

Horticultural themes during my lifetime of research in anthropology and garden history

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I grew up in a family of gardeners and spent much time helping my parents with weeding and harvesting. Our vegetable garden supplied fruit and vegetables most of the year.

Besides our own gardening, we talked about the professional world of horticulture, for our mother was the sister of Ivon, Harry and Dan Watkins of New Plymouth². However, by the time I reached 12 years old there was a special sort of digging that caught my attention – archaeology. When I was 15, I joined the newly formed Otago Anthropological Society and took part in some of their field trips. In 1963 I enrolled at the University of Otago, majoring in Anthropology.

In 1967 I started work on my MA thesis. I had become interested in early European visitors' accounts of Māori subsistence, especially those of Māori who lived in the colder parts of the South Island where kūmara and other tropical crops could not survive. Southern Māori were anthropologically-speaking hunters and gatherers. Yet they did not live in temporary encampments as they moved around their territory, as most other hunter-gatherers did. They had substantial permanent villages with well-built houses and stores, where families spent the winter months. Their temporary camps were used mostly in the summer when the population dispersed to places where food was abundant and could be processed for storage. This settlement pattern was consistent with that of their ancestors in tropical and sub-tropical Polynesia where both freshly cleared plots inland and intensively cultivated gardens and orchards supplied most of the food for coastal villages.

My MA thesis was the first of many publications on Polynesian and specifically Māori use of wild plant foods, and the transference of techniques to make them edible that had been developed for cultivated or emergency foods in the tropics. I became increasingly interested in the permeable boundary between gardening and gathering throughout the Pacific.

Palliser Bay

In 1969 my husband Foss and I began a three-year programme of excavations in Palliser Bay, Wairarapa (Fig. 1A–C), which provided the basis of our respective PhD studies and to supervise five Master's theses on specific site complexes, or themes such as lithic resources. These collaborations were very stimulating and rewarding for us all. Exposed on the old raised beaches were hundreds of acres of walled plots, believed by some to be extremely ancient. Since the orthodox view was that the Great Fleet had introduced kūmara and other tropical crops some centuries after settlement by 'Moa-hunters', the Palliser Bay evidence had the potential to push back the date of introduction to the earliest period.

At the end of the project I knew that at least 93 hectares of the coastal platform between Whatarangi and Cape Palliser had been subject to stone clearance according to several principles: the plots defined by the stone rows and alignments had equal access to the best soils, they followed a rectilinear system having been set out from a base line on the lowest side, usually a beach ridge but sometimes a river bank, and they were associated with trench boundary markers and paths. The soil between the rows had

been artificially deepened, with the incorporation of wood charcoal, and sometimes domestic refuse or beach gravel. Artefact styles, the presence of moa bone and the radiocarbon dates showed that the largest wall complexes had been started by the 12th century, a date that some would now revise upwards with the new short chronology. But I had confirmed the existence of early gardening, and its complexity warranted the term 'horticulture'. The climate was consistent with cultivation of just two crops: kūmara and bottle gourd.

My doctoral thesis, entitled *Horticulture in New Zealand: An investigation of the function of the stone walls of Palliser Bay*, submitted in 1976, was just the beginning of a long and satisfying engagement with garden history and culinary traditions. In 1979 Foss Leach and I edited a bulletin of the National Museum of New Zealand, entitled *Prehistoric man in Palliser Bay*. But there was much more that I wanted to say on Māori gardening.

Rhodes Visiting Fellowship in Oxford

I began to ask why an anthropologist should confine herself to the activities of other cultures. I realised that I knew more about Māori gardening than that of my own ancestors. I applied for a Rhodes Visiting Fellowship at St Hilda's, Oxford, England, submitting as my research topic the role of kitchen gardening in Aotearoa / New Zealand, and comparing the responses of the two gardening traditions that had to come to terms with our environment and climate. Instead of a token chapter on Māori gardens it would give full weight to their great achievement – adapting tropical horticulture to a temperate landmass.

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² These three brothers established high profile flower, seed and nursery businesses, including Watkins Seeds Ltd, and Ivon Watkins Ltd (which in 1964 became Ivon Watkins-Dow Ltd).



Fig. 1 Three images from *1,000 Years of Gardening in New Zealand*, p. 40. **A**, an archaeologist traces the course of an L-shaped alignment of stones marking the edge of a garden plot at the mouth of the Makotukutuku River in Palliser Bay. **B**, on the south bank of the Pararaki River in Palliser Bay, two lines of stones delineated the edges of garden plots and the pathway between them. **C**, this simple stone alignment flanked a stone row made during garden clearance at the Waiwhero wall complex in Palliser Bay.

There was a lot I needed to know about the origins of kitchen gardening in the West, and Oxford proved an excellent location. I met and talked with Egyptologists and experts on Babylonia. I also had the resources of many libraries in this pre-internet era. The result was a book published in 1984, entitled *1,000 Years of Gardening in New Zealand* (Fig. 2).

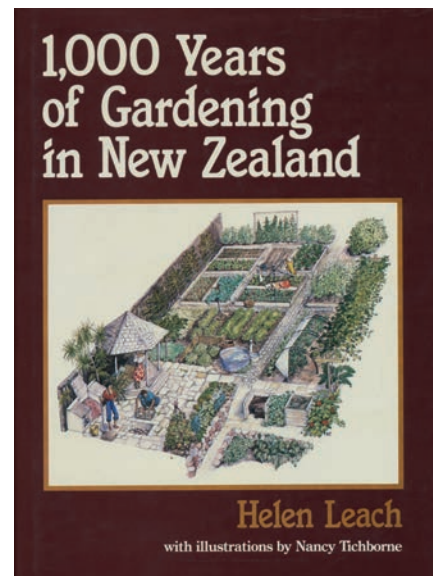


Fig. 2 Book cover of *1,000 Years of Gardening in New Zealand* (1984).

The influence of terminology

Terminology and shifts in word meanings became increasingly interesting to me over the next two decades. In many of the cases I have investigated, ignorance of an old meaning has led to misleading historical reconstructions, while incorrect categorisation of activities has affected political outcomes. A prime example of the latter was the subject of an article I wrote for the English journal *Antiquity* which had a long and cumbersome title (Leach, 1997). In 1965 the famous Danish economist Ester Boserup had proposed a global model of the development of food production systems in which the earliest form of agriculture was non-labour-intensive slash-and-burn cultivation. As populations increased, fallow periods declined, and food producers had to intensify their labour input to keep up. Eventually this led to high-input industrialised farming. Anthropologists with experience of a wide range of non-western production systems knew that some of them were more like gardening than farming. Most were inclined to classify these horticultural systems as primitive and of very ancient origin, at a similar level to slash-and-burn cultivation.

I had always been puzzled by my colleagues' and earlier anthropologists' descriptions of Māori cultivation practices as agriculture. However, the 18th century explorers called the large Māori plots 'plantations', probably because to them a garden had to be enclosed. But the 18th century observers were unanimous about the high standard of care of these plantations, likening them to "our best gardens", weed-free, mulched, and with fine tilth. Praise turned to criticism through the course of the 19th century, despite the fact that Māori gardeners had adopted numerous western vegetables and were supplying the settlers of Auckland and many other towns until the 1850s. Increasingly their tools were described as 'bad', their knowledge of agriculture limited, and their practices unsystematic. They were criticised for not using manure or practising crop rotation systems. By classifying Māori as agriculturists instead of advanced horticulturists, Europeans justified the re-education of Māori on missionary farms and the dangerous attitude that Māori did not know how to use their land.

On a similar theme I published a paper in *Current Anthropology* in 1999 in which I took my fellow Pacific archaeologists to task for the way they applied Boserup's model to Polynesian production systems. They had convinced themselves that every time a new island was settled, the settlers went back to slash-and-burn production, until population growth demanded intensification in the form of garden walls, terracing, and irrigated pond fields. But I knew that the gardening of the first settlers in Palliser Bay was intensive from the start. My argument was that horticulture was an intensive system wherever particular species were moved away from the environment in which they evolved. For example, in Samoa the wet climate and soil conditions are highly suited to taro production in clearings in the bush. In drier parts of East Polynesia, taro plants require intensive cultivation in irrigated pond fields. In no way was this the sort of intensification that

Boserup had modelled for agriculture. Intensification in horticulture is plant and environment-specific. Horticulture and agriculture have followed very different trajectories and our culture has kept them apart until very recently when market gardening has been increasingly mechanised. In no way can horticulture be seen as underdeveloped small-scale farming.

Domestic gardens in and beyond New Zealand

While working on academic aspects of horticulture, I collaborated with my sisters Mary Browne and Nancy Tichborne on a series of cookbooks in which I emphasised the history of each plant type and its domestication. *The Cook's Garden* was the first to appear, in 1980 (Fig. 3). While in Oxford I gathered enough additional material to write a paper for the British journal *Garden History* entitled 'On the origins of kitchen gardening in the ancient Near East'. Although it was published in 1982 it has not yet been superseded. I think this is because prehistorians are obsessed by the origins of agriculture in the Middle East and see gardens and orchards as insignificant add-ons. Even among scholars of gardening, like the editors of *The Oxford Companion to Gardens*, kitchen gardening was of minor importance – as I discovered when I was allowed just 2,000 words for the entry on 'Kitchen-gardens' in the first edition of this large volume, published in 1986.

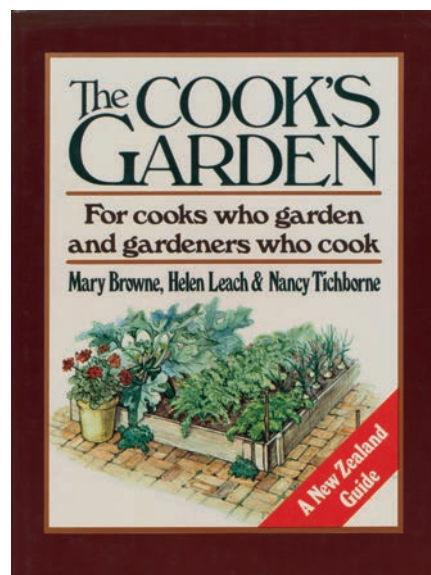


Fig. 3 Book cover of *The Cook's Garden* (1980).

In 1995 *Garden History* accepted my paper 'Plant categories and the significance of meaning changes – the case of herbs and related terms'. This exposed the shallow research that lay behind the craze for formal herb gardens pretending to be historical reconstructions. Many popular garden writers had looked at reproductions of formal, geometric gardens from the 16th and 17th centuries and in reading their captions had assumed that 'herbe' meant the same as it does now. I showed that from the 14th century at least, to the early 18th, 'herb' had much the same meaning as our word 'plant', though excluding trees.

In the 1990s I also looked more deeply into European gardening in New Zealand than had been possible in the 1984 book. Much primary research had to be done since the field was under-studied. I started with a paper called 'The New Zealand kitchen garden of European origin: a preliminary study', published in *Horticulture in New Zealand* in 1991. Using my collection of old gardening manuals, seed catalogues and recipe books, I looked for the first signs of a divergence in vegetable types from those of Britain. In the same article I traced changes in plant fertilisers. The Victorians were especially interested in locally produced bone meal, perhaps as a substitute for imported guano. As sources of dung and 'night soil'³ declined, there was growing use of industrial fertiliser, such as coal-gas by-products.

The chemical industry had been wooing gardeners since the later decades of the 19th century. When some of the lethal arsenic-containing compounds were withdrawn after World War II, the chemical industry had an even more dangerous array on offer, many of them employing defoliants and anti-malarial insecticides left over after the war. Sold under the militant names Pestmaster and Gardenmaster, DDT was widely used in gardens and on farms, as were chlordane and lindane. The 1961 Yates Garden Guide declared that DDT was harmless to humans, unlike arsenate of lead which "is a deadly poison".

³ Defined in Wikipedia as "a historically used euphemism for human excreta collected from cesspools, privies, pail closets, pit latrines, privy middens, septic tanks, etc. This material was removed from the immediate area, usually at night, by workers employed in this trade."

Malathion joined them in the 1960s. While DDT became a restricted pesticide on farms in 1973, home gardeners were free to continue its use. Lindane was not banned until 1990, just three years after *Yates Garden Guide* introduced its first section on Organic Gardening.

I found a very fruitful resource in the *Yates Garden Guide*, because it was constantly revised to match changing public tastes. When I was asked to contribute to Tom Brooking and Eric Pawson's volume *Environmental Histories of New Zealand*, published in 2002, I plotted all the changes since the first New Zealand edition of *Yates*, in a chapter entitled 'Exotic natives and contrived wild gardens'. This title drew on another earlier publication in *Horticulture in New Zealand* that had appeared in 1994. I called it 'Native plants and national identity in New Zealand gardening: an historical review'. Much to my surprise I found that until the ecology movement began to gain ground in recent decades, the New Zealand natives that had been grown as a statement about national identity tended to be bright-coloured and variegated sports, propagated by nurserymen and bearing little resemblance to truly wild forms. The Victorians had incorporated certain natives like flaxes and cabbage trees in their gardens not because they appreciated their status as natives, but because they looked as exotic as palms and aloes and cost less. A third paper on a similar theme was selected for the British journal *Hortus* in 2001. I called it 'Our natives, your exotics – your natives, our weeds'.

My major work on British garden history was my book *Cultivating Myths*, published in 2000 (Fig. 4). This book pulled together a lot of threads, including the myths that the fashionable ornamental potager and formal herb garden were a historical revival, and that the flower-bedecked cottage garden was typical of agricultural labourers' homes.

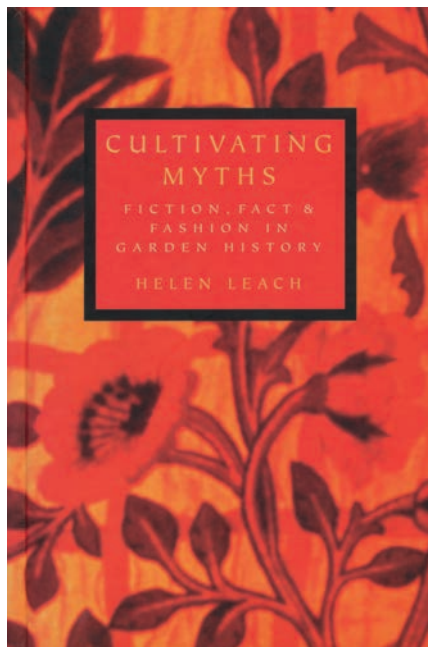


Fig. 4 Book cover of *Cultivating Myths* (2000).

There had indeed been picturesque cottage gardens in the 19th century but they had been made by the middle and upper classes trying to emulate an Arcadian image of 'Merrie England'. I also examined various garden fashions, teasing apart the conversion of the 16th and 17th century formal wilderness into the late 18th century shrubbery, and plotting the rise of the romantic wild garden. I studied walled gardens and outdoor rooms, gardeners' love-hate relationships with variegated plants, and the paradox of the 20th century lawn as an amalgam of four concepts with quite separate origins (Medieval flowery meads, bowling greens, Renaissance grass plats and 18th century deer-grazed lawns). The latter was one of the most satisfying pieces of research from a personal point of view because it expunged my guilt concerning the condition of my own lawn.

Overall, I have found the study of gardening, and its formal discipline 'horticulture' extremely satisfying. Restoring its separate identity from agriculture, and its importance for so many human societies has been very rewarding. In future it has a key role to play in maintaining healthy ecosystems.

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