

# VIEW FROM THE GROUND: THE DIRTY WORK OF RESTORATION ON PRIVATE PROPERTY

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## Abstract:

Many countries share the social and economic challenges of ecological restoration, as well as the difficulty in improving public participation and support. These challenges can be partially met by showing private property owners the benefits and enjoyment they can derive from being part of restoration and conservation. Involving private property owners is a vital and effective part of conservation strategies in populated areas. I was the owner of a small ecological business on the west coast of Canada that offered private property stewardship services complemented by the creation of low-impact recreational opportunities. Why open a business as opposed to an NGO? To increase public support and participation, and to encourage property owners to maintain the ecological integrity of their land, restorers, who are skilled in the physical aspects of landscaping and gardening and educated in the sciences of ecology and biology, need to become more visible and respected in society.

Coast Alive Recreational and Ecological Services successfully completed a large variety of ecological services contracts that were of great benefit to land owners. A popular ecological service is the control of invasive plants, mainly *Rubus discolor*, *Helix hedera*, and *Cytisus scoparium*, as controlling these plants benefits native plant and animal diversity. Another important service in this part of Canada is wildfire hazard reduction, where fuel wood from the forest floor and ladder fuels such as dead branches and trees are removed. This results in a safer property, as well as allowing greater light to reach the forest floor and increasing habitat complexity. A final important service, ecological gardening and landscaping, benefits the land owner by creating a beautiful, low maintenance, low water and low input garden while also attracting birds, bats and insects. My experience with Coast Alive indicated that many private property owners are very interested in conserving their surrounding biodiversity. In the end, encouraging the public to be part of restoration helps reinforce a change in consciousness that is vital to maintaining healthy ecosystems.

**Keywords:** Socio-economics of nature restoration; increasing public support and participation; connectivity; new techniques for management; Canadian case study; environmental policy

## Introduction

In most cases the physical act of restoring land is allotted to NGO's and the government, using minimal funds and the help of willing volunteers. These restoration activities are generally concentrated on public lands such as parks and protected areas. However, only a small percentage of the earth's surface is protected, (Schmitt 2003), while a great deal of ecologically-valuable lands such as valley bottoms and coastlines are in the hands of private property owners. Small, naturalized areas can be of great benefit to conservation of biodiversity, and any restoration efforts on a landscape scale need to take this fact into consideration (Fischer et al, 2007). To do so they need to establish the support of the people controlling these lands. This requires a multi-faceted approach that touches on the socio-economics of nature restoration, increasing public support and participation through education and environmental policy, and the establishment of a field of professionals that are able to successfully complete and maintain restoration projects.

As well as being directed towards the improvement of the health of ecosystems, restoration of this form needs to appeal to peoples' sense of enjoyment and recreation. While some property owners may gain satisfaction knowing that what they do is good for the environment, when paying for a service most people want some visible, personal benefits. In this sense, recreational services intermixed with ecological services are complimentary, and allow people to enjoy their private property while also adding to the overall health, diversity, and stability of the landscape.

Coast Alive Recreational and Ecological Services (Coast Alive or CARES) is a business designed to meet the need for restoration and ecologically sustainable recreation on private property. It was opened in 2005 on Salt Spring Island, 100 km from the city of Vancouver on the southwest coast of British Columbia, Canada. The island is home to several species of endangered plants and animals such as *Arctostaphylos columbiana* (Hairy Manzanita) and *Contia tenuis* (Sharp-Tailed Snake), as well as the rare and beautiful Garry Oaks ecosystem (<http://www.env.gov.bc.ca/atrisk/>). The residents in this area are known for their love of nature and level of environmental awareness, and since the vast majority of the land is private property, conservation and restoration strategies needed to enlist their help.

Although Coast Alive is a business, it shares many similar traits with environmental NGO's. It was always stressed to customers that any activities would be performed in as ecologically sensitive a manner as possible, using local sustainable products, avoiding chemicals, and utilizing human effort over machines when possible. In a sense the concept of stewardship needs to be as focused on the process of restoration as on the product. The goal of Coast Alive is to link with other businesses to form a co-operative with an NGO affiliate and strong community links.

The business model is an important part of creating a respected trade of professionals in the same general field as gardeners or landscapers. Ecological services are best performed by people with a background in both the sciences of ecology and biology and the trades of landscaping and gardening, and the product they offer private property owners needs to be both ecologically productive and something that is attractive, desirable and affordable. The following paragraphs give details of some ecological services contracts completed by Coast Alive in 1996 and 1997.

### **Ecological Services – Case Studies**

The most common major service that seems to be desired by property owners is preventing invasive plants from becoming established on their land. In many cases, entire sections of a property are highly overgrown, resulting in suppression of native plants, reduction in habitat quality, and lower biodiversity ([www.invasiveplantcouncilbc.ca](http://www.invasiveplantcouncilbc.ca)). The major problem plants Coast Alive has had to deal with are *Rubus discolor* (Himalayan Blackberry), *Hedera helix* (English Ivy), *Ilex aquifolium* (English Holly) and *Cytisus scoparium* (Scotch Broom), and controlling them can be a serious challenge. These plants are quite astonishing in their ability to stay dominant, including having extensive rootstocks, few predators, and producing copious seeds that are viable for many years.

One project was to clear a one-hectare field behind a small hotel, left unattended for 15 years, of overgrown broom and blackberry. The plan was to convert the field to a small organic vineyard, vegetable garden, and naturalized forest. After several months of labour by two men, the removal was only partially completed, showing the tedious and challenging nature of the work, and in the end the property owner decided to first plow the land and then raise goats to control re-growth. The soil was highly degraded, lacking in humus and compacted, and to properly control these plants and rejuvenate the land will take several years of maintenance. In addition to the restoration work, we installed an on-site native plant nursery and compost, and created plans for an interpretive trail network. The results of the work were highly visible and appreciated by the community, though the use of heavy machinery was unfortunate as it only added to the problem of soil compaction.

A second important ecological service that Coast Alive offers is wildfire hazard reduction (wildfire simulation). There is a very real threat of wildfire in many British Columbia communities, the worst year being 2003 when over 25,000 ha of forests burned and thousands were evacuated from southern BC communities (The Vancouver Sun, July 24, 2008). Forest fires have been suppressed for many years leading to a build-up of dead wood. Reducing the hazard essentially entails disposing of the fuel wood on the forest floor, thinning the forest of dead or dying trees and saplings, and removing ladder fuels such as lower dead branches. The tools used were simple, comprising of a chainsaw, a pruning saw, hand tools and a mattock. Depending upon the level of decadence, between 400 m<sup>2</sup> and 800 m<sup>2</sup> can be cleared by a single person in a day.

There are several benefits to the ecosystem when this work is completed, a fact known by the forestry sector which now attempts to mimic natural disturbance patterns to maintain biodiversity (Bunnell 2002). The before and after effects of one simple contract can be quite impressive, as more light is allowed onto the forest floor to stimulate growth of the lower canopy layers, and the complexity of the forest increases as habitat such as snags, woodpiles and nurse logs are easily established.

A third service offered by Coast Alive is ecological gardening, an area of work that has many facets including landscaping with native plants and creating gardens that produce organic products or attract birds,

bats and bugs. Although attracting birds to one's property is greatly enjoyed, growing a garden that is attractive to a high diversity of insects can be very important. For example, in recent years there has been a reported collapse of world bee populations, which are a vital to food production (Benjamin 2008). Creating habitat for native bee species and other pollinators such as butterflies and ants is an ecological process that is in danger and needs to be seriously addressed.

Another benefit of ecological gardening is that, when a native area is established around the borders of a property, and neighbouring properties do the same thing, a continuity is established over the landscape that is beneficial to many plant and animal species. Traditional landscaping with a large lawn and a highly manicured border often uses harsh chemicals, and invasive plants and is much less desirable to species than a space with lush plants and a native plant border ([www.evergreen.ca](http://www.evergreen.ca)).

One project completed by Coast Alive was creating a lush organic garden, complete with heritage plants, a compost and a diverse border, in the heart of the city of Vancouver. As well as providing delicious healthy vegetables, this garden needed no additional inputs such as fertilizers or pesticides, and it created a more complex habitat for other species.

### **Discussion and Conclusions**

Restoration work on private property is a fascinating and important part of restoration and conservation efforts across a landscape. While restoration of private property to native landscapes may seem to be of small importance when viewed on an individual basis, given the large percentage of ecologically-valuable land in the hands of humans, and the lack of strong laws or enforcement controlling what people may do with their land, creating a new vision of property stewardship is vital in our attempts to reduce biodiversity loss, and maintain effective ecological services such as water filtration, CO<sub>2</sub> sequestration, and pollination. As well, restoration activities on private property on the West Coast of Canada helps to reduce the risk of destructive wildfires and plays a strong role against the deleterious effects of invasive plants. Such restoration projects have both small-scale and large-scale effects if performed on a significant portion of privately owned land.

The socio-economic effects of such work are not to be undermined. A well-paid field of restoration workers, similar to landscapers and gardeners, would do much to establish the credibility and importance of restoration. A place in society should be developed for such experts, leading to the potential for a change in the way we as a society view what it means to be a property owner. This field of work would draw on people with a diverse background, as their ability to do hard physical work in all forms of weather needs to be complemented by a scientific understanding of the interactions between plants, animals, people and soil.

In essence, ecological services for private property owners is a field that draws upon the ecological research done by many ecologists and biologists and applies it to land in a form where the results are something that can be seen and enjoyed, and businesses such as Coast Alive are most effective if they establish close ties with the community, local NGO's and researchers. As well, the traditional business model of maximizing profits should not be applied. Making this work affordable, re-investing in the community, and giving a portion of profits to conservation, are all vital elements of dealing with the many ecological and socio-economic problems now facing our planet. When people understand that they can receive a product that is not only highly enjoyable to them but also very helpful to the ecological integrity of their surroundings, they become part of the solution as opposed to exasperating the problem. Only when a significant percentage of landowners feel involved in restoration will conservation activities take on truly large-scale dimensions.

### **References**

- Ahearne S. (2008) Fire moves closer to Edgewood. The Vancouver Sun, July 28.
- Benjamin A & McCallum B. (2008). A World Without Bees. Guardian Books, London.
- Bunnell FL. (2002) Forest-Dwelling Vertebrate Faunas and Natural Fire Regimes in British Columbia: Patterns and Implications for Conservation. Conservation Biology 9, 636-644.

Fischer J, Lindenmayer DB & Montague-Drake R. (2007) The role of landscape texture in conservation biogeography: a case study on birds in south-eastern Australia. *Diversity and Distributions* 14, 38-46

Schmitt T. (2003) Influence of forest and grassland management on the diversity and conservation of butterflies and burnet moths (Lepidoptera, Papilionoidea, Hesperidae, Zygaenidae). *Animal Diversity and Conservation* 26.2, 51-67

<http://www.env.gov.bc.ca/atrisk/>

<http://www.evergreen.ca>

<http://www.invasiveplantcouncilbc.ca>