State of Regional Parks: An Ecological Perspective

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ABSTRACT

Population and development pressures in the Capital Regional District (southern Vancouver Island, British Columbia, Canada) are threatening sensitive ecosystems. A strategy of protecting and maintaining existing regional parks, and acquiring land is recommended to protect these ecosystems.

Key words: Capital Regional District, Garry oak, parks, protection, urban development, Victoria.

The Capital Regional District (CRD) is located on southern Vancouver Island, British Columbia, and includes the city of Victoria. The CRD is experiencing rapid population growth along with its associated land development. The rate of population growth is expected to more than double by the year 2020. Some of the main attractions for people to our region are that it is a nice place to live, with a moderate, "Mediterranean" climate (part of that rain forest mystique), and that we are surrounded by the stunning Olympic Mountain range.

The mild climate, milder than anywhere else in Canada, has also created an environment suitable to ecosystems that have most of their range further south in the U.S. Pacific Northwest. This northern extent of their range, plus encroaching development pressures, makes many species and ecosystems rare (even globally rare) and critically imperilled in British Columbia and Canada. The Garry oak ecosystems of this region are prime examples of habitats at the northern extent of their range that have been largely lost to development pressures.

Indeed many of these ecosystems in which species of conservation concern occur are fragments or remnants of their previous abundance, and now are either protected in parks or are on private lands that are slated for development. This case is especially common in the southeastern and southern part of the region. Ecosystems converted to residential developments and urban sprawl are irreversibly changed. In contrast, ecosystems in the western part of the region are largely in managed tree farms, where the original large tracts of old-growth forests remain only as fragments. Areas that have been logged have the potential to re-establish forests; however, active forest management precludes old growth for a long time.

CRD Parks is the CRD government's parks department. The parks managed by CRD Parks make up about one-half of the total area with protected status in the region (provincial parks make up about one-quarter) or about 8,200 ha. As with most park agencies, the biggest challenge is to ensure that the ecosystem functions, remnant natural and semi-natural areas, marine shorelines, and the plant and animal populations they support remain intact and viable over the long term. Thus the role of CRD Parks in protecting remnant areas containing threatened organisms and ecosystems has become critical in our region.

In July 1998, CRD Parks produced a report called *State of Regional Parks: An Ecological Perspective* to research and report on: (1) the current health of ecosystems within regional parks; (2) the key threats to those ecosystems, and (3) the remnant natural areas that are currently outside parks protection (Fleming 1998).

This report was produced as a background document for the *Draft Master Plan* (Capital Regional District Parks 1998) which is currently available for public and internal review. Two strategic direction statements in the master plan recognize the importance of natural areas protection: (1) protect and maintain the natural environment in existing regional parks; and (2) acquire additional lands for regional parks.

Some of the most threatened ecosystems or habitats in the region can still be found within CRD Parks, such as Garry oak meadows, coastal bluffs, wetlands, and riparian and old-growth forests. The protection of the natural areas within parks is challenged by the development of facilities, trails, and parking lots to serve the increasing numbers of visitors. Wear and tear on trails, dogs running unchecked, and garbage are all potential conflicts with natural area protection. Limiting some types of recreation in sensitive areas, public education programs, environmental impact

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assessments, biological inventories, and thoughtful planning are all proactive ways of minimizing damages and threats to ecosystems in regional parks.

One of the key threats to parks is not knowing what species and ecosystems of conservation concern are in the park. A classic scenario, for which all park agencies have examples, is a trail being constructed next to or even over a rare plant or population of rare plants. Environmental impact assessments for all parks development projects are needed to avoid such scenarios. Also, inventory information needs to be communicated to the operational staff of parks to increase their level of knowledge about the rare and threatened plants that live precarious existences near trails and facilities.

In the summer of 1998, CRD Parks staff discovered a previously unknown location of a population of deltoid balsamroot (*Balsamorhiza deltoidea*). This endangered plant was found because an ecological inventory was being conducted in the park. This population is currently threatened by a high cover of the invasive plant Scotch broom (*Cytisus scoparius*), which is competing for light, moisture, and nutrients. Because we now know that this sensitive plant grows in our park, we will make every effort to protect it.

All of our regional parks have been invaded by nonnative or exotic plants, largely garden escapes. The mild climate of our region has allowed some shrubs (e.g., Scotch broom, daphne [*Daphne laureola*], holly [*Ilex aquifolium*]) to "naturalize" in indigenous ecosystems. Scotch broom has become successful in open areas like Garry oak meadows causing ecosystem changes by increasing fixed nitrogen in the soil which encourages a preponderance of agronomic grasses, as well as unfavourable conditions for the native wildflowers. Recent CRD Parks guidelines for the management of invasive plant species have recognized the vast challenge of eradicating plants like Scotch broom. Therefore, our strategic approach to their removal and control includes 2 broad guidelines: (1) prioritize the exotic species targeted for removal; and (2) prioritize those parks and ecosystems that have the highest conservation concern, and remove priority exotic species.

It is becoming increasingly popular for residential developments to be built beside parks. In fact, many developers and local governments have advertised proximity to natural areas as a selling feature for housing. All sorts of threats to the species and ecosystems within parks result. Noticeably, parts of ecosystems are lost because ecosystem boundaries do not stop at park boundaries. Park boundaries are not based in nature—they are artificial. The ecosystems and watersheds are rarely protected in whole. The creeks and rivers are only partially protected by parks, and the waters that flow in them are affected by what is happening in developed areas upstream. Other key threats to the natural areas within parks that result from adjacent land development are: (1) increased numbers of personal access trails from private properties which result in fragmented ecosystems; (2) expansion of backyards into the park and dumping of garden waste, which provides new invasion points for nonnative plants (and animals); and (3) removal of natural resources, plants, and animals from the park, such as gathering mosses for hanging baskets, picking salal for flower arrangements, and picking mushrooms and wildflowers.

CRD Parks works closely with municipal governments and developers to reach compromises that add parkland as buffers around regional park boundaries. This kind of arrangement can help to mitigate the conflicts between ecological protection and development. To protect CRD Parks interests on land beside an existing regional park, several options exist such as easements, special permits, private land stewardship, conservation covenants, and community group efforts (Capital Regional District Parks 1998).

Opportunities still exist to acquire important remnant ecosystems in the CRD. The *State of Regional Parks* report (Fleming 1998) provides direction for park land acquisitions from an ecological perspective. First and foremost, ecosystems that extend beyond present park boundaries have been identified as targets for acquisition. Connecting natural areas is also an acquisition priority where private lands can be acquired, or protected by some other means, to strategically link one regional park (or protected area of another jurisdiction) to another park. Riparian corridors are prime examples of critical habitat in need of protection that can connect protected areas in parks.

Few opportunities remain to acquire remnants of Garry oak ecosystems. Much of what is now urban Victoria once was covered by open Garry oak savannahs and meadows. These deeper soil Garry oak ecosystems have been converted to manicured lawns surrounding the oak trees. The Garry oaks and wildflower meadows of thin soil rock outcroppings are also threatened as residential development pushes up onto the hillsides. Remnants will be targeted for protection, with the knowledge that it is increasingly urgent to protect the Garry oak ecosystems already within regional parks.

The most important recent acquisition by CRD Parks is the Sooke Hills Wilderness Regional Park Reserve; acquiring this tract of land has doubled our regional park land base. Sooke Hills is just northwest of the western extent of development associated with the Greater Victoria area. It had been held within Victoria's water supply lands, and as a regional park continues to be a buffer for the drinking water supply of the city. Although much of the Sooke Hills is second-growth forests, it also contains large tracts of older mature and old-growth forests. This wilderness area is important wildlife habitat where black bears, cougars, and wolves live. No other protected areas of this size, about 4,000 ha, occur on southern Vancouver Island, and some wildlife species require these large protected landscapes to

maintain viable populations.

Recent research in the Sooke Hills illustrates the need for large contiguous tracts of natural lands. Last summer a team of researchers from the University of Victoria found marbled murrelets flying around in old-growth forests in the Sooke Hills (Burger et al. 1999). The British Columbia Conservation Data Centre (CDC) has Red-listed these little birds, meaning that their breeding population has been extirpated, endangered, or threatened in this province, and they likely occur only as a diffuse, moving, nonbreeding population (B.C. Conservation Data Centre 1999). These shy sea birds are unique in that they nest on the large mossy branches of very old trees and fly great distances between forest and ocean habitats. With further research, the University of Victoria team hopes to find some nests in these "hot spots" where marbled murrelets are active in the Sooke Hills.

The gaps in protection of remnant natural areas were analyzed as part of the *State of Regional Parks* report (Fleming 1998). Using the Sensitive Ecosystems Inventory (SEI) compiled and mapped by the CDC (B.C. Conservation Data Centre 1996), those ecosystems sensitive to human disturbances, such as those containing rare and threatened species of flora and fauna that are not in protection status, were flagged, described, and indicated on maps (Fleming 1998). Garry oak ecosystems, old-growth forest, wetlands, and riparian areas were identified as high priorities for protection in the region. Many of these unprotected areas also appear as areas of interest to CRD Parks (Capital Regional District Parks 1998).

CRD Parks feels that we still have the opportunity to influence the development pattern in the western part of the region by protecting the remaining best examples of ecosystems and landscapes.

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