

## INTERTWINED HISTORIES: Plants in their Social Contexts

Edited by Jim Ellis

ISBN 978-1-77385-091-7

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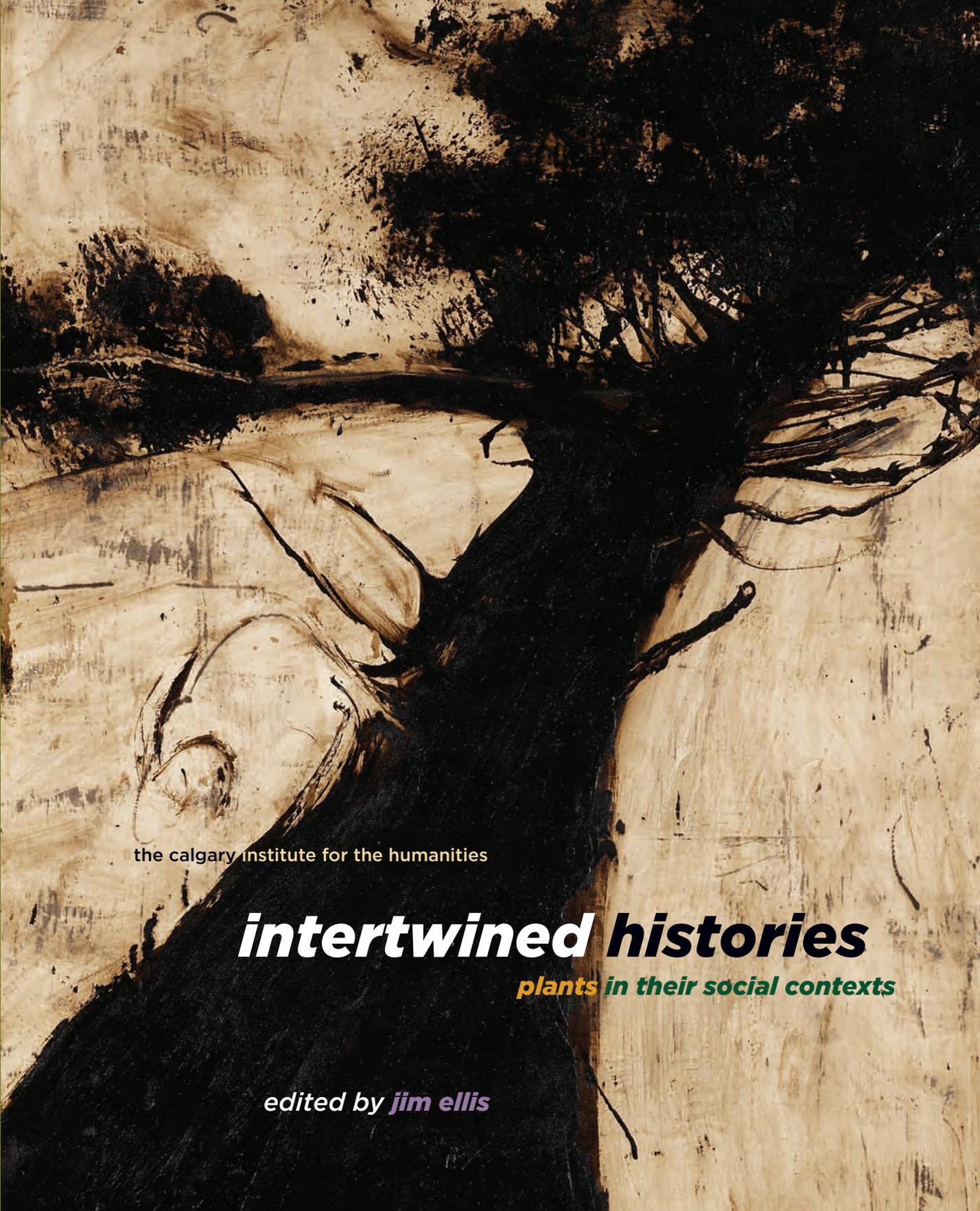
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The background of the cover is a high-contrast, textured image. It features a dark, almost black, gnarled tree trunk and its branches, which are set against a light, yellowish-tan background. The background has a rough, wood-grain-like texture with various scratches and marks, suggesting an old piece of wood or a weathered surface. The lighting is dramatic, with deep shadows in the tree's crevices and highlights on the surrounding surface.

the calgary institute for the humanities

***intertwined histories***

*plants in their social contexts*

edited by *jim ellis*

# ***intertwined histories***

***plants in their social contexts***



**UNIVERSITY OF CALGARY**  
FACULTY OF ARTS  
Calgary Institute for the Humanities

**Calgary Institute for the Humanities Series**

Co-published with the Calgary Institute for the Humanities

ISSN 2560-6883 (Print) ISSN 2560-6891 (Online)

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Press

the calgary institute for the humanities

***intertwined histories***  
***plants in their social contexts***

*edited by* ***jim ellis***

*a special publication of* **the university of calgary press**  
*in co-operation with* **the calgary institute for the humanities**

CALGARY INSTITUTE FOR THE HUMANITIES SERIES  
ISSN 2560-6883 (Print) ISSN 2560-6891 (Online)

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University of Calgary Press  
2500 University Drive NW  
Calgary, Alberta  
Canada T2N 1N4

press.ucalgary.ca

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Library and Archives Canada Cataloguing in Publication

Title: Intertwined histories : plants in their social contexts / edited by Jim Ellis.

Names: Ellis, Jim, 1964- editor. | Calgary Institute for the Humanities, publisher.

Series: Calgary Institute for the Humanities series ; no. 3.

Description: Series statement: Calgary Institute for the Humanities series, 2560-6883 ; no. 3 |  
This book has its origins in the Calgary Institute for the Humanities' 38th Annual Community  
Seminar, which took place in May 2018. | Includes bibliographical references.

Identifiers: Canadiana (print) 20190073446 | Canadiana (ebook) 2019007342X | ISBN  
9781773850900 (softcover) | ISBN 9781773850917 (Open Access PDF) | ISBN

9781773850924 (PDF) | ISBN 9781773850931 (EPUB) | ISBN 9781773850948 (Kindle)  
Subjects: LCSH: Plants. | LCSH: Plants—History. | LCSH: Plants—Social aspects. | LCSH:  
Plants in art.

Classification: LCC QK50 .J58 2019 | DDC 580—dc23

The University of Calgary Press acknowledges the support of the Government of Alberta through the Alberta  
Media Fund for our publications. We acknowledge the financial support of the Government of Canada. We  
acknowledge the financial support of the Canada Council for the Arts for our publishing program.



Canada Council  
for the Arts

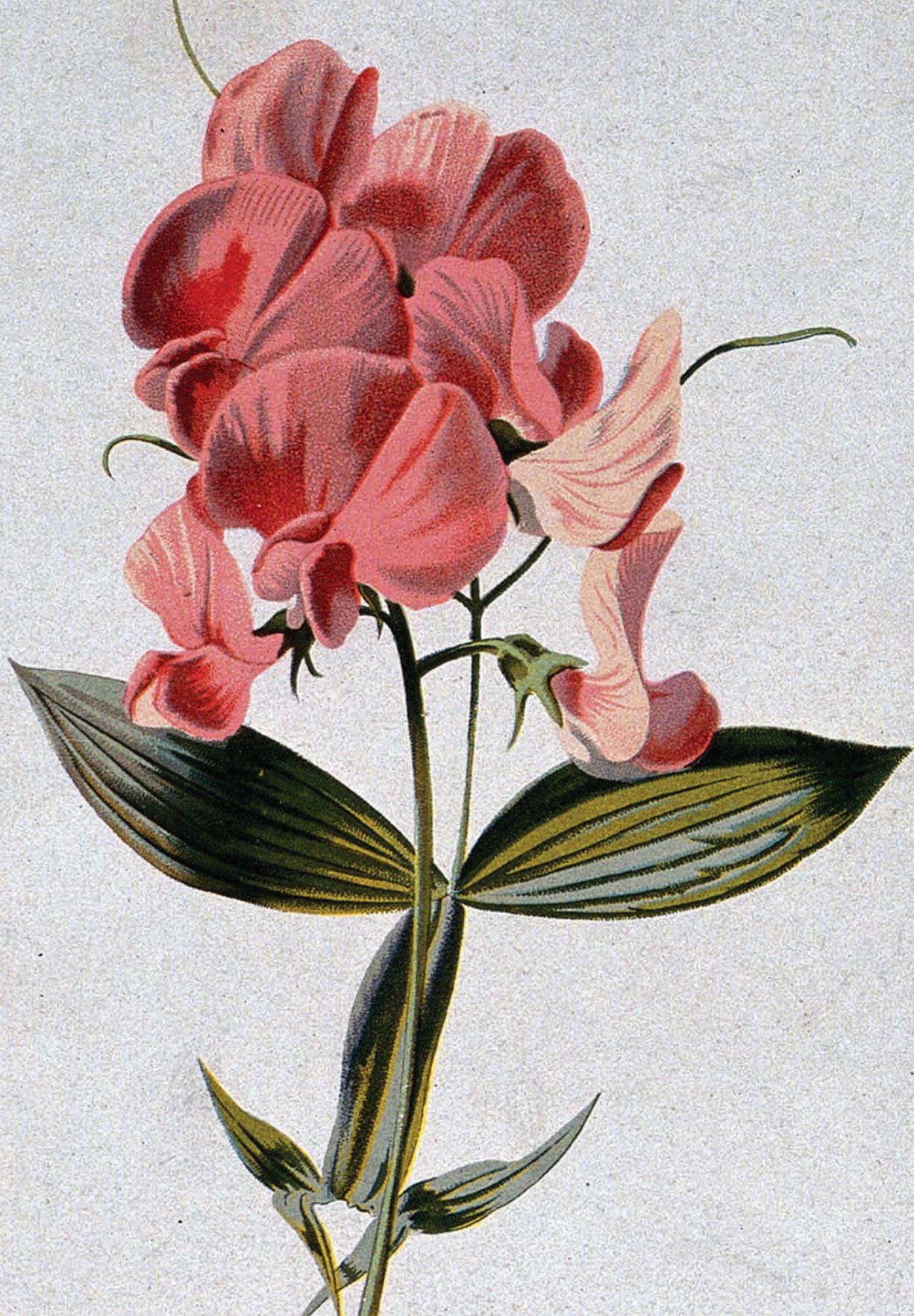
Conseil des Arts  
du Canada

Copyediting by Peter Enman

Front & Back flap image: A cultivar of garden pea (*Pisum sativum*) and of variegated kale  
(*Brassica oleracea acephala*). Chromolithograph, c. 1890. Credit: Wellcome Collection. (CC BY 4.0).  
Cover art: Attila Richard Lukacs, *Arbour Vitae 6*, 2002, bitumen and oil on canvas, private collection,  
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Cover design, page design, and typesetting by glenn mielke

OPPOSITE: An 'everlasting' pea plant (*Lathyrus latifolius*): flowers and leaf.  
Chromolithograph, c. 1879, after F. Hulme. Wellcome Collection (CC BY 4.0).





# contents

**xi** **acknowledgements**

**xiii** **introduction**

jim ellis

**1** **the nature of plants: *how different scientific perspectives shape our understanding of what plants are***

james f. cahill jr., megan k. ljubotina, & habba f. mahal

**12** **phytognosis: *learning from plants***

patricia vieira

**20** **historia plantarum: *from persphone's abecedarium***

erina harris

**36** **periculum: *artist's statement & portfolio***

jennifer wanner

**46** **spectral garden: *artist's statement & portfolio***

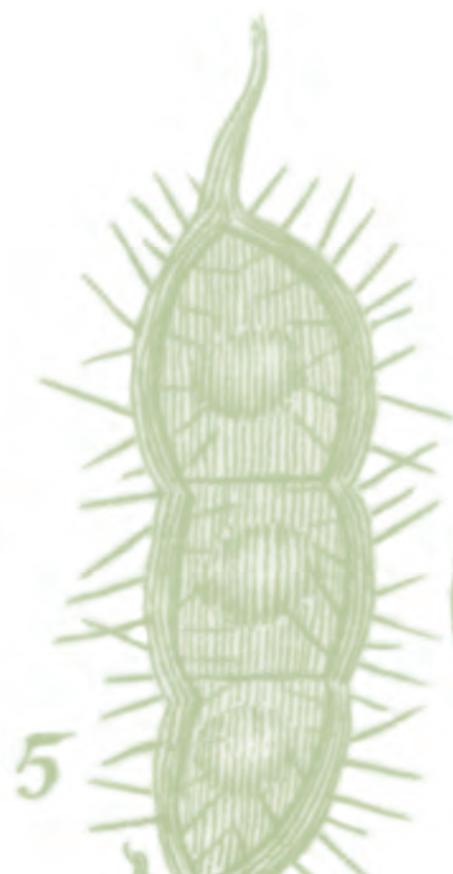
laura st. pierre

**54** **mike macdonald's butterfly garden: *the little garden that could***

katherine ylitalo



- 66 an ancient partnership: prairie grass, bison, & First Nations**  
wes olson
- 76 big stone**  
m. n. hutchinson
- 78 gone today, here tomorrow:**  
*an interview with mia rushton & eric moschopedis*  
ciara mckeown
- 88 the city of calgary's urban forest: past, present, & future**  
nikki anguish
- 92 make the waste places fruitful gardens:**  
*the calgary vacant lots garden club, 1914-1952*  
jim ellis
- 102 coming into noticing: on being called to account by ancient trees**  
andrew s. mathews
- 112 leila sujir's forest of pixels**  
nancy tousley
- 125 contributors**



# *acknowledgements*

**This book** originated in the Calgary Institute for the Humanities' Annual Community Seminar for 2018, which had the theme *Living with Plants*. The idea for the seminar came from the CIH's Advisory Council, which included Jackie Flanagan, Fran Jamison, Murray Laverty, Donna Livingstone, Judy MacLachlan, Micheline Maylor, Bill Ptacek, Valerie Seaman, Nancy Tousley, and Rod Wade. Many thanks are due for their guidance and support of the project from beginning to end; I am particularly grateful to Nancy Tousley for her advice on art and artists.

At the University of Calgary Press, Brian Scrivener, Helen Hajnoczky, Alison Cobra, and Melina Cusano have all been very supportive of the project and our vision for the book; thanks to glenn mielke for the beautiful design.

Carol Stokes, Archivist at the City of Calgary Corporate Records, Archives very helpfully compiled information about the Calgary Vacant Lots Garden Club. Thanks as well to the staff at the Glenbow for assistance with archival images and objects.

CIH Coordinator Sean Lindsay provided research assistance and organizational support for the community seminar and at all stages of book production. I am grateful to the four original speakers at the seminar, and to all of the other contributors to the book, for being co-operative and patient with our many requests as the outlines of the book came into shape. A heartfelt thank you to all of the writers, artists, and organizations who allowed their work to be included. Special thanks to Katherine Ylitalo for her enthusiasm and advice, and for her invaluable assistance in securing the beautiful cover image; I am grateful to Attila Richard Lukacs for giving us permission to use his work for the cover.

—jim ellis

**IMAGE pp x - xi: (Detail) Sensitive plant, *Mimosa pudica*, native to central and south America.** Handcoloured copperplate stipple engraving from Jussieu's *Dictionary of Natural Science*, Florence, Italy, 1837. Engraved by Corsi, drawn by Pierre Jean-Francois Turpin, and published by Batelli e Figli. Credit: Album / Florilegius.

# *introduction*

jim ellis

*director, calgary institute for the humanities*

**Plants** were the first to colonize the planet, and they created the soil and the atmosphere that made life possible for the animals. The largest and oldest life forms currently inhabiting our earth are plants. In spite of their primacy, Western cultures have traditionally regarded plants as the lowest of life forms, lacking mobility, language, and sensation. However, recent research by botanists, anthropologists, philosophers, historians, and ecocritics has challenged these older views of plants, shedding new light on how plants have shaped and continue to shape life on earth, and how intimately plants are intertwined with human history.

Scholars, writers, and scientists such as Suzanne Simard, Monica Gagliano, Stefano Mancuso, and Peter Wohlleben have argued that plants move, respond to their environment, communicate with each other, and form mutually beneficial partnerships with other species.<sup>1</sup> These thinkers explore the connections to be found in the “Wood Wide Web,” where mycorrhizal fungi facilitate forms of community that we traditionally associate with animals.<sup>2</sup> These new studies not only shift our view of plants themselves as largely inert beings but also alter the way we understand the borders or boundaries of individual creatures and the systems of interdependency that bind all living things together. This leads philosophers like Matthew Hall to consider the moral standing of plants, echoing certain Indigenous ways of knowing that see plants as fellow creatures.<sup>3</sup>

## xiv introduction

Moving in a related direction, Anna Lowenhaupt Tsing's *The Mushroom at the End of the World* is a breathtaking exploration of the world of the matsutake mushroom, which grows in human-disturbed forests, nurturing new growth and supporting cultures of itinerant harvesters in a globalized economy; in Tsing's telling, the mushroom offers lessons for life in the Anthropocene era.<sup>4</sup>

Here in western Canada, human habitation has always been intricately intertwined with the lives of plants. As Wes Olson demonstrates in his essay in this book, prairie grasslands co-evolved with Indigenous cultures and the buffalo. Calgary is located on land where the Bow River meets the Elbow River; the traditional Blackfoot name of this place is "Mohkinstsis." Another name for this region is "Old Man's Garden," according to An-nora Brown. Brown was an Alberta artist and amateur botanist born in Red Deer in 1899; she heard the name "Old Man's Garden" in the sacred stories told to her by First Nations friends about the first man and the planting of the Earth. These stories portray a world in which plants are fellow creatures, with which we have relations and reciprocal responsibilities. In her book *Old Man's Garden*, Brown categorizes the plants of the foothills of Alberta largely by the uses that the First Nations people made of them: whether for food or medicine or dye, or for something else. Whenever she can, she gives the names that the First Nations people use for the plants, but she also notes the names that the European visitors gave them, and their reasons for the names, which offers an insight into the different relations that different groups have had with plants.<sup>5</sup> As Katherine Ylitalo notes, whereas Europeans generally give plants one name, First Nations people might have three different names for different parts of the same plant.

When discussing plants, Brown writes about the methods by which the First Nations people harvested and processed them for food, whether by boiling, drying, pounding, or roasting, and how they also produced food for trade, either with other neighbouring nations or with the European visitors who came onto their territories. For the European explorers, it is clear that they could not have survived without the plant products they traded for or the knowledge of edible plants that they slowly gained. These visitors sent plants, seeds, and roots back to European collections and gardens, and brought others here. Plants are often thought of as immobile, but they do in fact get around, often by manipulating others: they manage to get insects to move their pollen, birds and animals to carry their seeds, and humans to transport them to various parts of the world.

The potato, for example, which is now one of the biggest crops in Alberta, is indigenous to the Andes and was domesticated by the Inca sometime between 8000 and 5000

BCE; it moved to Europe in the sixteenth century, via the Spanish, before coming back across the Atlantic in the seventeenth century. In North America there were already varieties of wild potato; the sixteenth-century English botanist John Gerard in his *Herball* includes the Virginia potato, and notes that some called Jerusalem artichokes Battatas de Canada, or Potatoes of Canada. Wheat, our other big Alberta crop, was first domesticated about ten thousand years ago in southeastern Turkey; through cultivation, it began to move outward from Turkey around 8000 BCE.

Plants, then, have from the beginning been intertwined with the lives of humans here in the West and with the European settlement of the West. It was the prospect of farming and farmland that brought most European settlers west and, a bit later, Maritime boys like my grandfather, who came out on special trains to help harvest the grain in the 1920s before going back to work in the logging camps of New Brunswick in the winter. What has brought others, more recently, is the fossil fuel industry, which is dependent upon the fossils not of dinosaurs but of ancient forests that grew a much longer time ago. And the burning of those fuels is causing warming trends that affect our contemporary forests, increasing the length of the forest fire season and thus diminishing the watershed's ability to hold water.

This book has its origins in the Calgary Institute for the Humanities' 38th Annual Community Seminar, which took place in May 2018. The seminar, with the title of *Living with Plants*, was the third in a trilogy of seminars that concerned topics from the environmental humanities. The first, in 2016, was *Calgary: City of Animals*, and the second, in 2017, was *Water Rites: Reimagining Water in the West*. The Calgary Institute for the Humanities (CIH) is Canada's oldest humanities institute, founded in 1976 to support high-level research in the humanities at the University of Calgary and to engage the Calgary community with humanities research and questions. The contributions in this book by Patrícia Vieira, Andrew S. Mathews, James F. Cahill, and Jennifer Wanner all began as presentations in the seminar. Cahill discusses his laboratory's experiments on plant behaviour, a relatively recent and still controversial area of plant biology. His experiments are designed to test and challenge conventional notions of plants as essentially organic factories that process inputs and expend energy; instead, his lab's experiments often demonstrate that plants respond to their environments in manners similar to those of animals, taking in information about their surroundings and modifying their behaviour accordingly.

## xvi introduction

Patricia Vieira uses the work of plant behaviourists as a starting point for a philosophical challenge to ways of thinking about human behaviour. Her essay on phytognosis asks what we can learn from the behaviour of plants, particularly in the era of the Anthropocene. Erina Harris draws on the work of Vieira and her collaborator Monica Gagliano in her poem “*Historia Plantarum*.” This is an excerpt from a book manuscript that reimagines the ancient Homeric hymn to Demeter, the only Homeric hymn devoted to a mother and daughter. In this case, the mother is the goddess of the harvest, whose daughter Kore, the goddess of grain, is abducted by the god of the underworld. This startling revision of the myth rests on the latest philosophical speculations about plants as beings, using the language of botany to rewrite the girlhood of a plant deity.

Two of the artists included in this volume take their starting place from botanical illustration and specimen collection to produce dystopic reflections on the Anthropocene era. Jennifer Wanner presented work from her series *Periculum* at the 2018 Community Seminar, showing collages made from endangered plant species along with surreal animations of plants that draw on French nature documentaries of the 1930s. Wanner’s project is a satiric modest proposal, grafting together the endangered plants of each Canadian province into one single entity that can be more easily preserved. In her installation “Fruits and Flowers of the Spectral Garden,” Laura St. Pierre collects and preserves specimens from Saskatchewan’s boreal forest. The resulting displays conjure up the melancholy of vitrines in a natural history museum, where fading and disintegrating specimens document life while simultaneously evoking death. The title of her 2018 exhibition in Regina’s Sherwood Gallery, *Museum of Future History*, points to a possible future where these now-common plants will have disappeared from the landscape.

The cover image of this book similarly documents loss, in its sumptuous depiction of a giant tree. The painting, “Arbor Vitae (6),” is by celebrated Calgary artist Attila Richard Lukacs. What appears to be the disorienting perspective of looking up into a tree is in fact part of a series of portraits of trees in Vancouver’s Stanley Park that were downed in a violent storm. These extraordinarily vibrant and active paintings, painted in gold on tar, bring an epic quality to these fallen gods, evoking the mythical dimensions of plants that Erina Harris explores in her poetry. Anthropologist Andrew S. Mathews documents the lives of other long-lived giants. His work details the mutually beneficial relations between chestnut trees and peasant farmers in Tuscany. The different time scales of lives means that individual trees depend on the labours and attentions of generations of farmers, who in turn must develop an acute sensitivity to the life cycles of trees. Mathews urges an attentiveness to the plants that surround us, an attentiveness that includes an awareness of these different time scales.

Like the peasant farmers of Tuscany, Nikki Anguish has a professional connection to trees: she works for the City of Calgary's Urban Forestry program. Anguish attended the CIH's community seminar, and her contribution below reflects on the particular challenges faced by urban trees. She starts by noting the ambitions of city official William Pearce to make Calgary a "City of Trees"; Pearce was also involved in another early civic endeavour, the Calgary Vacant Lots Garden Club. This club started early in the city's history and was designed to help with the high cost of produce by giving city dwellers the opportunity to have gardens in vacant lots. Like other such programs in the United States, and the early twentieth-century back to the land movement, it was informed by a belief in the morally and socially uplifting experience of working with plants. The vacant lots clubs are thus important precursors to contemporary progressive programs to address food deserts in underserved city neighbourhoods, as well as to post-humanist ideas that see a moral imperative in reconsidering our relation to plants and reclaiming earlier modes of being-in-the-world.

Two pieces about artists illuminate contemporary reclamation projects. Katherine Ylitalo discusses the work of Indigenous artist Mike MacDonald, who planted a series of butterfly gardens in disused spaces around art galleries in the 1990s. The original impulse for this work was a period of illness, when an elder told MacDonald to follow the butterflies, who would lead him to medicine. Ylitalo describes the process of maintaining the garden MacDonald planted at the Banff Centre for the Arts, which is the last surviving example. Calgary artists Mia Rushton and Eric Moschopedis took up a three-month residency at the Lougheed House, a local history museum in the heart of Calgary. As they discuss in an interview with Ciara McKeown, they undertook a work of reclamation by replanting indigenous plant species in the garden outside the house and bringing examples into the house, installing them on the mantelpieces. This act of bringing the weed, a plant which is by definition "out of place," into the centre of the home, challenges our ideas of what belongs where.

The earlier history of the native plant species is discussed in Wes Olson's essay on the intertwined histories of prairie grasses, bison, and Indigenous people. Olson explores some of the complexities of the co-evolution and mutual dependency of plants, humans, and animals, as they remade the landscape of the Great Plains. Relics of the subsequent phase of that history, when the West was being homesteaded by European settlers, are represented in the work of Calgary photographer M. N. Hutchinson. Hutchinson returned to Big Stone, in southern Alberta, to visit the place where his great-grandmother briefly settled with her five daughters, having moved northward from the United States in the

## **xviii** introduction

course of a long migration that began in Norway. Hutchinson's long-format photographs, captured with a custom-built camera, beautifully evoke the scope of the grasslands and the melancholy of an abandoned farm.

Moving westward, Leila Sujir takes us from prairie grasslands to the old-growth forests of British Columbia. Drawing on the latest photographic and projection technology, Sujir constructs an immersive experience of a space that is increasingly threatened by logging. Nancy Tousley's discussion of Sujir's work highlights the collaborative nature of the forest project, which draws in artists, community activists, and plant researchers like Suzanne Simard.

Sujir's multi-disciplinary approach matches that of this current volume. In combining art, philosophy, poetry, history, botany, and activism, the aim is to bring together a multiplicity of approaches that will illuminate an interconnected series of stories. One recurring story is of the plants of western Canada, and their role in the long history of human habitation. This is part of a larger story about our dependence on plants, and what we can learn from them for our own survival. Plants are the foundation of life on the planet, the source of energy for human and non-human animals and the air that we breathe. In habitually overlooking plants, we miss the myriad benefits they offer to us and, perhaps, the keys to our continued co-existence.

## notes

1. Simard, "The Mother Tree"; Wohlleben, *The Hidden Life of Trees*; Gagliano, *Thus Spoke the Plant*; Mancuso and Viola, *Brilliant Green*; Gagliano, Ryan, and Vieira, *The Language of Plants*.
2. Macfarlane, "The Secrets of the Wood Wide Web."
3. Hall, *Plants as Persons*; see also Nealon, *Plant Theory*.
4. Tsing, *The Mushroom at the End of the World*.
5. Brown, *Old Man's Garden*; on the relations between plants and First Nations of southern Alberta, see also Johnston, *Plants and the Blackfoot*.

## bibliography

- Brown, Annora. *Old Man's Garden*. Sidney, BC: Gray's Publishing, 1970.
- Gagliano, Monica. *Thus Spoke the Plant: A Remarkable Journey of Groundbreaking Scientific Discoveries and Personal Encounters with Plants*. Berkeley, CA: North Atlantic Books, 2018.
- Gagliano, Monica, John C. Ryan, and Patricia Vieira, eds. *The Language of Plants*. Minneapolis: University of Minnesota Press, 2017.
- Hall, Matthew. *Plants as Persons: A Philosophical Botany*. Albany, NY: SUNY Press, 2011.
- Johnston, Alex. *Plants and the Blackfoot*. Lethbridge, AB: Lethbridge Historical Society, 1987.
- Macfarlane, Robert. "The Secrets of the Wood Wide Web." *New Yorker*, August 7, 2016.
- Mancuso, Stefano, and Alessandro Viola. *Brilliant Green: The Surprising History and Science of Plant Intelligence*. Washington, DC: Island Press, 2015.
- Nealon, Jeffrey T. *Plant Theory: Biopower and Vegetable Life*. Stanford, CA: Stanford University Press, 2016.
- Simard, Suzanne. "The Mother Tree." In *The Word for World is Still Forest*, edited by Anna-Sophie Springer and Etienne Turpin. Berlin: K. Verlag, 2017.
- Tsing, Anna Lowenhaupt. *The Mushroom at the End of the World*. Princeton, NJ: Princeton University Press, 2015.
- Wohlleben, Peter. *The Hidden Life of Trees*. Vancouver, BC: Greystone Books, 2016.