



Exploring Environmental History through Botanic Gardens

How can Victoria's rich botanical heritage support student exploration of the natural world and society through Environmental History?

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Introduction: What is Environmental History?

Sciences and the humanities – so often separated in our training and thinking – are now turning towards one another with a grateful and urgent sense of opportunity and collaboration.¹

Environmental History is a relatively new area of inquiry within the history discipline, emerging since the 1970s, and an exciting development within the recent Australian History curriculum, especially in Year 10.² This opens up rich cross-curriculum opportunities for student exploration of the historic interactions between people and nature.

Environmental history is just one of the Ecological Humanities (including Human Geography, Agricultural and Garden History, Environmental Anthropology, Environmental Philosophy and so on) which investigate the transformation of the natural world by humans and the consequences for both the natural world and people. It imagines nature as an actor in history rather than as an inert backdrop against which the stories of history unfolds; as William

Cronon wrote, 'Environmental history sets itself the task of including within its boundaries far more of the nonhuman world than most other histories, and yet human agents continue to be the main anchors of its narratives.'³ In many ways, the Ecological Humanities, including Environmental History, challenge the very idea of a nature/culture divide. These tensions and shifting definitions provide useful frameworks for awakening curiosity and stimulating student thinking, discussion and debate. Is human action inside or outside nature? Are human actions natural or cultural? Have these divisions and distinctions changed through time and what does this say about us as a society?

This area of study is interdisciplinary in nature, pulling together ideas from the sciences, especially Ecology and Climatology. In creating this synthesis between disciplines, Environmental History seeks to develop holistic understandings of the big issues of global change and current local environmental problems. This interdisciplinary context means that much Australian Environmental History scholarship supports the cross-curriculum priorities of the

OPPOSITE: Senior students participate in an Indigenous Cultural Program at the Royal Botanic Gardens Cranbourne. Photo by Janusz Molinski.

Australian Curriculum: Aboriginal and Torres Strait Islander histories and cultures, Australia's engagement with Asia and sustainability. This work's underlying idea is that if we know more about how present environmental issues arose, then this will prepare us for future challenges.

The Anthropocene: A Tool for Framing Global Change

A Year 9 Depth Study – 1. Making a Better World? (ACDSEH017, ACDSEH082) – touches on core areas of inquiry within Environmental History, change in the physical landscape and changing or revolutionary ideas that lead to changes in the way we view the natural world and ourselves. A useful tool to consider when exploring these concepts is the idea of the Anthropocene.⁴ The Anthropocene is the name of a new geological epoch added after the Holocene to the Quaternary. This epoch was coined by ecologist Eugene Stoermer and controversially popularised by Paul Crutzen (a Dutch Nobel-prize-winning atmospheric chemist) as the twentieth century ticked over into the twenty-first.⁵

The Anthropocene marks the point at which humans began to change planetary ecosystems and takes its name from the Greek roots: *anthropo-* meaning 'human' and *-cene* meaning 'new.' The Anthropocene is still an idea in prospect, generating debate in the scientific community particularly around the timing of the beginning of this proposed epoch. Did it start with the industrial revolution, the beginning of agriculture or the detonation of the atomic bomb? There is a really useful short film (see link below) that introduces the idea of the Anthropocene as a way of framing the impact that humans have had on planetary systems and adds a new dimension to discussions about notions such as 'Gaia', 'limits to growth,' the concept of 'sustainability' and the concept of 'rights of nature' explored in Year 10 (ACDSEH125, ACDSEH126). The concept of the Anthropocene helps to frame the key inquiry question for Year 10: How was Australian society affected by other significant global events and changes from the end of WWI to the present?

Victoria's Rich Botanic Heritage

Of the 140 Botanic Gardens in Australia, 38 are located in Victoria, most in regional and rural areas – a legacy of recent developments, nineteenth century plant science and the quest to name and know Australian flora.⁶ Each of these historic landscapes has a unique history of creation, plant collection, gardening, community use or lack thereof. Exploring the history of your school's local Botanic Garden provides an interesting area of inquiry for Year 2 students (ACHHK044, ACHHK045) focusing on local history. This is useful to bear in mind if you decide that a more hands-on excursion would bring these ideas to life for students (unlike the Anthropocene, which is best explored in the classroom).

For Year 10 students inquiring into the 'background to environmental awareness, including the 19th Century National Parks movement in America and Australia' (ACDSEH028) a focus on local Botanic Garden or Parks provides interesting opportunities for exploration of scale in this idea: local to global. A great paper for teachers to access as background for this area of study is the recent article by Libby Robin on the history of the development of Australia's Royal National Park.⁷ This article highlights the historical role of national parks as conservation reserves in the quest to maintain biological diversity. What plants have your local gardens and reserves preserved, and when and why – these are interesting questions that can be explored with classes at the local level.

Another author whose work adds context to the study of the National Parks Movement from the American perspective is William Cronon. In 'The Trouble with Wilderness; or Getting Back to the Wrong Nature,' Cronon explores the notion of wilderness and challenges the idea that the great wilderness parks of North America are 'natural', suggesting rather that they are cultural artefacts.⁸ This is useful material for discussion and debate.

Royal Botanic Gardens Melbourne and Cranbourne

The Royal Botanic Gardens Education Service utilises the landscapes and cultural resources of the nineteenth century Royal Botanic Gardens Melbourne (RBGM) and the twenty-

- 1 Tom Griffiths, 'The Humanities and an Environmentally Sustainable Australia,' *Australian Humanities Review* 43 (2007), <http://bit.ly/19LCYyF>
- 2 For an introduction to the origins of Environmental History in Australia see Libby Robin, 'Australia in Global Environmental History,' in *A Companion to Global Environmental History*, eds. J. R. McNeill and E.S. Mauldin (London: Blackwell Publishing Ltd, 2012). Or for a view from North America see: J. R. McNeill, 'Observations on the Nature and Culture of Environmental History,' *History and Theory* 42 (2003): 5-43.
- 3 William Cronon, 'A Place for Stories: Nature, History, and Narrative,' *The Journal of American History* 78, no. 4 (1992): 1347-76.
- 4 For an overview of the history of the concept of the Anthropocene see Robin, Libby. 'Histories for Changing Times: Entering the Anthropocene,' *Australian Historical Studies* 44, no. 3 (2013): 329-49. For more detail about the evidence for the Anthropocene in stratigraphy, see Jan Zalasiewicz et al., 'Are we Now Living in the Anthropocene?' *GSA Today* (Journal of the Geological Society of America) 18, no. 2 (2008), available at: <http://bit.ly/aZRpUF>
- 5 P.J. Crutzen, and E.F. Stoermer 'The "Anthropocene,"' *IGBP Newsletter* 41 (2000): 17-18.



first century Australian Garden and Bushland at the Royal Botanic Gardens Cranbourne (RBGC). Both Gardens provide opportunities to enliven and enhance the learning of students. The Education Service also provides teacher professional development and teachers' resources (see link to programs in 'Resources' below).

The programs run for an hour and forty-five minutes and are guided by qualified teachers, who provide face-to-face engagement through stories, hands-on experience and the rich sensory environment of the Gardens. Our programs take an integrated and holistic approach to learning, making powerful connections to Curriculum and POLT (Principles of Learning and Teaching). RBG Science and Culture Programs offer another way to explore the Australian History curriculum. Education staff offer a broad range of programs that can support and deepen student exploration of Environmental History in the following ways:

INDIGENOUS CULTURAL PROGRAMS

Both the RBGM and RBGC deliver programs based on exploration of traditional Indigenous knowledge and culture. The RBGM lies in the traditional lands of the Wurundjeri People and the RBGC in the traditional lands of the Boon Wurrung People. See *Connecting to Country*, *Shared Country*, *Wilams not Wigwams* and *Bushfood*; all programs explore the historic and living cultures of our local Indigenous Community.

These programs support elaborations in:

- Year 3 Community and Remembrance (ACHHKo60, ACHHKo63).
- Year 4 First Contacts (ACHHKo77)

DARWIN'S GARDEN

Offered at the RBGM. This supports student inquiry into the impact of Darwinism (ACDSEH019) in Year 9 Progressive Ideas and movements (1750 – 1918).

ENVIRONMENTAL CHANGE PROGRAMS

Both the RBGM and RBGC deliver programs that explore changes in the Australian landscape through time. See *Changing Landscapes*, *Carbon Futures*, *Climate Change*, *Fire* and *Future Cities*.

These programs support elaborations in:

- Year 3 Community and Remembrance (ACHHKo61).
- Year 10 The Environment movement (1960's – present) (ACDSEH125, ACDSEH126, ACDSEH128)

If you would like to contact us to make a booking please call:

- Melbourne (03) 9252 2358 or
- Cranbourne (03) 5990 2200

Education Services Melbourne (for all Education enquiries and requests including the booking form): edserv@rbg.vic.gov.au.

Resources

WEB

The Environmental History Network Australia and New Zealand: <http://environmentalhistory-au-nz.org/>.

A great short film called *Welcome to the Anthropocene* which quickly and clearly outlines the idea of the Anthropocene, global change and the 'Great acceleration': www.anthropocene.info/en/home.

Tom Griffiths talks about the Environmental History of Ice. This short film will provide additional background to Environmental History as a discipline as well as providing a good example of how the environment can be discussed as an actor in history: <http://tedxtalks.ted.com/video/TEDxSydney-Tom-Griffiths-Ice-Co>.

For more detail on the Education Service programs at the Royal Botanic Gardens Melbourne and Cranbourne and booking information go to: www.rbg.vic.gov.au/learn.

ABOVE: Primary students at the Royal Botanic Gardens Cranbourne. Photos by Jorge de Araujo.

- 6 For more information about Victoria's regional Botanic Gardens, see Gwen Pascoe, *Long Views Short Vistas*; Victoria's *Nineteenth-Century Public Botanic Gardens* (North Melbourne: Australian Scholarly Publishing Pty Ltd., 2012).
- 7 For more information about the history of Royal National Park placed in a global context see Libby Robin, 'Being First: Why the Americans Needed It, and Why Royal National Park Didn't Stand in Their Way,' *Australian Zoologist* (2013): 1-11. Available to download from: <http://bit.ly/16NHBqZ>
- 8 William Cronon, 'The Trouble with Wilderness; or, Getting Back to the Wrong Nature,' in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Co., 1995), 69 - 90.