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Studies, designs & plans for the conservation of northern Garry oak ecosystems



Much of my work as an environmental planner and designer has involved conservation and recovery of sensitive ecosystems and an underlying exploration of the relevance of the field of landscape ecology. The group of ecological communities and landscapes with which I have worked for the longest period, going back to my childhood and the land on which I grew up, are northern Garry oak, *Quercus garryana*, ecosystems in south-western British Columbia. Ecosystems with significant presence of Garry oak are typically shaped by summer drought and relatively mild temperatures and extend from the northern edge of the Los Angeles Basin to Savary Island at the northern end of the Strait of Georgia. In much of the southern half of its range, south of north-western California, Garry oak grow more as a shrub in fire-dependent, chaparral ecosystems, often with related oak

species. Similarly, the northern half of the range of Garry oak, where it is the only naturally occurring *Quercus* species, is often described as part of fire-dependent or fire-resilient ecosystems. And the label Garry oak ecosystems are often used for the deciduous savannah and woodland portion of the gradient between Douglas fir forest and parkland and grassland bluffs and balds. Occurring in Olympia and northward, northern Garry oak ecosystems are those that have been shaped by the end of the last Ice Age, the creation of island ecosystems, and the subsequent Hypsithermal period of temperatures that were higher than today's climate. For at least as far back as the Hypsithermal, of five millennia ago, there has been wildfire compounded by burning by human beings. And virtually all of today's northern Garry oak ecosystems in British Columbia saw Salish burning, combined with intensive digging and harvesting, as recently as the late nineteenth century and sometimes later.



In recent decades, there have been a number of initiatives to conserve northern Garry oak ecosystems. Today because of inadequate research and political resolve there are at least one hundred very rare species, often under risk of extirpation or even extinction, associated with the drier woodlands and grasslands of the islands of the Georgia Strait of British Columbia. One of the weaknesses of the more recent ecosystem recovery goals and programmes have been the poor appreciation for landscape ecology and broader questions of disturbance (and stability) processes across landscapes – in relatively small, shifting islands often on marine islands. Understandings of shifting edges and fragments over time, and in the context of climate change, will be crucial to more successful conservation strategies especially for specific species at risk and their habitats.





Northern Garry oak ecosystems are also cultural landscapes, shaped for food production, where the largely Salish-speaking aboriginal communities remain marginalized and largely ignored in contemporary ecosystem recovery discussions – even where a growing number of legal precedents require consultations. Crucial Garry oak lands on Indian Reserves, that not so long ago were burned until local governments suppressed such traditional activities, remain removed from serious consideration. And of course, landscape ecology, that more than any other environmental science recognizes the human impacts on most ecosystems on earth can help us understand how to live with these dynamic mosaics in very uncertain times.





Over the last three decades, I have contributed to assessments, management documents, and conservation plans for more than a score of landscapes with Garry oak ecosystems. Much of my inspiration has come from learning from one of the largest remaining dynamic mosaics of northern Garry ecosystems on the south-western slopes of Mount Maxwell on Salt Spring Island – an area that I began to visit in 1978. Other landscapes with northern Garry oak ecosystems, in which I have worked, have been largely obliterated since I began these studies in my teens – and this fact has created a great deal of pain. While I have done much work in temperate and tropical rainforest, the conceptual challenges of respecting and maintaining these dynamic mosaics remain the most interesting – and 'feels like home'.



scholarly publications

This material is available as PDF files through www.gordonbrentingram.ca/scholarship.

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Ingram, G. B. 2001. Analysis of the January 2001 Catalogue of Site Records of the Georgia Basin Ecosystem Partnership for locations of interest for conservation planning under the terms of the Garry Oak Ecosystems Recovery Strategy. Report to GOERT.

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Ingram, G. B. & Allan Lidstone. 2001. A conservation planning process for northern (Canadian) Garry oak ecosystems & associated biodiversity. A discussion paper for the GOERT (Garry Oak Ecosystems Recovery Team) Conservation Planning & Site Protection RAG.

Vagelatos, K. and G. B. Ingram. 1995. Native plants for residential landscapes: Design and management guidelines for southwestern BC. A Report to the Central Mortgage and Housing Corporation of Canada, Ottawa.

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public presentations

This material is available as PDF files through www.gordonbrentingram.ca/scholarship.

Ingram & Lindsay Upshaw. 2004. Gap analysis in conservation planning for cultural & less culturally modified landscapes: Prospects for northern Garry oak ecosystems in British Columbia, Monitoring the Effectiveness of Biological Conservation, Vancouver.

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Ingram. 2004. Historical assessment protocols in setting ecosystem restoration priorities for cultural landscapes: Prospects for the oak woodland and conifer forest mosaics modified by the Salish of Pacific Canada, Faculté des géosciences et de l'environnement, Université de Lausanne, Switzerland.

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