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**Setting goals and priorities for restoration strategies in the context of disparate historical interpretations:**

**An example from the Garry oak and Douglas fir mosaic of Mount Maxwell, Salt Spring Island, British Columbia**



**Abstract:** Restoration of landscapes and ecological relationships differs from other kinds of ecosystem management in that goals are based on recreating conditions thought to have existed at a point in history especially appreciated or privileged. Different reconstructions and interpretations of environmental history can generate divergent restoration goals and priorities. Aboriginal communities have had a long presence on Mount Maxwell with its mosaic of Garry oak, *Quercus garryana*, savannah and woodland and Douglas fir, *Pseudotsuga menziesii*, forest. Adjacent Burgoyne Bay was the site of one of British Columbia's more traumatic 'Indian wars' in the mid-Nineteenth Century. Later in the nineteenth century, settlers brought sheep and invasive plants Europe. There was active aboriginal land use into the Twentieth Century. In the early part of the Twentieth Century, wildfire and aboriginal burning was suppressed. Without fire, the oak savannahs are becoming dominated by woodlands and Douglas fir forest. But other historical points, necessary for setting defensible and fundable restoration goals increasingly scrutinized by community groups, remain unresolved. On Mount Maxwell, restoration advocacy and activities began twenty-five years ago and have been increasingly related to biodiversity conservation and species at risk. A number of divergent interpretations of the history of the area are presented with corresponding restoration goals and priorities. This discussion is a dialogue between the first author, who completed the first management and restoration plan for Mount Maxwell in 1981, and a former student and new practitioner.

## Introduction

In recent years, historical assessments have become increasingly important as partial bases for ecosystem restoration goals and priorities. As goals have become more precise, so have historical interpretations and critical discussions around the range of possible interpretations of disparate sources of information. This presentation, for the Society for Ecological Restoration, explores the needs for and approaches to undertaking landscape history assessments as prerequisites to setting restoration goals and priorities. There are pressures for such assessments of the histories of particular sites and landscapes to be increasingly defensible, especially for obtaining community support and funding. But there is typically more than one interpretation of local environmental and social history. The differences in historical interpretations are not necessarily minor. Different interpretations might suggest different ecosystem types, successional phases and species for the same sites. And such divergent determinations of landscape histories and past ecosystem composition rarely exist without politically charged interpretations. Thus, landscape history assessments are bound to be highly politicized documents subject to critical scrutiny and ongoing revision.

The politics of making landscape histories as a basis for restoration goals can be an anathema to those who de-emphasize the role of human beings in certain ecosystems or who just want to re-establish biomass with some of an area's more common dominant plants. But as we move into more critical restoration politics, how much historical information, interpretation and discussion is enough? And what level of research and analysis should be necessary before proposals for 'hands-on' operations can be approved, funded and initiated?



figure 1. This is Mount Maxwell from the south with the drier, oak woodland ecosystems in this view just behind steep slope on the left.

This discussion centres on an exploration of the links between historical knowledge of and prospective restoration options for the south-western face of Mount Maxwell of Salt Spring Island (figures 1 & 2). The south-western face of Mount Maxwell is a conservation area of national and global importance. Within both Canada and the northern margins of this ecosystem, Mount Maxwell supports one of the largest and least disturbed of the remaining landscapes dominated by Garry oak, *Quercus garryana*, savannah and woodland combined with dry coastal Douglas fir, *Pseudotsuga menziesii*, forest. In contrast to much of the other areas with protected examples of northern Garry oak ecosystems, substantial parts of this area are in late successional phases with considerable standing and fallen dead biomass supporting detritus food webs.

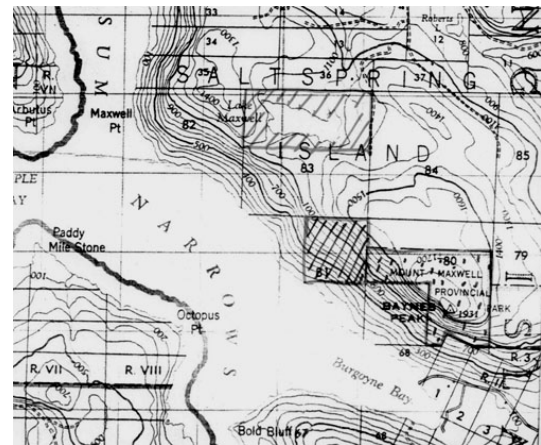


figure 2. This is a topographic map in feet from the 1960s. The south-west face of Mount Maxwell stretches from the upper left to the lower right of the map with the ecological reserve indicated in cross-hatch and Mount Maxwell Ecological Reserve with dots. Burgoyne Bay is in the lower right.

The south-western face of Mount Maxwell is also an aboriginal landscape that has been transformed by burning and digging for harvesting of food and other materials. Burgoyne Bay (*Hwaaqwum*, 'The Merganser Duck Place' in the Hwulmuhw language (Arnett 1999: 18) is at the base of Mount Maxwell and was the site of one of several 'Indian Wars' in the colonial period (Arnett 1999). These conflicts were the major basis employed by colonists to obstruct Westminster's policy of treaty negotiation. Aboriginal land use continued into the late nineteenth century or early twentieth centuries. Sheep along with agricultural and ornamental plants were introduced and fire was suppressed. Without fire, many of the Garry oak meadows,

of savannah and woodland, have been overgrown with Douglas fir forest. Species associated with the meadows of forbs, moss and grasses have tended to decline.

The first ecosystem management and restoration plan for Mount Maxwell Ecological Reserve, extending to adjacent areas, was completed by the first author in 1981 (Ingram 1981). One fence, to exclude sheep, was erected in 1983 and was breached, after a storm, in 1991. In 2001, a large portion of the unprotected parcels on the south-western face of Mount Maxwell were acquired for biological conservation, recreation and watershed management (figure 3). Today, the south-western face of the mountain is largely in protection designations comprising over 10,000 hectares of publicly and privately owned lands. Much of this area involves categories such as Provincial Park, Ecological Reserve, and protected watershed lands. The levels of biological and cultural richness and size of the area in protection warrant Mount Maxwell being developed as a national centre for research on oak woodlands, ancient coniferous forest, and Mediterranean sub-humid-type ecosystems with an international designation such as UNESCO Biosphere Reserve.

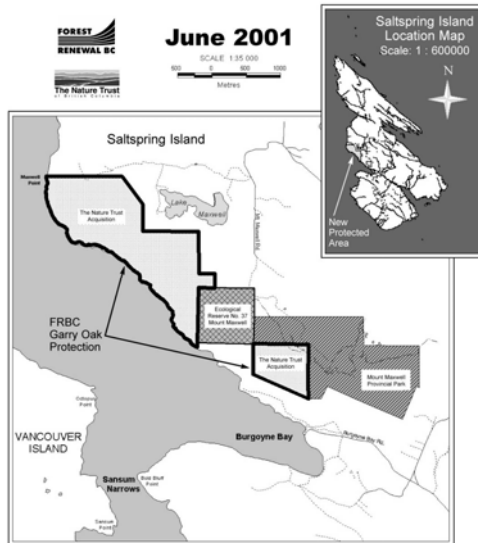


figure 3. Since 2001, the areas in white, around Lake Maxwell, and the shore areas around Burgoyne Bay have also been acquired for conservation status.

The prospects for development of a relatively systematic restoration programme are favourable. A community-based restoration plan, that would be well-researched, defensible and engages all of the major stakeholders, is most likely just a few years away. Within this positive

set of circumstances, how can historical knowledge be used to better formulate restoration goals, select and justify priorities for expensive activities while further mobilizing the support of local residents and communities along with all stakeholders and levels of government?

This discussion centres on the opportunities for using landscape history assessments for formulating restoration goals and priorities – and to subsequently justify and organize support for those proposals. The underlying question in this question is that of how can the field of environmental history be better used in initiatives largely driven by conservation biology and other kinds of environmental planning oriented to conservation of vulnerable and largely non-tangible resources related to habitat, heritage, recreation and landscape aesthetics.

While restoration advocacy and activities began well over twenty-five years ago, work has increasingly been organized around the imperatives for conserving vulnerable elements of local biodiversity especially species at risk. In Canada, concern for species at risk in restoration programmes has intensified in recent years in large part because of the growing numbers of organisms in urbanizing regions that are on the verge of disappearing. In 2003, the federal *Species At Risk Act* was enacted. This discussion is a dialogue between the first author, who completed the first management and restoration plan for Mount Maxwell in 1981, and a former student and new practitioner. Terry McIntosh, who began field work on Mount Maxwell in 2001, will be making a complementary presentation on management possibilities for the area.

We need historical landscape assessments as part of restoration programmes so that we can credibly propose and justify support for certain activities that related to recreating past conditions. This paper explores what sort of information, in what forms, comprise the minimum levels of research needed. In addition, we explore the role of unresolved historical legacies and how they can complicate the setting and revising of restoration goals and priorities.

We explore landscape history assessments through the following questions. In a world of expanding public support and funding for ecosystem restoration, as more ecological relationships are being comprised, how can

historical information be used most effectively? With so much information on past ecological and human – environment relationships available, how can the most relevant points be quickly and clearly identified and organized? How can divergent interpretations of social conflicts, such as around treaties and a so-called ‘Indian War’ that involve differing views of cultural impacts on ecosystems are acknowledged in landscape history assessments? What are the more important sources of information and what formats could best organize such data into more cogent and succinct, landscape history assessments? Finally, what is the minimum level of historical research that is necessary before restoration goals, priorities, proposed operations and budgets be approved and funded?

Restoration of landscapes and ecological relationships (MacMahon and Jordan 1994) differs from other kinds of ecosystem management (Grumbine 1994) in that goals are based on recreating conditions thought to have existed at a point in history especially appreciated or privileged. Different reconstructions and interpretations of environmental history can generate divergent restoration goals and priorities.

**Problem statement:  
Determining the historical  
research necessary for defensible  
restoration priorities**

In her influential 1998 essay, “Whose Nature, Whose Culture?” critical geographer Cindi Katz critiqued some of the typical restoration approaches that we have seen over the last two decades. She argued that restoration is built on the recognition of culture in landscapes, that “it can still be driven by deeply romantic notions of nature; and has a tendency of to privilege certain landscapes and land use practices” (Katz 1998: 57). Typically, this process of romanticizing and simplifying notion of landscapes and ecosystems is well underway by the time that goals are articulated and priorities set.

In ecosystems become rapidly degraded and obliterated, how much information on the past and human impacts in particular, is necessary? With the typical imperatives for maintaining ecological processes how much emphasis on the cultural aspects of ecosystems is scientifically and politically justified? In the case of Mount Maxwell, how much emphasis on recent human

history is appropriate when the aboriginal communities, the Cowichan Tribes, who formerly were heavily engaged in modification of today’s conservation and restoration sites, have expressed little recent interest in ecosystem management? What protocols for linking aboriginal environmental histories to restoration goals and priorities are necessary especially with legal options for First Nations intervention having been established under the 1997 Delgamuukw decision and with the expanding initiatives in contemporary aboriginal culture such as those associated with the Quw’utsun Cultural Centre located nearby in Duncan? More rhetorically, can ecosystem restoration of cultural landscapes be successful without direction from groups engaged in revivals and contemporary adaptations of respective cultures? And in a period of increased research and information availability, how do we anticipate new understandings of environmental history that might be substantially different to those on which the goals of earlier ecosystem restoration were based? And for the hands-on restorationist who feels an immediate need to heal the earth, how can unresolved histories be acknowledged and different cultures and views respected in badly needed, ‘eleventh hour’ interventions such as eradication of broom, *Cytisus scoparius*, and protection of dwindling populations of species at risk? Some kind of rapid landscape history assessment (for ecological restoration of cultural landscapes) is necessary.

Reconstructing information on ecological conditions can be daunting. But recreating the typically erratic human social impacts on particular sites and biological resources remains problematic. For setting restoration goals and priorities, there are usually questions of scale. Even when certain species, ecosystems, and human land use activities can be confirmed for a period in time, the extent of these things and their locations remain difficult to confirm.

A more profound question is that of to what exact year to we want to propose the restoration of an ecosystem. For a landscape such as the south-western face of Mount Maxwell, the relative areas of Salish fields with digging and regular burning, other areas of Garry oak savannah and woodland, and Douglas fir forest may well have been quite different between the points of 1790 with higher population levels, 1850 when the colonists started alienating lands and identifying fields, and 1900 near the nadir of

aboriginal populations and with traditional land use actively discouraged or prohibited. These fine points of historical restoration issues diverge from typical restoration goals of recent decades which have focused on removing modern nuisances such as invasive species and just trying to re-establish biomass dominated by native perennials.

Another question relates to the axiom that all ecosystem restoration priorities effectively represent interpretation and cultural editing of ecological, cultural and historical processes. With pressures, often originating from particular stakeholders, such as for re-establishment of spiritual and food production sites contrasting with protection of species at risk (aspirations that are not necessarily in conflict), how can historical information be used to inspire balanced programmes that foster social equity? A more methodological issue is that of how to confirm but not exaggerate often cursory information about shifting human presences, land use practices, impacts and events?

There are huge issues, only touched on in this discussion, on respect for and, where appropriate, use of traditional knowledge. Aboriginal communities and First Nations may have numerous reasons why they may want to keep to themselves knowledge relevant to land use, history, and important sites. Far from automatically being considered allies, restorationists and biologists, in particular, may well be viewed as settler and competing stakeholders. When information on aboriginal impacts and engagement is available, there are perennial issues of ownership and control of knowledge along with concerns around privacy, minimizing misuse, and respect and cultural sensitivity. Similarly, there are huge questions around the control of information and social equity that extend to political decisions related to negotiations around treaties (where they exist), assertion of ownership of land and resources, traditional involvement in ecosystems, and long-term development strategies of aboriginal communities, restorationists remain in a particularly dynamic and vulnerable situation around historical data held by aboriginal communities. Of course, native groups and individuals are by no means obliged to provide any or all of the knowledge, that they possess that might better inform the setting of restoration goals and priorities -- even if the sharing of certain points might appear, in the eyes of some

restorationists, as in the best interests of those communities.

## Competing restoration paradigms: Natural versus cultural landscapes



figure 4. This is a culturally modified Red cedar, *Thuja plicata*, tree near the shore at Mount Maxwell.

In his 1995 essay on the conflicting management goals around old-growth Pacific Northwest forests and habitat for spotted owl, James Proctor explored the ethics behind competing views of nature that can often derive from different paradigms and ethical positions. Proctor noted that different ethical perspectives revealed the impact of particular moral attitudes towards the relationship humans have towards nature. Today, those particular conflicts, around protection or liquidation of late succession forests, are largely absent from Mount Maxwell. But a competing set of restoration visions, goals and priorities are emerging. These new dynamics may well prefigure much of the restoration efforts, in many parts of the world, in coming decades.

Today, aboriginal impacts on the landscape are often being reasserted more forcefully than at most points over the last century because today's First Nations are less constrained legally than in the past and they remain major stakeholders for the lands in their respective areas. But we are also seeing a reaction to decades of notions of ecosystems that have not been viewed and having had significant aboriginal impacts. The misreading of northern Garry oak ecosystems as almost accidental and unimportant seral phases is a case in point.

To understand why more perspectives on the cultural impacts on ecosystems have been so lacking in this part of the world, and why such avowedly social views of biophysical processes

are so needed for the restoration of northern Garry oak ecosystems, we can go back to the single most influential document on habitat conservation in the history of British Columbia. V. J. Krajina's 1972-1975 *Biogeoclimatic Zones of British Columbia* map.<sup>1</sup> This map indicates a 'Coastal Douglas Fir' zone but does not delineate a separate area for Garry oak ecosystems. This omission was not without considerable discussion. A distinct subzone, for drier areas, proposed was well over thirty years ago. But such an ecosystem category was consistently opposed for a simple reason. It was believed that ecological disturbance was undesirable for habitat protection and that without such human-related factors, Garry oak savannahs and woodlands would become gradually dominated by Douglas fir forest.

Aside from not having an ecological paradigm that recognized cultural impacts until recent decades, there have been institutional bases that have effectively removed and obfuscated the presence of aboriginal communities. Cindi Katz examined the social alliances behind the contemporary environmental movement as it exists under capitalism. She explored how politics and capitalism have taken a revitalized interest in the scale and use of preserved areas. Katz argued that the politics of power and space inevitably tend to reproduce and re-entrench neo-colonial relationships. She contrasted some of the politics that drive preservation from those that drive restoration ecology. The differences, Katz argued, lie in scale and application often leading to "a privatized rescripting of nature" or a "theme park within-a-park" approach to restoration on smaller scales. (Katz 1998: 57-59). She argued that the alternative to the misrecognition of the "landscape as a solely natural artefact" (Katz 1998: 55) was reconciliation of past and present grievances between social groups associated with different modes of landscape management such as those of aboriginal and non-aboriginal communities.

Katz went as far as to warn that agencies that do not actively acknowledge and negotiate around cultural difference in setting conservation and

restoration goals run the risk of neglecting "vastly different human constituencies who use the protected environment" (Katz 1998: 49). She even made a call to go beyond narrowly defined restoration or preservation efforts and instead strive for a more inclusive set of socialized landscapes that could sets of ecological processes embodying a wide range of ecological processes that would extend to environmental justice between human social groups.

There is a growing body of thought on the costs of ignoring aboriginal impacts in the formation (and maintenance) of North American landscapes. William Cronon's 1995 essay (Cronon 1995B), "The Trouble with Wilderness; or, Getting Back to the Wrong Nature," consolidated the sense of unease about ecosystem conservation and restoration that ignored those cultural factors. In his recent essay on the restoration priorities of the United States National Park Service Dennis Martinez argued that the agencies has a history of actively creating "wilderness" at the expense of the human cultures that were a part of cultural landscapes (Martinez 2003). Today, restorationists have theoretical space for divergent scientific perspectives which can (and should) be debated and can be combined with intercultural dialogues (Pritchard 2003: 256). But as with the pressures around management of Yellowstone National Park, setting practical management goals can be daunting.

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<sup>1</sup> The map is entitled *Biogeoclimatic Zones of British Columbia* and was proposed by V. J. Krajina. The map was published by the BC Ecological Reserve Committee. There was no date but the indication of Robert Williams as Minister of Lands, Forests and Water Resources indicates publication in the years of the 1972 – 1975 provincial government.

## Reconstructing prehistories: The northern margins of coastal Douglas fir forest & Garry oak woodland ecosystems



figure 5. This site is on or adjacent to the boundary between Mount Maxwell Provincial Park and Ecological Reserve. This photograph was taken in June 1979.

Variations on the Garry oak – Douglas fir savannah-woodland-forest ecosystem configuration extend south to California with the northern margins on some of the drier islands and mountain faces in the extreme south-west of Canada being relatively low in species numbers. However within Canada, these ecosystems support some of the highest levels of species richness – especially in conjunction with marine and shore areas. In addition, these oak ecosystems, at 49 degrees latitude, represent one of the more polar margins of such Mediterranean-like, summer drought woodlands. Here, as in much of the world, temperate maritime sites, with mild climates and summer water stress, are dominated by oaks and other drought-resistant perennials with damper sites often supporting coniferous species.

The northern margins of Garry oak-dominated ecosystems can involve a range of canopy formations from few trees to savannah to woodland. Only three strata, herbaceous, shrub, and canopy trees, are a consistent features. The vine layer is nearly nonexistent with little or no poison oak in contrast to similar communities further south. Instead, the under-story layer of Garry oak savannah and woodland dominated by a few shrubs, mosses and forbs. This third group often has tubers and roots adapted to rapid activity in late winter and spring followed by dormancy in the long, cool summer drought. Because the weather of this area so influenced by the ‘Pacific High’ the extent of the summer

drought and highly variable between years.

These abrupt fluctuations between years in the extent of summer water-stress and respective fire have impacts on the variability of biomass across the landscape and, in deed, whether savannah, woodland or coniferous forest dominates and for how long.

A number of structural aspects of northern Garry oak ecosystems make elements of associated biodiversity more vulnerable than others – both in nature and through the impacts of land use. Ecosystems that are temperate and with summer drought are often termed fire-climax because some regular combustion is inevitable in warmer and drier years. Some species can cope with a summer drought and subsequent water deficit. Other species are more resilient to fire than others.

A second characteristic of temperate, sub-humid summer drought ecosystems is that fire-resistant trees (with thick bark) tend to dominate. Of these ecosystems, northern Garry oak ecosystems are exceptional in the low diversity of tree species that comprise such an exceptional portion of the biomass. Whereas California has scores of such fire-resistant tree species, the major fire-resistant species this far north are the older specimens of Garry oaks and Douglas fir.

A third characteristic is that of long-standing dead wood. When these trees die, they tend to take on new ecological roles as snags -- often for decades. Garry oak and Douglas fir mosaics provide a diverse set of niches and habitats for a host of species associated with both the grazing (live plant) and the detritus (dead) food webs – if standing and fallen biomass is not removed.

A fourth characteristic of cool, fire-climax ecosystems is the especially crucial role of combustion in releasing nutrients trapped in biomass. Fire episodes embody one of the only processes for periodic and rapid release and redistribution of nutrients. The problem with a lot of standing wood is that nutrients in short supply can become locked away in wood. Thus, the productivity of these ecosystems, with relatively rapid uptake and slow release of nutrients, depends on fire that tends to kill dead standing biomass while leaving a large portion of the live biomass intact.

In contrast to much larger areas of Garry oak woodland and Douglas fir forest mosaics at higher elevations in north-western California (Kuchler 1977) and southern Oregon, the

mosaics even partially dominated by oaks from Puget Sound northward are relatively small and highly fragmented habitat units nearly all of which are on islands or isolated peninsulas. Today's northern Garry oak ecosystems, north of Olympia, Washington, are less than 10,000 years old although many of the constituent species, including this tree species, probably occurred in parts of the region in warmer periods for millions of years. But today's northern Garry oak ecosystems are the product of only 10,000 years of shifting climates with accompanying patterns of colonization.

Perhaps one of the best clues to the shifting increasingly cultural nature of northern Garry oak ecosystems, especially on Vancouver Island and the Gulf Islands, comes from pollen records (Pellat et al. 2001). After the melting of the last ice cap, 11,000 to 9,000 BP, the climate warmed quickly. There was rapid colonization by pioneer vegetation species such as Lodgepole pine and aspen (which today persists in small pockets including adjacent to Garry oak and Douglas fir).

The species that constitute the ecosystems today dominated by Douglas fir and Garry oak re-colonized the Gulf Island from the south. Throughout the glacial period, there remained Garry oak populations in lower elevations of Oregon and California. Sources of species of today's northern Garry oak ecosystems were mountain ranges that were not glaciated and with considerable environmental heterogeneity that provide genetic adaptations for the cooler, northern conditions. The Klamath Mountains in south-western Oregon and the Trinity Range in far north-western California have extensive complexes of ecosystems where Garry oak and Douglas fir often dominate. At the same time, species more associated with the plains and foothills of the arid West also colonized drier areas including the Gulf Islands.

By 7,500 BP, ecosystems dominated by Garry oak were established in the Georgia Basin and expanded in a climate that was warmer than that of today. It probably took other species, associated with the mosaics of Garry oak and Douglas fir, additional hundreds and thousands of years to colonize as far north and west as Salt Spring Island. Garry oak has perhaps the heaviest seed of any species in the region and yet became established on islands that may well have been in isolation since soon after the last glacial retreat. That Garry oak is one of the few

dominant trees in the region that also reproduces clonally has unexplored implications.

Soon after Garry oak became established in its current northern margins, there was a cooling phase between 7,040 and 5,750 years BP and Douglas fir and Western hemlock increased. Curiously, the presence of Garry oak does not appear to have declined as the climate cooled further 5,750 – 3,800 BP. Some new force intensified at 3,800 – 1,050 BP. Oak appears to have increased as the climate cooled as fire, whether natural or aboriginal, increased markedly.

## Reconstructing environmental histories

### Shifting aboriginal impacts

We can assume that human beings have been present and have generated impacts on the formation of the ecosystems of the Georgia Basin area since the end of the last glacial period – with a possibility of some earlier presence from marine-based cultures from around the North Pacific. Subsequently, cultural developments and perhaps other human migrations transformed ecosystems around the Strait of Georgia.

In recent centuries, communities speaking Salish languages extended from central British Columbia south well into Oregon. While including a diversity of practices and technologies, Salish food production in the Gulf Islands centred on salmon fishing and the gathering of root crops, such as camas, *Camassia* spp., and wild onions, *Allium* spp., along with scores of other species. All of these root foods tended to thrive best in meadows particularly the sunnier sites that often have supported Garry oak. The Douglas fir forest was much lower in food plants though did provide some berries and were used for hunting.

Salish tuber culture has some similarities to other island and coastal societies around the Pacific Rim. We have plenty of historical and cultural confirmations of extensive digging and burning in northern island Garry oak ecosystems. For example, White's 1999 case study from Whidbey Island was of a similar area less than 50 kilometres from Salt Spring Island.

The landscape changes that were figured in the pollen analyses suggest the emergence of a culture of heavy use of Garry oak meadows

along with burning. This would have been consistent with the societies all through the range of Garry oak ecosystems where, for example, in Mendocino, oaks were carefully managed and owned. Acorns, including of Garry oak, were a major source of protein (Chestnut 1902: 343). Coast Salish cultures at the northern margins of Garry oak ecosystems may well have represented a cultural fusion where root crop digging and burning and fishing cultures met. But most of the time in recent centuries, salmon would have been a more readily available source of protein. Nancy Turner (1975: 81) gives the best description of what little reliance there was on acorns in the twentieth century – after over a century and half of population decline (Harris 1997). But other than assuming that aboriginal population levels in the Strait of Georgia were much higher before the 1790s (Harris 1997) we have a very cursory knowledge of land use and impacts. And the recent period of cool Pacific temperatures, that was so conducive to salmon productivity, may have been an exception over the last several thousand years – with acorns and game having been the main protein alternative.

Given that other Salish groups were actively engaged in planting and managing oak trees for food production most of today's remaining savannah on Mount Maxwell may well have be the remnants of a proto-agricultural landscape produced by digging, burning and gathering. Most likely, the extent of gathering, digging, and burning may well have varied greatly with more impact before the nineteenth century.

### **The Colonial period and the 'Indian War' at Burgoyne Bay**

We have chosen a restoration project on a former battlefield to illustrate how restoration sites are often sites of conflict, in their own right, around historical interpretations, ethics, and competition over space and resources involving various social groups. To understand how these modern conflicts came about, the following is a brief chronology of the area over the last two centuries.

The era of exploration for this area was relatively short with the presence of Spanish and British ships in the 1790s. Aside from traders coming overland, intrusion of the British Navy and settlers was not significant until the Oregon Evacuation of 1846. Soon after, Salt Spring Island was scheduled for settlement. In British Columbia, there was a colonial period from 1847

to 1871 and a neocolonial period until the 1982 repatriation (and creation) of the Canadian constitution.

Throughout the colonial and neocolonial periods aboriginal communities and First Nations councils on the British Columbia coast were denied opportunities to negotiate treaties. There were a small number of exceptions. In the areas of Garry oak ecosystems around the colonial capital of Victoria (with the most favourable climate on the Pacific coast of British North America and thus early pressures for colonial settlement), some First Nations were offered and agreed to treaties. These 1850 - 1854 documents are often referred to as the 'Douglas Treaties' (Harris 2002: 17 – 64) -- named for the first Governor of the Crown Colony of Vancouver Island (which was later the amalgamated Crown Colony of British Columbia). The treaties that were forged were often poorly implemented. Because growth in the colony was slow, financial constraints severe, no treaties were negotiated after 1854. A series of Indian Reserves were subsequently established (involving varying forms of cooperation and resistance from respective aboriginal communities).

Under the colonial guidelines, aboriginal food gathering 'fields' (typically dominated by Garry oak and associated grassland) were to be protected and respected as aboriginal territory (Harris 2002: 18). But in the second half of the colonial period, in the 1860s, aboriginal rights around their food gathering landscapes were increasingly ignored with little mention after British Columbia's entry into Canadian Confederation in 1871.

Mount Maxwell is a landscape marked by and that embodies the unevenly negotiated and poorly implemented treaties of the 1850s. One succinct chronicle of the Douglas Treaties is from the Union of British Columbia Indian Chiefs<sup>2</sup>.

Between 1850 and 1854 Douglas made fourteen treaties with the Coast Salish natives in the immediate vicinity of Victoria, Fort Rupert and Nanaimo. Cash payments in the form of blankets were made for small portions of Vancouver

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<sup>2</sup> Union of British Columbia Indian Chiefs, March 2003, <http://www.ubcic.bc.ca/douglas.htm>

Island, with reservation to the Indians of their village sites and enclosed fields. In the spring of 1850 Douglas concluded nine agreements covering Victoria, Metchosin and Sooke; in 1851, two at Fort Rupert; in 1852, two covering the Saanich peninsula; and in 1854, one at Nanaimo. The limited area covered by these treaties was due in large measure to Douglas's decision to conclude agreements only as pressures of settlement in various areas made treaties necessary. For instance, the Cowichans wanted during this period to sell their lands in the same way as they understood the Songhees to have done, but Douglas refused, on the grounds that settlement was not immediately moving into that region (Douglas to Barclay, 16 May, 1850, HBCA, A-11/72). As well, a scarcity of funds with which to purchase lands in the later period was a limiting factor on the concluding of treaties. It is clear, however, in the content of the Fort Victoria treaties, that Douglas and the Colonial Office shared the notion that the aboriginal race exercised some form of ownership over the land that needed to be extinguished by colonial power."

Where this negotiation process, so enshrined in imperial law, broke down was at Burgoyne Bay and Mount Maxwell. And it very much broke down around perceptions of human-modified nature. Today, this point of historical conflict is directly relevant to the work of the restorationist. This emergence of environmental history as a force in setting restoration goals and priorities is both because of legal decisions, particularly the implications of the *Delgamuukw versus British Columbia* court challenges throughout the 1990s, and the completion of a fine piece of historical scholarship.

The Salish were quick to introduce potatoes to their fields and to mix them with other bulbs and tubers such as camas. Throughout the colonial period, there were requirements from Westminster to respect any fields involving food production, extending to setting the boundaries of Indian Reserves. Yet few indications of recognition of such spaces being protected through treaty negotiations have, so far, been confirmed<sup>3</sup>.

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<sup>3</sup> One such site of highly diverse and productive aboriginal food plant gathering and modification is the spectacular Belly-Rising-Up on a Douglas Treaty Indian Reserve in Central Saanich north of Victoria.

In defence of some of the early colonial administrators, this partial blindness to aboriginal fields was almost predictable. Many of these Salish fields were maintained by women. For much of the nineteenth century, the settlers were overwhelmingly male. In some cases, it would have been respectful for males to not intrude on these often women-dominated spaces. The more educated male settlers, especially ones with good employment positions, were under tremendous pressure to not have contact with 'squaws' (a word that became of a pejorative after the nineteenth century). Thus, few literate men would have spent much time to confirm that these often gendered landscapes were of any significance in delineating reserves as treaty negotiations. Similarly, aboriginal males during negotiations may have had little concerns for 'food security' and continued access to these food species – especially with increasing trade. The settlers were often far more concerned with 'meat and potatoes' in the landscape than with local camas.

Chris Arnett's *The Terror of the Coast* is one of the most advanced works in the movement to reposition the presence of aboriginals and First Nations in British Columbia's history – and to re-examine the more violent aspects of the colonial and neocolonial projects. This movement increasingly uses and partially generates environmental histories. The focus on *The Terror of the Coast* is on a series of conflicts, between the colonial government and aboriginals around land. Previously, this period was viewed as a time of almost enthusiastic cooperation between aboriginals and the colonial government – particularly in the years directly after the 1846 Oregon Evacuation (Arnett 1999: 28). Certainly, London began its presence in the region committed to recognizing aboriginal title (Arnett 1999: 29 – 31) and the 14 Douglas Treaties even recognized nominal sovereignty (Arnett 1999: 33 – 35). But by the early 1860s, there was a decided shift to alienation and settlement without treaties (Arnett 1999: 69 – 110).

Today, the 1847 to 1871 years are increasingly being re-visited as the time when today's social hierarchies (that have marginalised aboriginals) were codified – and often violently. And one of the major flashpoints for conflict were native 'fields', often dominated by oak trees and associated species, which were more attractive for colonial settlements than the dark forests of

Douglas fir. The histories of these conflicts can even be re-inscribed as struggles over a set of strategic spaces (relatively warm, south-west-facing beaches, flatlands and slopes) and their associated resources. While Arnett's is not an environmental history, any overlapping of his geographical data with ecological maps suggests the importance of these Garry oak systems to both aboriginal and colonial groups. And it was in the 1847 to 1871 period that saw the shift from colonialists viewing Garry oak ecosystems as comprising of aboriginal food production fields to being insignificant openings in primeval, natural.

Arnett's history represents a crucial link in how spaces, ecosystems and resources, in this part of British Columbia with Garry oak communities, were reconceived as part of modern forms of exploitation and production. Rather than viewing the alteration and degradation of Garry oak ecosystems as representing a conflict between settler and 'nature', we can now discern a contest between different stakeholders and, not coincidentally, different modes of ecosystem management, exploitation, production and exchange. Perhaps the most enigmatic point in *The Terror of the Coast*, for a forest history of northern Garry oak ecosystems, is Arnett's mention on page 88 of an 1860 census of aboriginal food production areas from southern Vancouver Island up its east coast to Nanaimo<sup>4</sup>. While having implications for the contemporary management of Garry oak ecosystems and some associated species, this document confirms that the Colonial Office (Harris 2002: 1 – 16) was knowingly engaged in displacing aboriginal systems of food production and ecosystem management with one dominated by settlers (and their technologies, crops and livestock). If ever re-entered into court initiatives, this document alone could have huge implications for the ownership and management of lands on Vancouver Island and the Gulf Islands and could, in fact, come to dominate the setting of restoration goals and priorities for respective sites.

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<sup>4</sup> George Heaton to William Young Colonial Secretary, June 16, 1860, Colonial correspondence (on file British Columbia Archives F748 / 249).

### **The late Nineteen and early Twentieth Centuries**

Perhaps the most enigmatic period in our story is the period right after the 'war': the second half of the Nineteenth Century. There have been suggestions that the first Mrs. Maxwell, who married an early homesteader on the mountain, was a 14 year old Cowichan woman offered in some kind of effort to keep the land accessible to aboriginals. Within a few years of the battle at Burgoyne Bay, Mount Maxwell was being divided into numerous parcels – often acquired as portions of sections the effective size of which for agriculture and logging were complicated by the shore and the rugged terrain. At some point in that period sheep were introduced, probably the ancestors of the feral livestock on the mountain, as was broom which was clearly planted at a homestead.

At some point late in the Nineteenth Century or early Twentieth Century, aboriginal burning<sup>5</sup> was suppressed or, if not suppressed, members of the Cowichan tribes who had been motivated to burn (males) and gather (females) no longer had motivation or were alive. Vegetation also was transformed, profoundly, by the eradication from Salt Spring Island first of wolf and then, though less successfully, of cougar. As predators were removed, sheep numbers increased to a point where some plants species, particularly forbs and other herbs, nearly completely disappeared.

A cursory examination of the tree ages suggests a wave of colonization of oak savannah in the first decades of the Twentieth Century that may have coincided with a decline in burning. A more recent indication of these changes between an aerial photograph from 1975 (figure 6) and 2001 (figure 7) suggests fairly rapid conversion, involving only several decades, of oak savannah and woodlands to Douglas fir forest.

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<sup>5</sup> Brenda Beckwith indicated to the first author in 2002 that she and Nancy Turner of the University of Victoria had interviewed long-term resident, Mr. Ackerman, who was certain that there was considerable aboriginal burning on Mount Maxwell into the early Twentieth Century.



figure 6. This aerial photograph is from the 22<sup>nd</sup> of June, 1975 with the boundaries of the ecological reserve and provincial park indicated.



figure 7. This aerial photograph is from the 21<sup>st</sup> of May, 2001 of the lower central part of the scene indicated above.

### Recent restoration movements, goals & initiatives for Mount Maxwell



figure 8. The first author of this presentation is photographed in November 2001 with a tree he photographed in 1979 with the image depicted on the computer screen. (photograph by Terry McIntosh)

The south-western face of Mount Maxwell was too steep and dry to support successful farming and settlement. There was logging of Douglas fir throughout the Twentieth Century. But many patches of late succession trees were left because of the difficulties of access and harvesting combined with the fact that many of the trees were scarred by the fires thus making them of low value. The sheep licenses lapsed. The few homesteads were abandoned by the mid-

Twentieth Century. Given the size of the area and its relative isolation, there might well continue to have been aboriginal presence and land use with significant impacts.

Mid-Twentieth Century, Mount Maxwell Provincial Park was established. The parcel that is the original Mount Maxwell Ecological Reserve was established as a provincial park reserve in 1967 and was transferred to the provincial government unit administering the 1971 *Ecological Reserves Act* in 1972. Professor Marc Bell, of the University of Victoria, supervised initial species inventories in 1974. In the same period, one home was built along the shore below the mountain (that was recently destroyed by BC Parks).

Mount Maxwell Ecological Reserve was the subject of provincial interest for a few years in the 1970s. But soon rugged Mount Maxwell was largely ignored because the difficult access (especially the cliffs) deterred some researchers and for the fact that another ecological reserve was established nearby on Mount Tzuhelum on Vancouver Island. This smaller reserve was never grazed and had many of the forbs and rarer wildflower populations that had declined on Mount Maxwell.

In 1978, the first author of this paper was hired to assess a number of ecological reserves and to make a series of “management, protection, and restoration proposals” (Ingram 1981). The Ecological Reserves Unit, of the BC Ministry of Lands, Parks and Housing, had previously argued that the province’s ecological reserves programme, originally part of the International Biological Programme, would require no management (let alone restoration initiatives). The original concept was to be entirely ‘hands-off’ with ecological reserves, with little management and minimal protection, to then watch them change ‘naturally’ as part of an international monitor initiative. But issues of restoration, and in deed of the relationships to aboriginal land use, had already emerged. Ecologists and other environmental scientists in positions of influence in that period tended to under-appreciate, when not aggressively denying, the cultural nature of these landscapes. And because most of these individuals were biologists, who had little training in social sciences let alone management, there were other ‘built-in’ biases.

Returning to the first restoration concept for Mount Maxwell nearly a quarter of a century later, some telling characteristics emerge. The proposal is five pages long (Ingram 1981: 49 – 55). There was little effort to reconstruct a land use history although this author can remember a land management file that had documents going back nearly a century. There was a naive notion of “pre-contact conditions” (Ingram 1981: 53) though little discussion of dates. Wildfire was to be tolerated, except in areas infested by Scots Broom. There was to be a goal of restoration of ground fuel levels to some point in the past when they were lower (because of regular burning) (Ingram 1981: 54). Feral sheep were to be removed – a goal that still remains elusive today. Because of the lack of regular predation, deer hunting might be acceptable at certain times. Elk and wolf were to be reintroduced which is not entirely far-fetched. In recent years, an elk herd has re-established itself and is expanding its range to roughly 10 kilometres away. Occasionally, lone wolves swim over and for a time survive on the Gulf Islands as with the celebrated resident of recent years on Saturna Island. There was a similar concern about trampling in the damp meadows as today. In the 1981, the roles of aboriginal communities were still marginalized – though would have been less so than what actually happened. As far as we can tell, there was really only one set of communities and families, within the Cowichan tribes, who have lived and harvested in the area but they are not mentioned. But the recommendation was vague. “Traditional Native harvesting patterns of plant material should be allowed on a limited basis. This should only involve individuals with documented ancestral claims. harvesting [sic] should be site specific and regulated by weight and quantity.” Had this proposal been implemented in the early 1980s, there might well have been a lot of conflicts from the patronizing attitudes of provincial civil servants (such as the first author in his early twenties). Another proposal was expansion of the ecological reserve to include most of the south-western face which has been the trend over the last forty years and a management committee of local residents (with First Nations not mentioned).

In response to the recommendations, the Ecological Reserve Unit did nothing except to fence a small area in 1983. Forbs such as camas spp. re-established themselves. The fence was intact until a storm in 1991 with sheep quickly

destroying the herb layer of the site. A warden system was established for ecological reserves in British Columbia involving a number of volunteer wardens. Other idealist volunteers worked to protect the ecological reserve but the threats were largely indirect most principally a huge expansion in broom infestation and a new invasive species, holly. The sheep may have declined because of factors other than predation. Or some of the sheep may have been herded there all along and were just moved off. Sheep are still there but the barnyard stink and wool that was such a part of the meadows decades ago seems to have declined markedly suggesting lower numbers or use of other areas.

In the same period, the provincial park lands were only light managed with fencing installed for safety on the summit of Mount Maxwell. There was some informal habitation of a shoreline campsite.

Since the majority of the south-western face of Mount Maxwell went into conservation status in 2001, there have been two conservation-related studies supported by the provincial government of British Columbia. One study was by Axys Corporation and was the result of a remarkably closed contract bidding arrangement and the other study, involving mapping, was by the locally based, Madrone consultants. In 2001, Nature Trust, one of the new stakeholders on the mountain, has engaged Dr. Terry McIntosh in some research questions and management issues.

## **Stakeholder analysis & contentious histories**

The stakeholders for the south-western face of Mount Maxwell extend well beyond the landowners, provincial and federal agencies with jurisdictions and which implement relevant laws, and First Nations. For example, a Salt Spring Island group concerned with management of the area, that at one points was to be called Friends of Burgoyne Bay, was set up a few years ago. Ironically, this group of legally defined stakeholders have yet to meet to talk about management and restoration – even after millions of dollars have been spent in recent years on conservation of the area.

Increasingly in British Columbia, the rights of stakeholders and the outcome of contests and outright conflicts are being settled in the courts. This situation has some highly deleterious

implications for low-budget, often volunteer-oriented restoration initiatives. In Canada, courts, that have been increasingly activist since the 1982 constitution, have increasingly determined how to include marginalized stakeholders and bring 'them' to 'the table'. The single most important to codify new modes of negotiation between First Nations and land use agencies (including those involved with biodiversity conservation) in recent years was the last of the *Delgamuukw versus British Columbia* decisions.

In the same periods as the Delgamuukw challenges, a series of parallel cultural and scholarly shifts formed the following paradigm shift. The following are some new fundamentals in considering aboriginal and non-aboriginal stakeholders. Within every culture, social group and community are ecological and unsustainable tendencies – some of which might be counter to dominant ethical positions and accepted practices. To characterize a culture as one way or the other would be a simplistic caricature verging on a kind of racist stereotyping.

Within every culture, social group and community are tensions between the rhetoric and actual reality of specific practices applied in particular locales over time. In other words, there was as much diversity of experiences and practices in the diverse aboriginal societies around the Strait of Georgia as there has been in the colonial and neocolonial periods. This divergence of experience can extend to behaviours within the same group of stakeholders across large areas such as Mount Maxwell. With these intersecting sets of human social and biological stakeholder groups, a matrix can be created for regional ecosystem management for protection of local biological diversity.

The old dichotomy, steeped in cultural chauvinism and ignorance, forcing a view of aboriginal communities as either being highly ecological 'noble savages' or 'Bad Indians' has been fully imploded. First Nations have shown themselves just as able to express a diverse range of environmental relationships as other communities and layers of layers of government in Canada. The shift from the neocolonial to the postcolonial in British Columbia has seen a push for more critical forms of analysis of both stakeholders and social conflicts. British Columbia's ecosystems remain, very much, part

of landscapes of (un)lawful conflict (Ingram 1995A) often with as many groups benefiting by prolonged legal contests and uncertainties than those other groups needing resolutions. In this even conflict, that keeps a restoration plan from being effectively developed, funded and implemented, benefits some human stakeholders over others (as well as some species over others).

Advocates of different restoration operations constitute specific stakeholder groups, as well. For example, a person who engages in the grueling work of pulling broom may not want to bother with the less exhausting but more tedious and painful efforts of carefully removing holly. Things get complicated when they are sharing the same budgets – or competing over the same funds. A group willing to build a fence on shallow soils, hauling metal rods for extensive distance, will probably have some cultural or scientific motivating factor, such as scientific and aesthetic interest in wildflowers or edible forbs, which compels them to stay concerned with the management of certain resources in the area. A group of aboriginal stakeholders who harvest and eat a resource have different relationships to those organisms and sites than a graduate student who makes a study and expects to obtain a degree and job from observing acts of harvesting.

## Landscape history assessment Sources of information



figure 9. Douglas fir tree with pronounced fire scars in former 'parkland' (Douglas fir savannah), Mount Maxwell April 2004

Regardless of how charged are the values of stakeholders involved (or soon to be forced to engage in) a restoration project, histories must be based on careful reviews of data and critical

reviews of oral and other less formal forms of information gathering.

The following are some of the most important sources of information:

- thorough reviews of current books in press and old, out-of-print titles;
- historical maps;
- species lists and analysis of presence of species associated with specific human groups such as Salish agriculturalists;
- photographs (aerial, landscape, documentary, personal);
- archaeological data;
- indications from landscapes elements such as fire scars (figure 9);
- records of actual individual persons, events and sites;
- incidental information from descriptions of parcels and sites;
- land management policy and historical files; journals;
- personal letters;
- newspaper articles and announcements;
- oral histories;
- art, culture and other representations of landscapes and land use; and
- analysis of language and dialects especially for local aboriginal communities.

### **Reconstructing cultural narratives**

As more First Nations in British Columbia are taking an interest in their traditional relationships to Garry oak ecosystems, a politics is emerging around the cultural narratives embedded within ecosystem management and restoration. There will be intensifying pressures for more acknowledgement of, mediation between and negotiations with, a range of aboriginal, government, and nongovernmental stakeholders (including restoration advocates and professionals).

Today, many First Nations in British Columbia remain engaged in treaty negotiations and assertion of rights over traditional resources. In this context, there is increasingly a tension between science-based approaches, that some might consider neocolonial, and traditional and postcolonial knowledge-based forms of ecosystem management and conservation. Ethic and ideological conflicts will increasingly be played out in the setting of restoration goals and priorities.

Efforts to minimize patronizing and disrespectful attitudes towards other stakeholders go well beyond critiques of romantic notions of “the ecological Indian” (Krech 1999) who were supposedly inherently in harmony with their ecosystems. For example, Krech has a chapter on fire (Krech 1999: 101 – 122) that mentions, in dubiously general terms, some of the ecological impacts from burning for similar Garry oak ecosystems to the south, in Washington State and in Oregon (Krech 1999: 106, 116 – 117, 114, 120 - 121). Those were communities with some cultural and environmental similarities to those of the Salish-speaking peoples around the Strait of Georgia. But his framework (Krech 1999: 122) still embodies that now fully discredited dichotomy of ecological processes that are purely natural or entirely anthropogenic – effectively negating many aboriginal perspectives that contest that line. Attitudes change quickly.

What Krech might have offered as a revolutionary framework for working with aboriginal people in 1999 appears annoyingly biased, and a bit hostile, for professionals working with First Nations stakeholders just five years later. As Katz argued, the answers, which allow for setting restoration goals and priorities, should not come from one single entity or agency. Instead, she argues, power and decision-making must be shared among many stakeholders.

### **Linking historical reference points to setting restoration goals & priorities**

The ecosystems of Mount Maxwell are deteriorated so rapidly in the last thirty years that it will be a small miracle to get the damage down to that of the levels in 1974. However, serious ecosystem restoration is about time and in particular a past and a future. And goals are necessary.

For Mount Maxwell, three possible historic points of reference emerge. In 1790, there would probably have been high population levels and particularly intensive food production activities. By the time of the conflicts in the 1850s, the population and the pressures on the ecosystems of Mount Maxwell would have been much lower. And 1900 might well be a more realist restoration goal. The invasive species that we cannot ever really get rid of there would have become established but in much lower numbers than today. The basic ecological structure, by the

time that regular burning was curtailed, was so different than today that without getting back to that point, other restoration concerns are barely attainable (or worthwhile).

### **Components of landscape history assessments**

For most projects, landscape history assessments should be short, such as ten to twenty pages, and to the point. They must first clarify the extent of the area of study. The terms of reference of such assessment should typically go back for two to three hundred years for north-western North America and much further into the past for areas with cultures that had more metal tools, agriculture and higher levels of human populations.

Landscape histories always involve the community histories of more than one group. Where it exists, social and cultural difference must be highlighted.

Landscape history assessment require maps with indications of sites with key information and, where possible, ecosystem types. As well as ecosystems and ecological processes, assessments must chart social groups and events. Similarly, references and appendices are necessary.

A landscape history assessment, particularly of poorly researched sites, should be self-reflexive. If a researcher really cannot be sure what the dominant vegetation was at a point in time, or the seral conditions for that matter, there is an ethical imperative to acknowledge such gaps in knowledge – even if the implications are that a restoration initiative is premature.

### **Guidelines for evaluating the completeness of landscape history assessments**

Restoration projects are becoming larger, more complex and extended, and increasingly expensive. Proposal reviewers are under greater pressure to advise on how best to spend taxpayer and foundation funds. In reviewing a proposal, the landscape history assessment should be appended. The following are the key elements to look for. If those components of a study are not presented, a reviewer would have the basis to indicate unwillingness to make a decision until there was additional research.

The following are the elements of a minimal level of assessment of a landscape's recent history as a prerequisite to setting ecosystem restoration goals:

- references with a comprehensive literature review of the local environment;
- relevant social histories;
- review of key government files;
- review of historical data in relevant archives;
- indications of permanent legacies such as toxic materials;
- a map clearly delineating the site and the larger district;
- where social conflicts exist, acknowledgement of and chronicles especially as they affect the use of the site; and
- indications of consultation with major stakeholder groups especially about their histories as related to the area proposed for restoration.

Requiring a further historical assessment may be expensive but restoration can be a lot more expensive than ecosystem management and clean-up. If funds exist to restore a landscape to a certain point in time, there should be funds to have enough information to set defensible goals.

### **Linking landscape history assessments with setting community-based restoration goals and priorities**

Today, most sets of restoration priorities represent one of two, often competing, approaches to more comprehensive forms of ecosystem management: Removal of nuisance disturbances and non-native species (and re-establishment of supposedly more natural processes) or the experience of the theme-park, alluded to by Katz. Rather than oriented to restoration back to a particular period in history this approach allows for a representation of a range of different historical periods at different points across a landscape unit. While this approach may first appear repugnant to most of use, it is sometimes the only restoration approach that can be justified by paltry data. In this approach, information about a site from one set of years allows us to conceive of how to restore respective ecosystems back to that point. Where information does not exist for other areas, aspects for more recent conditions may all that can be proposed for restoration goals.

Most basic principle for linking landscape history assessment with goal setting is to consult stakeholders about their satisfaction with historical studies and before goals and priorities are proposed. If groups contest historical assessments, and often for good reason, they will resist the restoration goals and priorities on which those chronicles are based.

### **Conclusions: Reinterpreting landscape histories while pursuing long-term restoration goals**

Perhaps our choice of a former battlefield to illustrate how setting goals and priorities for restoration sites could create new battlefields in conflicts over worldviews, interpretations and paradigms, is a bit didactic. But we are certain, that it will be increasingly necessary for restorationists to enter into dialogues and consultative processes with a full range of stakeholders.

Competing restoration paradigms that place cultural landscape impacts at odds with natural landscape impacts reflect a long-standing cultural dilemma over the place of humans in nature. As ecological restoration seeks to actively repair damaged systems, we must be critically aware of the social and historical underpinnings (as well as the ecological) that have created these landscapes both in reality and in our minds (Cronon 1995A).

The potential linkages between the fields of ecosystem restoration, environmental history, and theories of social marginality and stakeholder analysis warrant more exploration. In this way, Mount Maxwell becomes as much of a theoretical site in broader discourses of history and restoration as a landscape with local and vulnerable ecosystems, species and human cultures.

For most of us involved in restoration work, it has been difficult enough to labour away at controlling invasive species. Now being expected to actively engage in history and politics may seem like two much. As restoration politics become increasingly turbulent about the same sites, we will need to find opportunities to celebrate our cultural differences and to 'chill out'. If there was ever a time in the modern restoration movement for biologists to learn

more about history and ethnography, historians and other social scientists to learn more about ecology, and planners to learn about the cultural nuances of adaptive management, it will be the next few years.

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