

## APPENDIX: Records of *Sonchus kirkii* in the northern part of the North Island (see Fig. 2).

These records are based on 30 herbarium collections (excluding duplicates) and several published records. When present, information on abundance is also included.

### Historical sites (over 30 yrs old, or thought to be extinct)

Kermadec Ecological Region & District – Macauley Id, Jul 1966 (*W. R. Sykes 65/K, 91/K*, CHR 171166, 171182); Curtis Id, Jul 1969 (*W. R. Sykes 835/K, 874/K*, CHR 193791, 193783).

Te Pahi Ecological Region & District – Cape Reinga, Jan 1896 (*T.F. Cheeseman*, AK 10801-02); Spirits Bay, Jan 1927 (*H. Carse*, CHR 333690A & B).

Aupouri Ecological Region & District – Te Arai, Jan 1948 (*R.C. Cooper*, AKU 5590); near Awanui, wetland, Oct 1914 (*H.B. Matthews & H. Carse*, AK 222540, 227429); The Bluff (Te Wakatehaua), 1 plant Oct 1990, none Jan 1996 (de Lange 1996); near Ahipara [Tauroa Peninsula ?], west coast, Jan 1911 (*H. Carse*, CHR 333688A & B); vicinity of Kaitaia [Tauroa Peninsula?], Apr 1914 (*H. Carse*, AK 10799, 10800);

Eastern Northland and Islands Ecological District – Cape Brett, only 2 plants seen, Sep 1964 (*G.I. Collett*, CHR 153609).

Waitakere Ecological District – Anawhata, Dec 1930 (*L.B. Moore*, CHR 40919).

Awhitu Ecological District - cliffs near mouth of Waikato River [north side of the river?], Mar 1901 (*H. Carse*, CHR 333689A & B); Manukau County west coast, Mar 1901, (*H. Carse*, AK 35259); near Karioitahi sea cliffs plentiful (Carse 1901).

Waihi Ecological District – Waihi, Nov 1906 (*D. Petrie*, AK 10798, WELT 27956).

### Current sites (since 1970)

Kermadec Ecological Region & District – Macauley Id, Nov 1970 (*W. R. Sykes 1000/K*, CHR 211774), Dec 1988, Sep 1990 (*G. A. Taylor*, AK 247615-16, CHR 468553); Cheeseman Id, Nov 1970 (*W. R. Sykes 935/K*, CHR 211777); Curtis Id, Nov 1970 (*W. R. Sykes 917/K*, CHR 211776); fairly common on Macauley, Curtis and Cheeseman Is (Sykes 1977).

Three Kings Ecological Region & District – Great Id, Dec 1982, Dec 1983, Jan 1989 (occasional) (*A.E. Wright 5204, 5213, 6081, 8707*, AK 162630, 162598, 173011, 182941); frequently observed on Great Id within coastal scrub and forest clearings (de Lange 1996: 55).

Maungataniwha Ecological District – Tauroa Peninsula, uncommon, Dec 1985 (*P.J. Bellingham 536*, AK 175808); Tauroa Peninsula, north of Tanutanu Stream, small population (de Lange 1996).

Hokianga Ecological District – South Head near entrance to Hokianga Harbour, small population (de Lange 1996).

Tutamoe Ecological District – south end Maunganui Bluff, very few plants (de Lange 1996 and *pers. comm.*)

Taranga Ecological District – Maitaha Id (*W. Chickens*), very rare plant, Jan 1982 (*A.E. Wright 4518*, AK 159701 and grown from its seed: AK 159701, AKU 14570).

Awhitu Ecological District – Karioitahi, occasional, Mar 2000 (*Cameron 10113*, AK 245889).

Raglan Ecological District – Ngatutura Point, Jul 1992 (*P.J. de Lange 1386 & P.D. Champion*, CHR 478423); Otehe Point, local, Sep 1989 (*P.J. de Lange*, WAIK 11621, dup AK); Te Kaha Rocks, common, Feb 1989 (*P.J. de Lange*, WAIK 9682 A & B, dups AK, WELT).



## Laurie Henry Millener, M.Sc. (N.Z.), Ph.D. (Cantab.), FRNZIH

E. J. Godley and A. D. Thomson

Laurie Millener lectured in Botany at the University of Auckland from 1940 to 1974. He helped develop the Botany Department from a staff of two and very small Stage I classes and he enthused generations of students with his love of plants both native and introduced. Zoologist Professor John Morton in his tribute at the time of Laurie's retirement recalled (8):

"When we first knew him, he was already a superb teacher. Without being classically formal, his lectures were elegant and clear-cut. For many of us they have continued to be a model. He still wore a master's black gown (white coat in the labs); he was confident in his craft, and he knew how to project it. He was a master of good, clear blackboard work, and of beautifully arranged and sub-headed notes. His lecture-room style was clean and functional; not quite classical, let alone baroque; but he did lecture with beauty, and finish of an artist's recital." We too recall his outstanding ability as a teacher and his

love of plants. Laurie was also a foundation member of the Auckland Botanical Society and both he and his wife Joan were very active members, leading field trips and participating in working bees. In 1940 he was Acting-Secretary and gave a talk on "The Evolution of a Land Flora". He was Vice-President 7 times from 1944-5 to 1962-3 and President in 1955-6 and 1956-7.

Laurie was born on 1 April 1914, at home in Princes Street, Northcote, Auckland, literally a stone's throw from the sea. From Northcote Primary School and Northcote Junior High (Stds.5&6), a Junior National Scholarship (1926) took him to Mount Albert Grammar. In the days before Takapuna Grammar School, boys from the North Shore went either to MAGS or AGS by ferry and tram, but when the Millener boys grew older they took their bikes on the ferry and rode to Mount Albert. At Mount Albert Laurie played soccer and was always very proud of

the Auckland University Soccer blue that he gained later. From Mount Albert Laurie entered Auckland University College in 1933 with a John Williamson Scholarship and the Joseph Shaw Memorial Prize in Chemistry (10). At first chemistry was his favoured subject and his switch to botany was a considerable disappointment to Professor L. H. Briggs (1905-1975).

A fellow student, but a year ahead, was Geoff Baylis who writes:

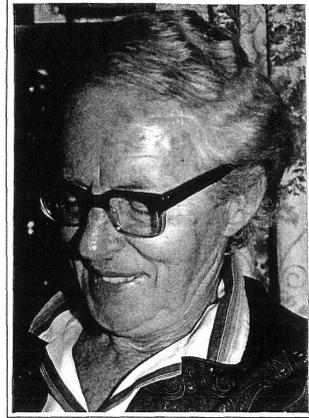
"Laurie Millener and I met as botany students at AUC. A day ashore at Parengarenga with the *Will Watch* expedition early in 1934 kindled my interest in the Far North and I infected Laurie with my enthusiasm. We had bikes and Laurie's Northcote neighbour Captain Preston-Thomas would give us a lift to Kerikeri in the NSS Coy's *Tuhoe*. So we left as soon as the 1934 exams were over having consigned a few stores to the care of the schoolmaster at Te Hapua. We camped at Spirits Bay and whenever we went to town for stores Mrs Rust the schoolmaster's wife called us in for a meal. Along with two young assistants the Rusts were the only white people in the village so our company was welcome.

Our interest in the countryside was as much geographic as botanical. We tramped to North Cape and to Cape Maria van Diemen, Laurie always a few yards behind, looking rather grim, saying little, but proving very durable. The only other centre of civilization was Te Pahi station but we were too shy to introduce ourselves to the Keans. We did of course try to identify all the plants and no doubt there are herbarium specimens somewhere other than the type of *Pomaderris oraria* [BD 18169, L.H. Millener, 11.12.1934]. Travel was arduous. I don't forget the interminable slog along Spirits Bay in soft sand because the tide was high or the 30 mile return journey from Cape Maria in one long day.

After about a fortnight Mrs Rust prevailed upon Captain Dorling of the *Waka* to give us a passage down to Russell. From then on the loose-metal roads were hell for bikes and punctures were frequent. It was with great relief when at Kaiwaka we saw the railway - lifeline home if our tyres gave out. I was so lean and sunbaked when I arrived home that my father did not embrace me but asked curtly what I wanted."

After the exams in 1935 Laurie camped on Hen Island with Geoff Baylis. He returned in January - February 1937 and with R. A. Falla, G. Buddle and two fellow-students, C. A. Fleming and E. G. Turbott, was marooned for four days when their expected launch developed engine trouble. They were rescued by the Whangarei Harbour Board

launch and the Whangarei police (1). And in the summer of 1936 or 1937 Laurie was invited by Mr T. L. Lancaster (1888-1945, Head of Department) to accompany him, Mrs Lancaster and their daughter Margaret on a tour to the South Island, helping with the driving. They reached Arthur's Pass, if not further. In 1939 Laurie made his third trip to the Hen.



Laurie Millener in the 1990s

In the second half of the 1930s Laurie was the major figure in the Botany Department, not only because of his brilliance as a student but because of his wide-ranging abilities and interests. As Secretary-Treasurer of Field Club in 1936 and 1937 he organised successive and ambitious After-Degree Camps to Mayor Island, and he helped with Whangaparapara (Great Barrier) in 1938 and the Waihothonu Hut (Tongariro) in 1939. He is reported to have held the record of long service in Field Club, being the only member to serve on the Committee, then as Secretary-Treasurer, student Chairman, Vice-President, and President. He loved music (a great admirer of Gigli) and was an expert photographer. His gramophone and Rollei flex were the envy of us all. Some of his photographs taken in the early halcyon Field Club days were reproduced in "Eric Godley Botanist: A Pictorial Record of His Career" (12) and in the history of the Club (6). Students in the early 1950s recall Laurie's fine slides of N.Z. mountain scenes with native plants in flower.

In 1936 Laurie graduated B.Sc. with a Senior Scholarship in Botany and the Sir George Grey Scholarship and in 1937 began a study of the ecology and anatomy of *Entelea arborescens* for his M.Sc. He worked in a small laboratory on the first floor of the old Choral Hall and was supervised by

Mr Lancaster. He was plagued by respiratory troubles and in one year could not sit his M.Sc. papers. But his work was supported by a Duffus Lubecki Research Scholarship in 1938 and 1939 and he graduated M.Sc. 1st Class in 1940 with a thesis entitled "Some observations on *Entelea arborescens* R.Br." His ecological observations were continued until March 1943 (when he revisited a revegetation plot on Hen Island) and were published in 1947; this is a pioneer paper in autecological studies in New Zealand botany. His anatomical work, which would have been of even greater significance was never written up. In his Duffus Lubecki years he was trying to relate the frequent growth rings of the very light wood of whau to changes in temperature, and cycled round regularly to trees in Auckland gardens, reading thermometers and taking wood cores.

In 1940 Laurie was appointed Demonstrator in the Botany Department (by now in the "new" biology building) in lieu of Miss K. J. Wakelin who had resigned to be married. He recalled: "The only equipment of value was a few microscopes. Books occupied a shelf or two, with two or three runs of journals just started. There was a keen handful of students beyond stage I, and a whole subject for two men - senior and junior - to teach." To help out he designed microscope lamps himself and he also began much needed lectures in plant physiology for the advanced and honours students. Until then students had to read this up for themselves.

In 1944 Laurie was appointed Lecturer but with the sudden death of Professor Lancaster in 1945 he shouldered the responsibility of running the Department virtually alone (8).

In 1946 V. J. Chapman was appointed to the Chair of Botany at Auckland and Laurie was free to study overseas. He was up at Pembroke College, Cambridge, from 1947 to 1949 and gained his Ph.D at the Botany School with a thesis entitled "Experimental studies on the growth forms of the British species of *Ulex* L.". Parts of his thesis were published in 1961 and 1962.

On returning to New Zealand Laurie was appointed Senior Lecturer and then in 1962 Associate Professor. In the Botany Department at Auckland, Laurie taught a range of subjects. He was steeped in N.Z. botany of the eras of Cockayne, Cheeseman, Kirk, Holloway and Thomas and the overseas classical work of Bower, Scott, Arber and Hutchinson. His main fields of interest were in ecology, anatomy, experimental morphology and physiology, and cryptogamic botany, with special

consideration to the evolution of a land flora and the alternation of generations.

Aspects of the botany of the Auckland region were one of Laurie's special interests and he had an extensive knowledge of notable plants in the region, both native and introduced. He also had an extensive knowledge of Rangitoto Island. He argued for special legislation to protect the vegetation (3) and in his view, cottage owners on the island were playing an important role preserving the unique plant life (2,4) by policing the island against vandalism and fires, and controlling introduced animals and plants such as *Pinus radiata*, *Hakea*, etc. He envisaged the cottage holders as Honorary Rangers on the island (4). Laurie prepared a report on his proposals for the then Minister of Lands E. B. Corbett. A highlight of the Auckland University Centennial celebrations in May 1983 was an ascent of Rangitoto on Sunday 8 May 1983 (11) by a large party of participants at the celebrations (including Lucy Moore, Charles and Peg Fleming, Eric Godley, Jack Rattenbury, Warwick Silvester and Diane and Andy Thomson), led by Laurie who gave us the benefit of his observations on the vegetation over many years. In a somewhat characteristic manner, Laurie grasping a sheaf of notes arrived at the Auckland wharf just before the boat left for Rangitoto. Laurie had perhaps the greatest knowledge of anybody about the botany of Rangitoto.

Laurie helped extend the native trees and shrubs planted around the university grounds which add so much to the beauty and interest of the cramped Auckland University campus. The natives around the campus will remain a monument to Laurie's dedication to botany.

In 1969 Laurie was elected a Fellow of the Royal New Zealand Institute of Horticulture with the following citation:

"Dr. L. H. Millener, Associate Professor of Botany, University of Auckland, has been an active member of the local district council for a number of years. Not only has he a keen interest in the conservation of the indigenous flora but he has diligently pursued an interest in collecting historic data of unusual trees in the Auckland district. From time to time he has been militantly concerned in petitioning local bodies for the preservation of these species. He has been responsible for the planting and maintenance of the ground around the university and through his own efforts maintained a pleasing display of interesting trees and shrubs. The Auckland District Council has no hesitation in recommending him for the award of Fellowship."

Outside botany Laurie had an absorbing interest in food and wine and in 1984 reported (7) that he had a cellar with c.4000 bottles and "...quite a number unique now ". For many years he judged the wine competition at the Auckland Easter Show and he also advised and encouraged many of the Auckland wine makers. With Nick Nobilo he was midwife to the first oak-aged Chardonnay in New Zealand; and he was very proud of the fact that it was his analysis of climate and soil conditions that lead to grape-growing in the northern part of South Island (13). In relation to this aspect of Laurie's interest two stories come to mind; in the Botany Department in the



**Laurie, with a glass of wine which he always enjoyed. 1990s.**

early 1950s Laurie produced a celebratory bottle of a sauterne for the then current crop of M.Sc.

students in the Department (Rod Bielecki, Carrick Chambers, George Mason and Andy Thomson).

Another example of Laurie's passion for food and wine was in 1959 when he was on sabbatical leave in Cambridge and was returning home to N.Z., my wife and I (A.D.T.) took him by car from Cambridge to London. He especially wanted to visit Fortnum and Mason where he purchased some coffee. Laurie then discovered he had left his travel documents in his coat which he had left hanging on the back of our kitchen door in Cambridge. Time was running out and we had to rush back to Cambridge and Laurie then caught a train back to London and did manage to get back for an engagement that night.

In 1942 Laurie married Vivienne Joan Howie a fellow student in the Botany Department and who, like Laurie, had a distinguished scholastic career. Joan died in 1977 and in 1985 he married their friend Jean Rushbrook Lochore who predeceased Laurie. Joan and Laurie are survived by two sons, John and Philip both now working in the United States.

Laurie's list of publications is not long. Early in his career he was quite definite -as one of us can confirm- that Botany was only one of the fascinating things in life that he intended to study and enjoy. And he kept to his intention. But anybody reading his papers and articles cannot help but be impressed by the breadth of his knowledge, his original approach and practical skills, and the felicity of his writing. Had he so wished he could have had a research career of exceptional merit.

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## 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 notebooks 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 was to 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