1953. The Loder Cup. *Auckland Botanical Society Newsletter 10 (2):* 7.
1955. Historic trees of Auckland. Ibid. 13(1): 1-3.
1957. Rangitoto once again. *Auckland Botanical Society Newsletter 14 (2).* Contains quotations from L. H. M's letter to the Minister of Lands (24 October 1956) and his letter to the Auckland Metropolitan Council (19 February 1957).
1959. Rangitoto. Species list of commoner ferns and flowering plants (L. H. M.) and brophytes (R. F. De Berg and L. H. M.). Circulated on excursion of N. Z. Ecological Society (29 August 1959).
1960. Our plant world. *N. Z. Junior Encyclopedia 1:* 310-336.
1961. Day length as related to vegetative development in *Ulex europaeus* L. I. The experimental approach. *The New Phytologist 60:* 339-354.
1962. Idem II. Ecotypic variation with latitude. Ibid. 61: 119-127.
1965. Forest, scrub and fresh-water communities. In: Kermode L. O. (ed). Science in Auckland. Handbook prepared for the 11th N.Z. Science Congress held in Auckland. Royal Society of N.Z.: 36-48. [Republished with minor changes 1979, In: Brook, P. J. (ed). Natural History of Auckland: an introduction. Auckland Institute and Museum.]
1971. A simple, inexpensive and efficient microscope lamp. *N.Z. Journal of Botany 9:* 545-548.
1974. Rangitoto. New Zealand's Nature Heritage 1 (3): 80-83.
1975. Obituary. Professor L. H. Briggs (1905-1975). *Tane 21:* 175-176.

Laurie Millener: A Teacher of Note

John E. Morton

Even if plants were only my second love, I caught my enthusiasm for them half a century ago from Laurie Millener. Early in 1945 Prof. T. L. Lancaster died suddenly and it fell upon Laurie alone to run the whole Botany Department, lectures and practicals and supervision of M.Sc.

I remember so well the courses in '43-'45. There was much that today's University could learn. Specialist options were unheard of: we were given a discerning tour of the (then) whole plant kingdom. Few today would be able to present it. But in 1945 Millener seemed the man for the hour. His was the best under-graduate teaching I was to encounter. Lectures were efficiently crafted, in plain yet elegant style. For many years I kept the big foolscap note-books with notes just as taken down on the left, and the right page later filled with coloured diagrams. Of the two lecturers I best remember, Barney McGregor's style (in zoology) was baroque, but Laurie's was clean and classic.

Years 2 and 3 alternated between Cryptogams and Phanerogams, with the grand theme of Hofmeister's life cycles running from mosses and ferns through to flowering plants. We had too in the Cockayne tradition a fine conspectus of NZ plant communities. Field work was generous and personal, with groups no larger than twenty. Hobson Bay close at hand provided mangroves and all the salt-marsh species. The Swanson day trip was the highlight where - as a zoologist - I was first to realise the glory of Auckland's bush. Field Club also was active - as (alas!) no longer - with Easter and after-Degree camps. Laurie was often there, and students got also to know and teach each other.

Books were fewer in those days, but we were kept up to date. With Dobzhansky's *Genetics and the Origin of Species,* we were brought to the frontier of polyploidy and speciation . A favourite of Laurie's - and still of mine - was Agnes Arber's new *Natural Philosophy of Plant Form.* I caught a life-time fascination with flowering plant families, then inspired by John Hutchinson of Kew. Plant physiology gave us just enough on photo-synthesis: (Wilstatter and Stoll) and respiration/fermentation to show us the way into biochemistry. Recent work on trace elements (boron and cobalt) was taken on board. As in no other department I knew, undergraduates were encouraged to read current articles, as in the *New Phytologist* and *Annals of Botany.* Or with that chuckle (heh!) of new enthusiasm, Laurie would bustle in to lecture with a new revelation culled from the latest *Nature.*

First year laboratories - six hours weekly - were special occasions, the themes were ecological anatomy and a generous introduction to the natural families. Laurie presided in person, through cutting our own razor sections, staining (saffranin and fast green), mounting (Canada balsam). Then in the second half, we'd do interpretation - and drawing: *Spinifex, Cotula,* mangrove or one of a dozen others with lessons to teach.

Laurie's heart was already set on Cambridge, stirred by letters from Eric Godley, Dick Matthews and Geoff Bayliss, Aucklanders already there. In 1946 he was off to Clare (with botanist E. Ashby as Master). To speak of a "renaissance man" today could be taken to imply some want of engrossing specialism. Laurie Millener's mission to was see his science whole: to teach it with conscience and concern: in fact to help ensure that a discipline of "Botany" went on existing. As students we had personal access to a very few "tall" people . And I've never accepted since that to teach any topic really well, one has to

be personally doing research in it.

In the years to come, I was often to remember Laurie: as when I walked in Cambridge Botanic Gardens with a kindred enthusiast, John Corner, or when I found *Ephedra* growing in Florence, or (both in one day) *Gnetum* and *Degeneria* in Fiji.

But the enduring Millener memorial is close to home. We need only to go out into the Princes Street University Gardens . . . and look around.

St John's College bush, Meadowbank, Auckland

E. K. Cameron

Directly below (north) of the Anglican Theological Training College of St John The Evangelist is a forested area comprising two intersecting gullies and surrounding land, covering c.5 ha (see Fig. 1). These steep-sided gullies drain to the north. The upper slopes (also forested) are more gradual. After intersecting the stream continues for c.25 m before flowing under a low point of Gowing Drive (in a 90 cm diameter pipe) and then down through a bushy area to Purewa Creek. The presence of young native fish, banded kokopu (*Galaxias fasciatus*), in the bigger summer pools in the St John's gullies indicate that this stream connection to the sea, at times, is virtually unbroken. Both streams show signs of recent down-cutting and there is a swampy area (c.40 m long) of recent sediment deposition at the confluence of the two streams.

History of the College area

The Theological Training College was transferred from Waimate North (Bay of Islands) to the present site in 1844. It was planned by Bishop Selwyn and developed by his Domestic Chaplain Rev. William Cotton. The College retains a nationally significant group of buildings that date from the 1840s (Cameron et al. 1997: 215). Elizabeth Jackson (1976: 49) documented the College's early history, including quotes about the grounds: when the new buildings were first occupied in 1846 ".. not a single tree grew in the vicinity and all the surrounding land was covered with fern and bracken". Although a sketch of the College settlement in 1846 (Jackson 1976: 38) shows young bush existing below the cleared building site. Other Jackson (1976) statements include: regular working parties made up from all 130 residents, both Maori and English, "changed the face of the landscape." One ex pupil, William Williams, noted that he and his companions planted hundreds of ngaios to improve the look of the place. These were purchased for 1 penny each from local Maori. Mrs Selwyn commented in 1846 on the innumerable planted trees "chiefly ngaios as nurses for the choiser sorts .. in time to come it will be as beautiful a place as the heart can wish" (Jackson 1976: 49). Today not one ngaio (*Myoporum laetum*) appears to have survived but many of the plantings by the early College residents have matured over the last 150 years and nursed a new cover of mainly native vegetation. Many of the native species would have dispersed naturally into the area from adjacent bush (by wind & birds) and, as mentioned above, it appears from a 1846 sketch that some native cover was always present below the buildings. Indeed, John King-Davis recorded in 1872 (Jackson 1976: 149) that "Under the loving care of the new master [John Kinder], garden and glen became a place of delight; ... the maze of pathways now running round the head of the gully, with pretty glimpses opening out of Rangitoto and the sea, now diving into recesses of the glen and bordered by the native trees and ferns, ... here to follow the banks of a tiny stream, while it penetrated further and further into the small bush, always beautiful, .."

Planted canopy species

Today native species dominate most of the canopy and understorey. But in the upper western gully and some outer margins there are many large exotic and native trees that would have been planted. Some of the larger exotics are spectacular and measure 1.0-1.5 m diameter and 15-25 m tall, they include oak (*Quercus robur*), pines (*Pinus pinaster, P. radiata*), bunya bunya (*Araucaria bidwillii*), macrocarpa (*Cupressus macrocarpa*), Norfolk pine (*Araucaria heterophylla*) and a *Magnolia grandiflora*.

Others exist as specimen trees on the College lawn above the bush. The tallest bangalow palms (*Archontophoenix cunninghamiana*) would have been planted. This species is now naturalising widely in the upper western gully. In the same area are tall pohutukawa (*Metrosideros excelsa*) and puriri (*Vitex lucens*), which also would have been planted. In the western gully there are many deciduous sycamore (*Acer pseudoplantanus*) and in both gullies large tree privet (*Ligustrum lucidum*) is present. The tall canopy specimens of both these species were presumably planted.