

# WAITING: A MEDICINAL GARDEN FOR AILING PLANTS

*"God is very rarely a plant and many people think of plants as furniture. From Aristotle to Kant to Darwin, life is running around biting your mate. What does a plant do in its spare time?"*

Ramon Guardans (1)

Text by **Ingrid Periz**



**Janet Laurence**

*Waiting - A Medicinal Garden for Ailing Plants*, 2010, Australian native plants, laboratory glass, blown glass, steel, horticultural mesh, acrylic, salt, amethyst, medical silicon tubing, water and various fluids, ink jet prints and screen prints on acrylic, water crystals, tulle, carbon, sulphur, various plant seeds, charred wood and plants, water pumps, ash; photography credit:

Photography: Jamie North © Janet Laurence and Jamie North

The Western medicinal garden has taken various forms: the monastic physic garden, typically located close to the infirmary; the university-affiliated gardens of Renaissance Europe, dedicated to the academic study of medicinal plants; the fenced kitchen gardens of colonial North America, where healing herbs were grown as close as possible to the master's house. Whatever the configuration, grand or domestic, the medicinal garden held plants that healed. Humans kept plants that would keep them.

Janet Laurence's *Waiting: A medicinal garden for ailing plants*, a major installation for the Sydney Biennale of 2010, was imagined, loosely, as a medicinal garden but one where the onus of care has shifted. Instead of the simples and herbs of the European pharmacopeia, "Waiting" sheltered a range of Australian native plants, some healthy, some ailing, and others dead. Contained in laboratory vessels connected to a network of tubing, the plants were housed in a large transparent pavilion with membranous walls extremely sensitive to changes in light and temperature. A solar-powered pump kept water circulating; condensation happened of its own accord with the arrangement working like an overarching metaphor for the work of plants themselves. Recalling in its structure and function both the botanical glasshouse—a light-filled structure dedicated to living plants—as well as the museological vitrine—repository of dead specimens—"Waiting" comingled life and death, decay and resuscitation. But this fantastic machine could not revive all the plants it contained and the appearance of life support was an illusion, framed by Australia's environmental fragility, water shortages and species loss. The work staged the medicinal garden as tent hospital, where plants are held in triage. (2) Plants keep us, can we properly keep them?

Laurence has worked remedially with plants in the past. Her "In the shadow" was an explicitly reparative work undertaken for Sydney's Olympic Park in Homebush Bay in 2000. Here Laurence regenerated a polluted waterway, incorporating extensive plantings of Casuarina and she-oaks with moving fog while the site's water chemistry was tracked by twenty-one glass measuring wands which registered its change over time. When the work was completed these wands dominated, now ten years later it is the plants that have reclaimed the site, bringing in their turn, insect and bird life. To the extent that the intervention's registration—the measuring wands—have been obscured by natural growth, the work

of art has disappeared, a remarkable result for a piece of public art. "Waiting" too will disappear from its site in Sydney's Royal Botanical Garden, obeying instead the laws of contingency that govern contemporary installation practice. Its afterlife existence in the extensive photo documentation that is also a feature of contemporary practice shows something both bleaker and more fantastic than the regenerative work of a decade ago.

## Glass

Nodding to the glasshouse and the vitrine, "Waiting" also conjures up another glassy container for plants-- the Wardian case, a glazed wooden box devised by the physician, fern enthusiast and amateur entomologist, Dr. Nathaniel Bagshaw Ward. In 1829, while studying the life cycle of a moth, Ward noticed a tiny fern growing in a covered jar in which he had placed a cocoon six months earlier. Unlike the tired ferns of his Wellclose Square garden, struggling in London's coal smoke, the fern spores which germinated in his entomologist's bottles thrived. Ward contracted a carpenter to build a closely-fitted case and discovered an ideal growing environment for ferns.

In 1842 Ward published *On the Growth of Plants in Closely Glazed Cases*; the second edition appeared ten years later, by which time Ward was envisioning great ameliorative and recuperative effects for a much larger version of his device. In this he echoed the words of Joseph Paxton, designer of the super glasshouse known as the Crystal Palace and a key proponent of its conversion, at the close of the Great Exhibition for which it was designed in 1851, to a sanatorium for consumptive patients. Ward, believing measles and tuberculosis could be cured by purified air, wrote, "...the Author hopes he may be pardoned in directing the attention of medical men to the possibility of constantly surrounding patients with a pure atmosphere, which, he imagines, will eventually be effected by a combination of vital and chemical forces." (3). He imagined the widespread adoption of Wardian cases as fixtures on city-dwellers' windows for by these means "London, or any other large town, might be converted into one vast garden". (4) Although Ward's science was faulty--he discounted the evidence that what is now called acid rain was the cause of plant decline in industrial cities and imagined that the enclosed air within the sealed Wardian case could work to cleansing effect on the external atmosphere—his fantasy of a million



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plant-filled glass cases making London “one vast garden” resonates with contemporary arguments for greener cities.

The vast garden that Ward helped create was less London than the British Empire, and ultimately the globe itself, for his glazed cases made possible the reliable transportation of plants and seedlings across oceans. Prior to the adoption of his device this had been a fraught enterprise with living plant material subject to salt spray, temperature extremes, dehydration, rodent attack and lack of light.<sup>(5)</sup> Wardian cases enabled the British to shift tea production from Shanghai to Assam, transplant Chinese bananas to Fiji and Samoa, and, using rubber tree seed gathered in Brazil and raised in the glasshouses of Kew Gardens in London, establish rubber plantations in Malaya and Sri Lanka, transforming local economies, agricultures, labour practices and cuisines in the process. For good and ill, these transplants remade the world.

Laurence uses species native to Australia but her work situates itself in the new global garden created by the colonial enterprise. One of the first uses of the Wardian case was in the shipment of two Australian plants—*Gleichenia microphylla*, a type of coral fern, and *Callicoma serratafolia*, commonly referred to as “black wattle”—to England in 1834, an eight month voyage during which the temperature fluctuated 100 degrees Fahrenheit.<sup>(6)</sup> Seeds of the black wattle successfully germinated en route; in Sydney the tree was used extensively in wattle and daub construction in the early colony to such an extent it is no longer found in the area. When Laurence, with artist Fiona Foley, was commissioned to produce a commemorative work for the Museum of Sydney in 1994, she used salvaged black wattle timber along with other depleted local species in the jointly produced “Edge of the Trees” (1994-5), a work marking the museum’s site as the first zone of contact between the original Cadigal people and their British colonizers while also recording the losses subsequent to that encounter.

The life of plants is not outside the time of human history. “Waiting,” situated on the former site of the Sydney Garden Palace which was built to house the Sydney International Exhibition of 1879 and designed by New South Wales colonial architect James Barnett as a reworking of Paxton’s Crystal Palace, casts this relationship in the contemporary mode of crisis rather than Victorian celebration. Plants and humans are both ailing in the current hothouse.

## Waiting

“All plants require rest,” wrote Ward and he understood this not as an absence of activity so much as a marshalling of forces.<sup>(7)</sup> Contemporary models of plant growth confirm this. Halfway into the diary of a year spent observing the life-cycle of a clump of the common European weed thalecress (*Arabadopsis thaliana*) in an English churchyard, plant geneticist Nicholas Harberd writes, “Previously, it was thought that plants grown in adverse environments grew poorly because they were ‘sick’, weakened by bad conditions, their metabolism compromised...this picture is incomplete. The inhibited growth, at least in part, is something the plant is doing to itself. It is an active, regulated thing rather than a passive-response thing.”<sup>(8)</sup> Guardans, too, refutes the passive, vegetative model of plant growth and cites plant allometrist Karl J. Niklas, “The physical environment and the laws that describe its behavior do not operate on a passive, totally submissive organism. By its growth in size and its potential to alter shape and structure, an organism can influence and even alter the extent to which the physical environment affects the rates and means of energy transfer.”<sup>(9)</sup> Thus, as Guardans notes, a plant will thicken the protective waxy coating called a cuticle on leaves growing in the sun but not those of leaves growing in the shade. He suggests a signaling response at work in all plant organisms and imagines a 3,000 year old tree as a “business of wind and water [management]” built on “a lineage of daughters.”<sup>(10)</sup>

If plants can rest, can they also wait? Harberd indicates as much when he writes about DELLAs, a family of related proteins that restrain the growth of plants. Growth, understood as a property of the plant as well as the environment, occurs through a series of interactions between DELLAs and the plant growth hormone gibberellin. Harberd calls DELLAs “the agents of restraint that restrain growth to a degree consonant with the conditions within which the plants find themselves. Lacking DELLAs, a plant becomes insensitive, brash, a fast-liver that is unable to exercise appropriate restraint, and that dies young. The appropriateness of restraint is a message that we ourselves need to heed.”<sup>(11)</sup>

To speak of plants waiting invokes the possibility of an agency that disturbs the usual distinction between subject and object but this is precisely Michael Pollan’s gambit in “The Botany of Desire” where he relates the history of four plants—apples, tulips, cannabis, and potatoes—as stands in for all the plants domesticated by



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Humans. <sup>(12)</sup> For Pollan, this history is the story of plant and human coevolution, of what plants do to human appetites— for sweetness, beauty, intoxication and control in his four examples—to further their own evolutionary advantage. If in Pollan’s words, “it makes just as much sense to think of agriculture as something the grasses did to people as a way to conquer the trees,” and if we are to adopt the more recent activist models of plant life, perhaps we can ask what it is that plants wait for.<sup>(13)</sup> In the scenario of Laurence’s “Waiting” their patience is almost at an end.

## References

1. “Plant physics: on the silent power of waiting” by Ramon Guardans, Journee ASIL (Art/Science/Instrumentation/Langage) DE L’IméRA, “Art, culture, théorie de l’évolution” Jeudi 22 octobre 2009, Maison Méditerranéenne des Sciences de l’Homme, Marseilles, France.

2. On the field hospital metaphor, see Felicity Fenner interview with Janet Laurence, “A hospital for plants: The healing art of Janet Laurence,” Art & Australia 48:1 (2010), pp. 64-5.

3. Nathaniel Bagshaw Ward, On the Growth of Plants in Closely Glazed Cases, 2<sup>nd</sup> ed. London: John Van Voorst, 1852; p. IX.

4. Ward p. 93-4

5. Fraught or no, the sea-borne traffic in plants was centuries old before it was transformed by Ward’s invention. At the end of the eighteenth century botanist Joseph Banks, in receipt of plant specimens from collectors throughout the world, sent casualties to a special hothouse in the Royal Botanical Gardens at Kew. He called this “our Kew hospital.” Andrea Wulf, The Brother Gardeners: Botany, Empire and the Birth of an Obsession, (New York: Vintage Books, 2010) p. 216

6. Ward, pp. 73-4.

7. Ward. p. 7.

8. Nicholas Harberd, “Seed to Seed: The Secret Life of Plants,” ((London: Bloomsbury, 2006) p. 197. Harberd was additionally directing a research team studying the genetic determinants of thalecress growth during this period. *Arabidopsis thaliana* is the fruit fly of plant genetics.

9. Guardans, p. 17, citing Niklas, Plant Allometry: The Scaling of Form and Process (Chicago: University of Chicago, 1994), p. 62)

10. Guardans, p. 18.

11. Harberd, p. 302.

12. Michael Pollan, The Botany of Desire: A Plant’s Eye View of the World (New York: Random House, 2001).

13. Pollan, p. xxi.

Janet Laurence exhibits widely and has an impressive record of representation in important group exhibitions, including the 9th Biennale of Sydney (1992) and Australian Perspecta (1985, 1991, 1997). Following her solo exhibition in 1991 at Seibu Gallery, Tokyo, and since she was awarded an Australia Council studio residency in Tokyo in 1998, Laurence has exhibited regularly in solo and group exhibitions in Tokyo and Nagoya. She was invited to create a permanent installation for the 2006 Echigo-Tsumari Art Triennial in Japan.

Her most recent solo exhibitions in Australia include ‘Birdsong’, Object Gallery, Sydney; ‘Janet Laurence’, Jan Manton Gallery, Brisbane (both 2006); and ‘Greenhouse’, Sherman Galleries, Sydney (2005). A survey exhibition of her work was held in 2005 at the aANU Drill Hall Gallery, Canberra.

Well known for her public commissions and architectural collaborations, Janet has completed significant national and international projects, such as the ‘Tomb of the Unknown Soldier’, Australian War Memorial, Canberra (1993).