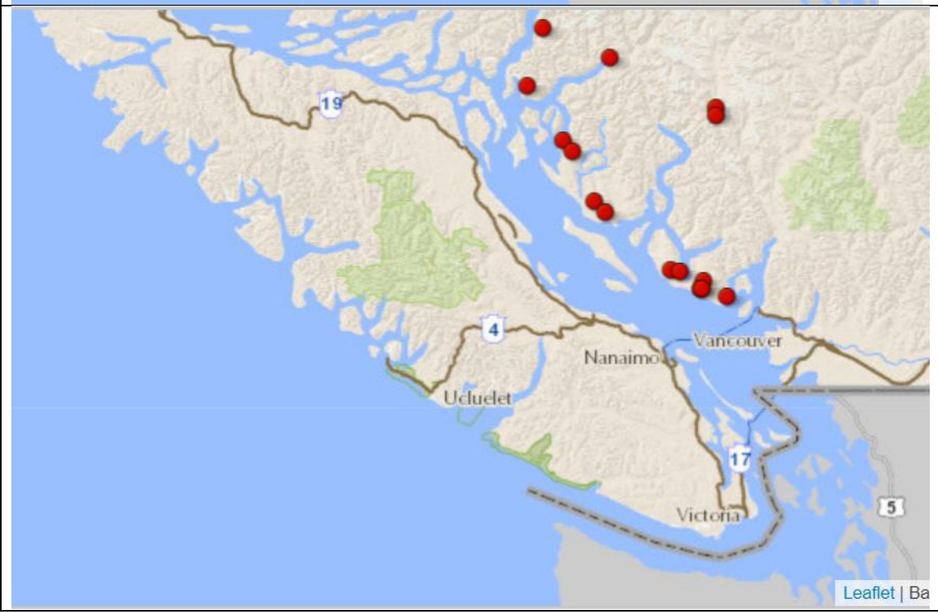
	English Name	Community Description	Occurrences held by CDC
Forest Ecological Communities	Western redcedar / common snowberry	Need to obtain a description of this community as not provided on CDC.	
	Douglas-fir - western hemlock / salal Dry Maritime	Douglas-fir - western hemlock / salal Dry Maritime ecological community occurs on dry, south facing ridges, crests and upper slope. It is a large patch forest community with a wide range that extends across eastern Vancouver Island, the Sunshine Coast and the lower Mainland around Vancouver, the North Shore and Chilliwack. Timber harvest has significantly reduced the extent of this community and has left it fragmented. The majority of this habitat type is located on private land. 4% is location in Parks and Protected areas.	Mapped occurrences do not reflect the description of the extent and range of this habitat. 

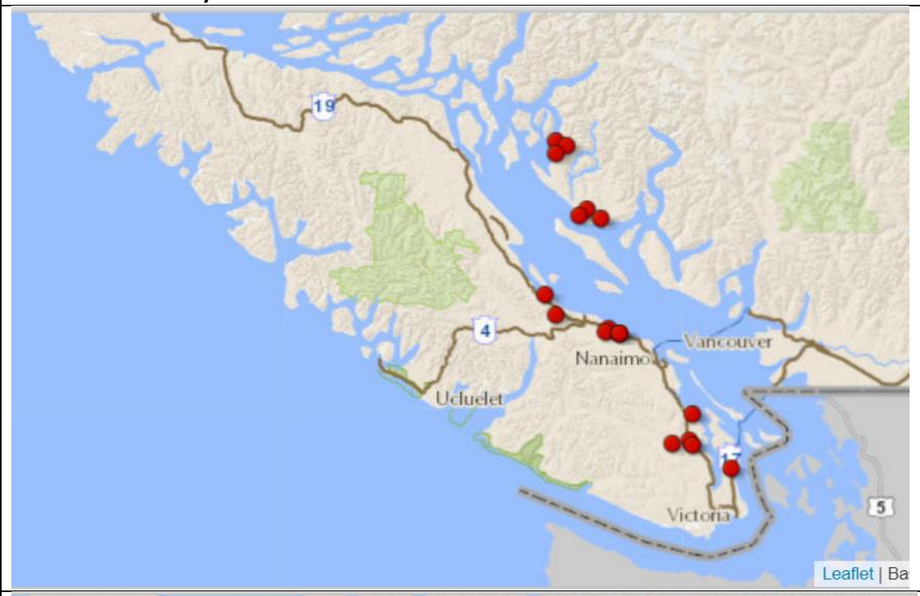
	English Name	Community Description	Occurrences held by CDC
Garry Oak Ecological Communities	Douglas-fir / Alaska oniongrass	Douglas-fir / Alaska onion grass ecological community occurs on dry sites at low elevation (0-150m) with typically a southern aspect. It is a mixed coniferous and deciduous forest that occurs at the southeastern end of Vancouver Island and the southern Gulf Islands. it has a moderately open canopy of Douglas-fir with some Garry oak interspersed. Arbutus is occasionally present but other coniferous trees species are absent. The shrub layer is sparse to absent and comprises ocean spray, baldhip rose, salal and saskatoon. The forest has a diverse herb layer often dominated by Alaska oniongrass and may include long-stoloned sedge, Pacific sanicle, yerba buena, blue wildrye, western fescue, big-leaved sandwort, broad-leaved shooting star and cleavers. The moss layer is characterised by Rhytidiadelphus triquetrus and includes a small amount of Oregon beaked moss.	
	Garry oak / California brome	The Ecological Communities; Garry oak / California brome; Garry Oak / oceanspray and Douglas-fir - arbutus are often found in a mosaic on hillsides and rocky knolls with dry, southern exposures. Garry oak / California brome is an open woodland community that grows in places where there are pockets of deeper loamy soil that have formed in bedrock crack and between large pieces of colluvium (loose unconsolidated sediments). It may historically have occurred on deep organic enriched soils where it was maintained by fire management. Garry oak is the most abundant tree species but can be over topped by single older (>100 years) Douglas-fir trees that survived previous fires. Arbutus and bigleaf maple may also be present. If undisturbed, snowberry is most frequently found in the shrub layer, but Scotch broom has been allowed to invade this community through lack of management, leading to the loss of at-risk species in the herb layer. The herb layer is highly variable as many of the native forb's flower from late winter to late spring before non-native herbs and grasses dominate the sites. Dominant native grasses, rushes and sedges include California brome, blue wildrye, many-flowered woodrush and long-stoloned sedge. Common forb species include small-flowered blue-eyed Mary, cleavers, Pacific sanicle, white fawn lily, yarrow, white triteleia, spring gold etc. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	

	English Name	Community Description	Occurrences held by CDC
Garry Oak Ecological Communities	Garry oak / oceanspray	The Ecological Communities; Garry oak / California brome; Garry Oak / oceanspray and Douglas-fir - arbutus are often found in a mosaic on hillsides and rocky knolls with dry, southern exposures. Garry oak / oceanspray typically occurs in placed where thin layers of soil have formed over volcanic bedrock or blocky colluvium (loose unconsolidated sediments). Garry oak is the most abundant tree and often forms dense stands. Single large Douglas-fir trees may overtop the Garry oak where it has survived past fires. Scattered arbutus, grand fir, western yew and cascara may be present. In relatively undisturbed sites ocean spray and snowberry dominate the shrub layer. Other shrubs that may be present includes saskatoon, tall Oregon-grape, salal, baldhip rose and hairy honeysuckle. The herb layer is highly variable as many of the native plants flower from late winter to late spring before the non-native grasses dominate. Species that can be present include great and common camas, white fawn lily, Pacific sanicle, broad-leaved shooting star, chocolate lily, satinflower etc. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	
	Douglas-fir - arbutus	The Ecological Communities; Garry oak / California brome; Garry Oak / oceanspray and Douglas-fir - arbutus are often found in a mosaic on hillsides and rocky knolls with dry, southern exposures. Douglas fir - arbutus tree layer is dominated (40-90%) by Douglas-fir and arbutus. Stands may include lodgepole pine, and Garry oak may occur in canopy gaps. The percentage cover of Garry oak increase when the Douglas-fir - arbutus community forms a forest mosaic with Garry oak / oceanspray and Garry oak / California brome ecological communities. The shrub layer is highly variable. When the layer is well developed it can include ocean spray, dull Oregon-grape, snowberry, tall Oregon-grape, bald-hip rose, saskatoon, trailing blackberry, hairy honeysuckle, salal and western trumpet honeysuckle. The herbs are generally low in cover and include a mix of grasses; western fescue, Alaska oniongrass, blue wildrye, California brome, Columbia brome, western fescue, dryland sedge etc. The common forbs include Pacific sanicle, big leaved sandwort, purple peavine, white fawn lily, starflower, woodland strawberry, purple sweet cicely etc. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	

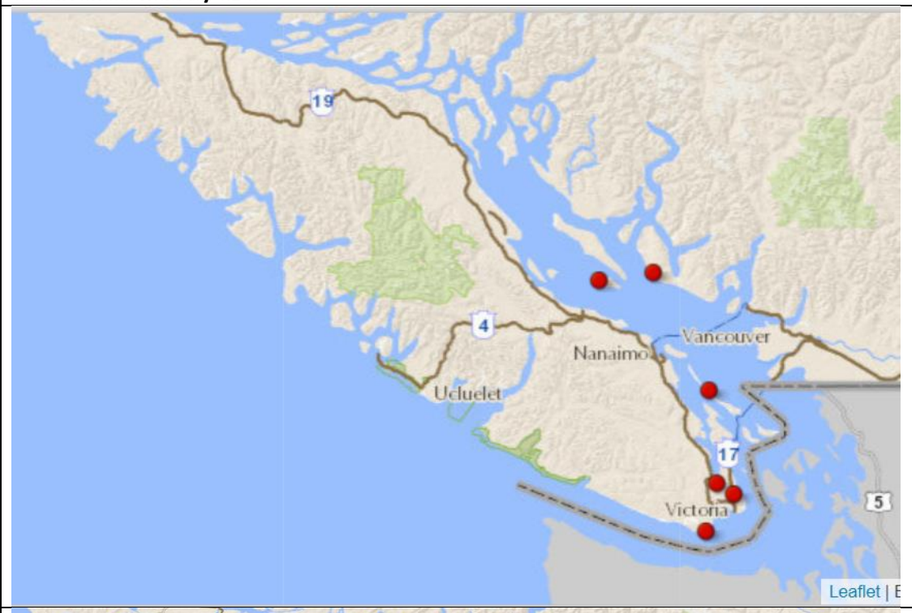
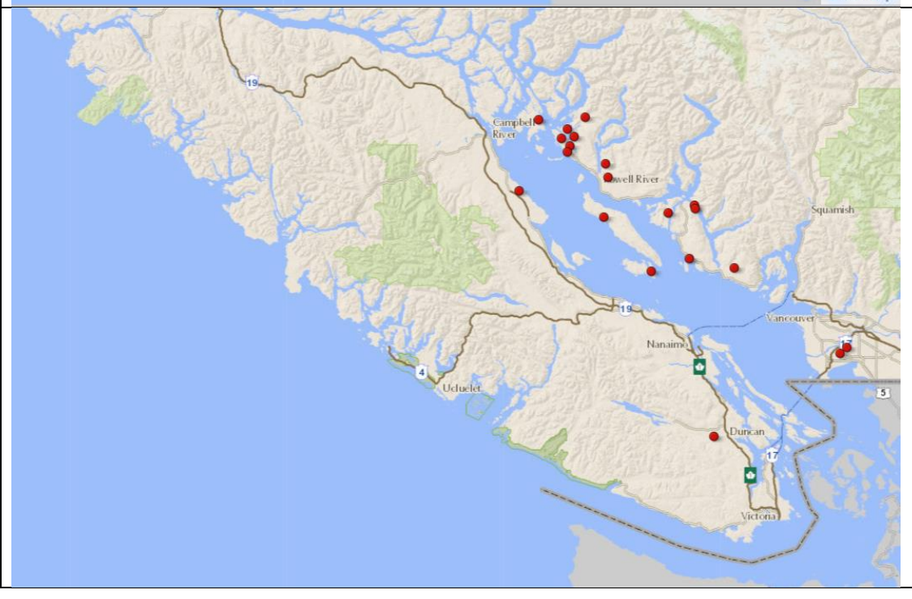
	English Name	Community Description	Occurrences held by CDC
Dry grassland and shrub/tree land Ecological Communities	Roemer's fescue - junegrass	Roemer's fescue - junegrass ecological community is a terrestrial herbaceous grassland where trees and shrubs are absent, except where it intergrades with the forest edge. This community is primarily found on south and east facing non forested slopes near the top of very steep hills, bluffs and ridge crests. Typically forms in areas of very shallow soils. key indicator species of this community are Roemer's fescue and junegrass. Important characteristic species include blue wildrye, Lemmon's needlegrass, short-stemmed sedge, meadow death-camas and common camas. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	
	Arbutus / hairy manzanita	Arbutus / hairy manzanita ecological community is characterised by dense shrub thickets of hairy manzanita with scattered arbutus and lodge pole pine. The community is usually on gentle upper slopes and ridge crests of bedrock hills on shallow, medium textured bedrock.	

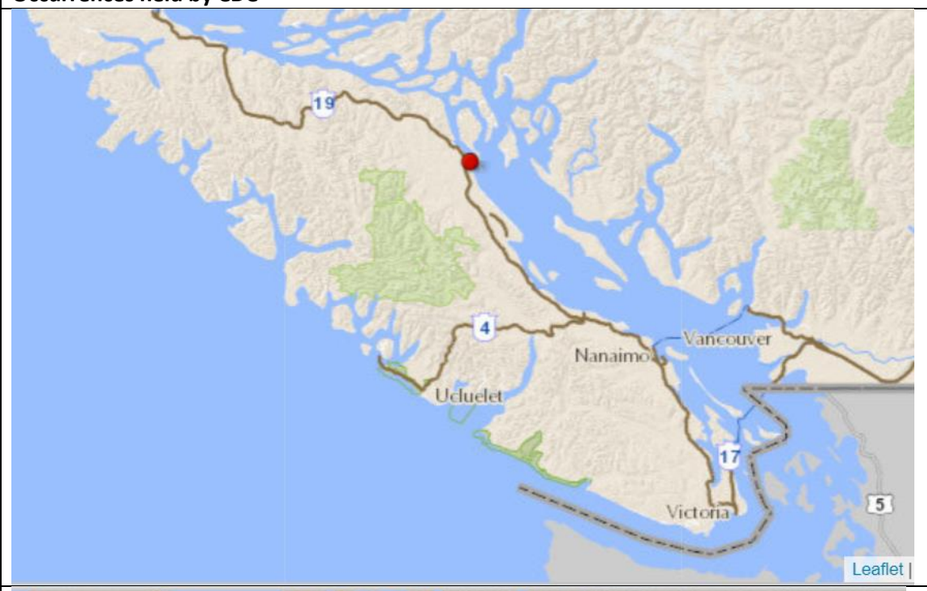
	English Name	Community Description	Occurrences held by CDC
Dry grassland and shrub/tree land Ecological Communities	Shore pine / common juniper - hairy manzanita	Shore pine / common juniper - hairy manzanita ecological community occurs in exposed areas on free draining then soils over granite bedrock. This community comprises shore pine, manzanita, common juniper and sometimes arbutus. There is limited herbaceous cover include poverty oatgrass, Wallace's selaginella, Alaska saxifrage. The bryophyte layer is dominated by Cladina spp. and Cladonia spp. lichens and broom moss, juniper haircap moss and roadside rock moss.	
Wet Ecological Communities	Trembling aspen / Pacific crab apple / slough sedge	Trembling aspen / Pacific crab apple / slough sedge ecological community is a rare and forms small patches. This community is often located in close proximity to roads and due to its close proximity to highly urbanised land covers this community is often fragmented, with altered drainage patterns and impacted by invasive species.	

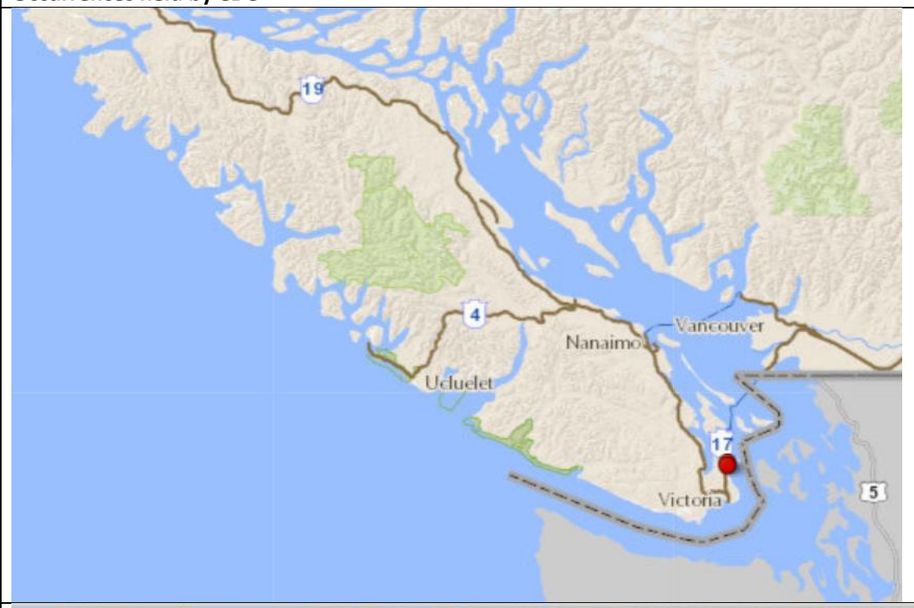
	English Name	Community Description	Occurrences held by CDC
Wet Ecological Communities	Sitka spruce / salmonberry Very Dry Maritime	Sitka spruce / salmonberry Very Dry Maritime ecological community occurs on high bench floodplain sites that experience flooding at greater than five-year intervals. The canopy is dominated by red alder with lesser amounts of western redcedar and bigleaf maple. Sitka spruce would be the climax species. The shrub layer is dominated by salmonberry with occasional devil's club, stink current, trailing blackberry. The herb layer is very diverse with low cover of many species. The most common herbs include vanilla leaf, sword fern, enchanters knightshade, piggyback plant, foamflower, Cooley's hedge-nettle, sweet bedstraw and lady fern. Mosses are dominated by Plagiomnium insigne with a lesser component of palm tree moss.	
	Sitka spruce / salmonberry Dry	Sitka spruce / salmonberry Dry ecological community is located on high bench floodplain sites that experience flooding at greater than five-year internals. The forest canopy includes Sitka spruce, bigleaf maple, black cottonwood, western redcedar and red alder. The shrub layer is dominated by vine maple, devil's club, salmonberry and common snowberry. Common herbs include false lily-of-the-valley, Hooker's fairybells, lady fern, mountain sweet-cicely, spiney wood fern. the sparse moss layer is likely to include Plagionmnium insigne.	

	English Name	Community Description	Occurrences held by CDC
Wet Ecological Communities	Black cottonwood - red alder / salmonberry	Black cottonwood - red alder / salmonberry ecological community is found on floodplains of rivers on the British Columbia coast. This community will be flooded frequently for moderate periods and will have a high-water table for prolonged periods. The forest canopy includes black cottonwood, red alder, wester redcedar and Sitka spruce. It has a dense shrub layer of salmonberry and may have a significant amount of red-osier dogwood, black twinberry, red elderberry, devil's club, stink currant and young Sitka spruce and red alder. The herb layer is sparse but may include a variety of species including false lily-of-the-valley, common horsetail, Pacific water-parsley, beaked sedge and small bulrush.	
	Red alder / slough sedge [black cottonwood]	red alder / slough sedge [black cottonwood] ecological community occurs in low-lying sites that experience winter flooding and have a strongly fluctuating water table such as poorly draining valley bottoms and depressions. The closed deciduous forest canopy includes red alder, black cottonwood and western redcedar. Other conifers are usually suppressed due to the frequency of flooding. The shrub layer is dominated by common snowberry and red-osier dogwood. The shrub layer can also include Pacific crab apple, black twinberry and trailing blackberry. The herb layer is dominated by slough sedge, sword fern and false lily-of-the-valley. The moss layer is poorly developed.	

	English Name	Community Description	Occurrences held by CDC
Wet Ecological Communities	Red alder / salmonberry / common horsetail	Red alder / salmonberry / common horsetail ecological community experiences prolonged annual flooding. The soils are fine loam and sands and nutrient rich.	
	Red alder / skunk cabbage	Red alder / skunk cabbage ecological communities are restricted to low-lying depressions associated with streams, rivers or edges of fens and bogs. The soils are deep and silty.	

	English Name	Community Description	Occurrences held by CDC
Wet Ecological Communities	Lodgepole pine / peat-mosses CDFmm	Lodgepole pine / peat-mosses CDFmm ecological community is a nutrient poor, treed bog wetland that is saturated for most of the year. The community is typically found in depressions where peat accumulation has raised the surface peat above the water table. The tree cover may be sparse (as little as 10% cover). The conditions typically restrict the height of the trees (<10m). The main tree species is lodgepole pine with smaller amounts of western hemlock and western redcedar. The shrub layer can have high cover being dominated by Labrador team. Salal can be sparse to abundant. Bog laurel is often present but not abundant. The herb layer is typically sparse but can include bracken fern, Canada dogwood and bog cranberry. The moss layer can be low to high. Dominant species can include Hylocomnium splendens and Pleurozium shreberi, which also so occurs in upland forests. Sphagnum spp. can be present but not dominant.	
	Labrador-tea / western bog-laurel / peat-mosses	Labrador-tea / western bog-laurel / peat-mosses ecological community is a nutrient poor bog wetland that are typically small in size and located in depressions with high, stagnant water table or adjacent to peatland lakes. The high-water table in this community prevents the establishment of trees but shrubs can grow. It trees are present they may include lodgepole pine, western redcedar or western hemlock and can be restricted in height to <2m. Labrador tea is typically very abundant in the shrub layer while sweet gale can be absent to abundant. The herb layer is sparse with western bog-laurel and bog cranberry being the most common species. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	

	English Name	Community Description	Occurrences held by CDC
Sand Dune / Esturine Ecological Communities	Tufted hairgrass - Henderson's checker-mallow	Tufted hairgrass - Henderson's checker-mallow ecological community is estuarine with extremely limited distribution. It is found in the backshore areas above the high tide. The community is dominated by highly productive lush growth of grasses and forbs. Key indicator species include tufted hairgrass, Henderson's checker-mallow, arctic rush, Lingbye's sedge, toad rush, meadow barley, elegant rein orchid, American bulrush, low club rush, hard stemmed clubrush etc. The BC Species and Ecosystem Explorer Vegetation Summary provides a more detailed list of the plant species present in this community.	
	Northern wormwood - red fescue / grey rock-moss	Northern wormwood - red fescue / grey rock-moss ecological community is naturally rare as it is restricted to sparsely vegetated coastal sand dunes and spits with well drained nutrient poor soils in the Georgia Basin. Large sand features are rare in coastal BC because of uncommon physiographic requirements. The community is a successional stage of vegetation development on coastal dunes. Physical disturbance cause by sand movement ensures that the successional communities on a spit / dune continue to exist.	

	English Name	Community Description	Occurrences held by CDC
Sand Dune / Esturine Ecological Communities	Black knotweed - yellow sand-verbena	Black knotweed - yellow sand-verbena is a naturally rare ecosystem. It is restricted to coastal sand dunes of the southern Strait of Georgia. The dominant vegetation includes black knotweed, yellow sand-verbena and entire-leaved gumweed. Beach bindweed, dune wildrye and silver burweed are also common. Other species associated with this habitat include grey rock-moss, large headed sedge, Indian celery, thrift, Californian broomrape and American glehnia. This habitat is very vulnerable to disturbance by recreational use and stabilisation of the dunes.	
	Large-headed sedge Herbaceous Vegetation	Large-headed sedge Herbaceous Vegetation ecological community is naturally rare because it is restricted to sand dunes in the Strait of Georgia, the west coast of Vancouver Island and Haida Gwaii. The vegetation is sparse but regular, low growing large-headed sedge. The diversity of species is related to the successional pattern. Recently established communities are dominated by large-headed sedge, but older communities include dune wildrye, sea-rocket spp., common sorrel, red fescue, hairy cats' ear and Puget Sound gumweed.	

	English Name	Community Description	Occurrences held by CDC
Sand Dune / Coastal Ecological Communities	Dune wildrye - beach pea	Dune wildrye - beach pea ecological community is restricted to coastal sand dunes where the natural dynamics of ocean currents contribute to the deposition and accretion of sandy materials. Subsequently it is a naturally rare habitat.