

AUCKLAND BOTANICAL SOCIETY

LUCY M. CRANWELL LECTURE

Date & Time: Wednesday 4 September, 8.00 pm

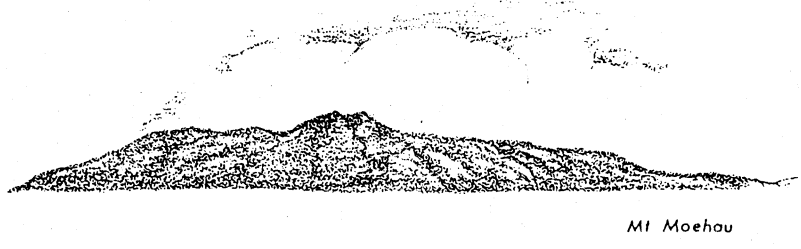
Venue: ZOOLOGY LECTURE THEATRE AUCKLAND UNIVERSITY
Symonds Street (entry via gate No. 5)

Speaker: Dr L.B. MOORE

"AUCKLAND BOTANY IN THE CRANWELL ERA"

Dr L.B. Moore, for many years a senior botanist with Botany Division, DSIR, was closely associated with preparation of Vol. I of the 'Flora of New Zealand' and was senior author of Volume II. In this the first Lucy M. Cranwell Lecture she will review the state of local botany 1924-1944, describe the excitement of pioneer botanical field work, and recall renowned botanists of the period.

Pterostylis alobula (Hatch) L.B.Moore



Mt Moehau

LUCY CRANWELL LECTURE

given by Dr Lucy Moore on 4 September 1985 at University of Auckland
Edited transcript

Good evening! Thank you for coming and for inviting me. First I can tell you that in a letter I had today from Tucson, Arizona, Lucy sent greetings to you all, her many friends and people she doesn't know too. You might like to return greetings to her by signing an attendance sheet, as we did here as students. I am especially pleased to see Lucy's sister, Delta Robertson who shared in some of our adventures.

Those of you who know LMC will remember her as rather unpredictable, perhaps because her mother was Cornish. Far from putting all her cards on the table she always kept a few trumps up her sleeve. Though I am by no means so resourceful I'm playing one small trick tonight by changing my title from "Auckland Botany in the Cranwell Years" to a less pretentious one — "Cranwell Botany in the Auckland Years". A general survey of Auckland (or New Zealand) botany during these two decades might make a good subject for a future talk in this series.

Lucy's husband, Watson Smith, wrote last week advising me to "Steer a light-hearted course with occasional wanderings hither and yon. Don't be scientific in any misguided impulse to stick to the absolute truth, which doesn't exist anyhow. Some good embroidery in things of this kind brings back life more vividly than factuality." Well, embroidery is rather outside my field, but you may recognise some as we go along.

At Epsom Grammar in the early twenties we knew Lucy Cranwell as a good all-rounder, a champion swimmer who made history also by driving a cricket ball through the window of a form room that was well outside the boundary. She won prizes for essays and for drawing but not in botany though her notebook was commended. She (and I) came to AUC in 1925. She did a somewhat odd Arts degree, including the equivalent of three units in Botany, one in Geology, English as a major topic and, for MA Honours Botany with a thesis on epiphytes. A short course in journalism with Alan Mulgan stood her in good stead later, and she served on the Students' Association executive in 1928. Recently she wrote "I've forgotten none of the pleasures of those days. Professor Egerton was the benign head of a small friendly English Department. I remember many students who were important at that time with warmth, and gratitude for the free, innocent, penniless, hockey-playing days we shared. I came callow from Henderson, a gentle but flavourful village in the twenties, travelling on the slow Kaipara and suburban trains." Among the pleasant recollections would be the botany taught entirely by T.L. Lancaster whose keen interest in native plants many of you will recall also. Along with Zoology students we took lectures under Prof. Sperrin-Johnson on what was called heredity and evolution. J.A. Bartrum, in charge of Geology, is remembered with affection, I'm sure, by everyone who knew him.

For botany in New Zealand the period 1925-1928 was an exciting time. The second edition of Cheeseman's Manual of the New Zealand Flora" came out in 1925, two years after the death of the author. We were lucky to come fresh to the new names and concepts. Leonard Cockayne's influence was consolidated by the appearance of the radically revised second

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Inaugural
LUCY M. CRANWELL
Lecture
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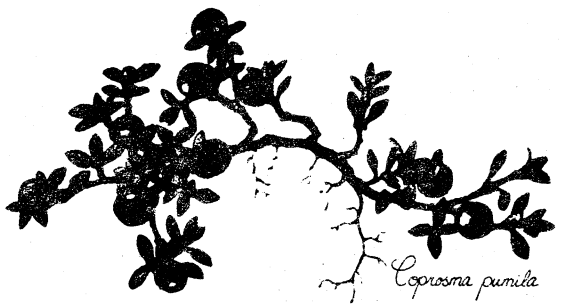
Patricia Fooks
Lynne Scott
Jon. Hatch
Elizabeth Bourke
Ted Cox (Soil Bureau a friend of Norman Taylor)
Nelda Robertson
Katie Wood Mayo
Ena Taylor
Una Esler
Mary Bourke
Janetta & Frank Newhook
Jack Rattenbury
Frank Hudson
Maureen Young

Jack Mackintosh
Marjorie Seddon
Bydie Eyres
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edition of his "Vegetation of New Zealand" in 1928, following on the third edition of his "New Zealand Plants and their Story" in 1927. R.M. Laing's "Reference List of New Zealand Marine Algae" updated this group of plants from Hooker's "Handbook" of 1867. In 1925 the university School of Forestry opened in Auckland, only to close again in 1930. As no biology was taught in boys' schools it was a novelty for us to see young men taking a professional interest in plants. DSIR was set up in 1926, opening up some prospects for employment of future graduates. Donald Petrie, an outstanding contributor to New Zealand botany since 1879, lived his last years in Epsom but we were unlucky not to meet him before he died in 1925. Harry Carse, another notable amateur, made himself an authority on grasses and sedges and we used to tram out to Onehunga to pick his brains. His comprehensive herbarium, now incorporated in CHR, seemed to occupy half of his very small retirement home.

Cockayne's vigorous correspondence with famous botanists all over the world facilitated publication in overseas journals where a surprising number of New Zealand papers appeared. Also he was instumental in bringing exotic visitors here. J.P. Lotsy, the Dutch botanist, lectured on the place of hybrids in evolution. The Swedish couple, Einar and Greta Du Rietz, stayed six months in the summer of 1926-1927, collecting from the Far North to the Subantarctic Islands, and paying special attention to the lichens. The Director of Kew Gardens, Sir Arthur Hill, came in 1928. Such celebrities were considered to be beyond the horizon of students and we missed them all. One we did see was Arthur Sledge from Leeds who has never forgotten how he ruined his good English boots and lost his pipe on Rangitoto. All the same he retained a great fondness for New Zealand which he handed on to his students of whom one, John Lovis, is now Professor of Botany at Canterbury.

Perhaps the first two-day trek that Lucy C. and I made together was to Tamahunga (436 m), the hill at the back of Leigh. We knew nothing about tramping or tramping clubs, and certainly had no back-packs. We carried our bed-rolls across our shoulders — very awkward for pushing through bush! After a night at the trig we stumbled down the track carrying a shelf fungus 40 cm or more across, trying to preserve its pristine whiteness. I wonder if it is still in the Museum.

Another very early field excursion was to the King Country in search of Dactylanthus, the subject of my thesis. Sergeant Fearnley of the Te Kuiti police was our contact and we travelled some way under his escort on the back platform of a railway carrage, looking as disreputable as any pair of prisoners but eagerly learning from him about local plants. From Mangapehi we two went eastwards, riding on a horse-drawn trolley that ran on wooden rails, to the Ellis & Burnand mill and in to untouched parts of that marvellous podocarp forest — a never-to-be-forgotten sight, the like of which will probably not be seen ever again.

In 1929 we were graduates without jobs but we were lucky to be awarded jointly the Duffus Lubecki Scholarship (which I hope still exists) and with its forty pounds or so we undertook to investigate the vegetation of Moehau at the tip of the Coromandel Peninsula. The unexpected assemblage of alpine plants on the summit had been recorded in 1888 by James Adams (great grandfather of the artist Nancy Adams) but there were no later reports; the list of herbfield plants in Cockayne's "Vegetation" was quoted from Adams. At Easter 1929 we set out to reconnoitre the mountain. Just to get there was an undertaking: NSSCo.

steamer to Coromandel, service car with Dick Goudie to Colville and even a few miles further by the clay road that would be impassable if wet. From the hill within sight of Port Charles it was a matter of walking, carrying everything we had, as far as Stony Bay. The leading ridge from there gave the most direct access to the Moehau trig (892 m) where we had our first glimpse of mountain plants; guided by one of the Bronlund boys we descended by another route. Then we pushed on by the coastal track to Fletcher's Bay where Captain Fletcher's account of Maori canoe relics in a nearby swamp diverted our attention from botany towards archaeology. The carved prow and stern-piece that were exhumed by LMC are in safe-keeping in the Auckland Museum.

It was in 1929 too that Lucy Cranwell was appointed botanist at the Museum, which was just settling into its new building, opened Nov. 1929, in the Domain. Here she faced tremendous tasks. The Cheeseman herbarium badly needed attention after being stored in the basement of the Town Hall, if I remember correctly. Dozens of glass cases yawned empty awaiting exhibits. Public relations were very important as the Museum depended largely on voluntary contributions from local bodies and private donors for funds and materials. The staff was very small and the half dozen professionals were expected to carry out field work and to produce papers for the burgeoning Museun Records. A big series of challenges! But she didn't give up the Moehau project.

Let me remind you of a few of the more anomalous plants growing on top of old Moehau, remembering that it is only 892 m (2926 feet) in altitude and nearly a quarter of a degree of latitude north of Auckland; drifts of Celmisia incana amongst the summit rocks; cushions of Oreobolus pectinatus in peaty places, run through with Drapetes dieffenbachii, Cyathodes empetrifolia, and Pentachondra pumila; dwarf tussocks of an alpine danthonia and the fluffy-headed sedge Carpha alpina; low growing bushes of Dacrydium (Halocarpus) biforme, Phyllocladus alpinus (asplenifolius), and Podocarpus nivalis or its hybrid with P. hallii; Libocedrus bidwillii pioneering in open ground and Coprosma foetidissima abundant in shrubberies.

Dr Cockayne was eager for information and full of advice. I can quote from a letter he sent to LMC on 7 May 1929. We must take an aneroid, a film camera and stand; he wants a vivid description and general photos of summit vegetation and close-ups of the margin of the forest, and to know about altitudinal belts; a list of all species observed from base to summit and some idea of relative abundance; on the summit to find out the nature of the soil; relation of plants to wind, shade &c.; how are the species combined together; the density or openness of vegetation; life-form of each species, in detail; relative abundance of seedlings; general colour; does forest become stunted? are there any rocks? We were to collect living plants and bring pieces of all the summit species "for growing in my garden so that they can be compared with other forms"; bring plenty of dried specimens; for unknown or critical species take only one piece from each of a number of different plants; pay special attention to suspected hybrids; don't neglect grasses and sedges; be sure to collect all forms of Alseuosmia. Don't rely on memory — have notebook in hand all the time; in the evening write up a general account of the day's work from memory and field notes (not easy as we carried no tent). The very next day another letter came, wanting cuttings from seacoast to the top; hybrid seedlings for growing; dried specimens of Senecio myrianthos (a species we never found); look out for

Hebes; are there two species of Quintinia? What is the Dracophyllum? and Corokia buddleioides, what is it like? This made a long list of desiderata but after some 40 field days over 5 years we knew answers to most of the questions, though some still remain in doubt.

That year we went three times to Moehau and, as we'd never been on any other mountain, we went one weekend in September to Te Aroha where C.E. Christensen, a protégé of Cockayne's, saw us well started up the mountain track. Near the summit some white stuff amongst fern patches puzzled me. It was in fact the frozen remains of a snowfall and the night we spent at the trig station was memorably cold — our unlined canvas sleeping bags were white with frost by morning. It was in this quite full year too that we began a long series of tramps out to Anawhata where the "university shack" was being built by the half dozen student owners, of whom LMC was one, and their impecunious friends. This small building and the beautiful headland property were later donated to the university.

I propose now to run more or less chronologically through the years, noting where we went and what we did to give you some picture of the sort of person this Lucy Cranwell was and how she worked.

1930

Off to Moehau again. When possible we went in a biggish launch, the Lady Jocelyn, that ran round Cape Colville to Whitianga, calling here and there rather unpredictably, sometimes at places near the foot of our mountain. I remember returning one night when the cargo included sacks of live crayfish for the Auckland market. Several large ones, gifts to the crew, roamed free on the deck and were a hazard for us moving about in the dark.

Castle Rock, off the Whitianga road, has (or had?) a nice population of Celmisia adamsii and a Gaulteria we wanted to see so, after spending an April night in Coromandel, we raced up there and back before catching the mid-day steamer for home. We had to move quickly, especially after an unscheduled but amusing hold-up. We were lightly clad, without packs, and LMC wore elderly cotton football shorts discarded by a brother. A snag of rock or twig produced a sizable three-cornered tear. I remember putting her over somebody's chopping block and, having borrowed a needle and thread, sewing her back to respectability — running repairs in situ, so to speak.

Our great expedition in 1930 was to the Urewera. We'd heard tales from Bob Falla and Ray Firth who had walked through the track a couple of years before, and were warned by W. Traill of Lands & Survey of the dangers of wild cattle. At this time the road from Murupara to Waikaremoana was pushing ahead and was just drivable as far as the lake edge at Hopuruahine. Our objective was Maungapohatu (1359 m) well away north-eastwards from the road. Leaving our driver (a Cranwell cousin with a hoodless old Dodge) to fish at the lake, we set off at 3 am in a PWD truck back to the Papatotara Saddle and from there trudged the deep-worn horse track across three steep ridges to Rua's pa at the base of our mountain. We were welcomed by two kindly school teachers and a missionary who pointed the way to the Gisborne track. This we followed, gaining little altitude, to the eastern side where an almost vertical surveyors' route took us to the flattish summit just as the sun was setting. When dawn came the mountain plants were covered with a delicate layer of frost — in leatherwood and Coprosma scrub, peaty

hollows and deep sink holes, limestone bluffs and ledges — our first meeting with alpine flower gardens. In her report to Dr Cockayne LMC wrote of "the extensive view. It was the first time that I had seen forest unbroken by clearings, and there was scarcely a dead tree, except near the trig, from horizon to horizon." and that is just as I remember it too. Reluctantly we left at 11.30, loaded down with specimens, to meet a 4 o'clock deadline at Papatotara. From our six hours of observations on this botanically undocumented mountain we wrote our first paper, with all the confidence of youth — and with copious editing by Dr Cockayne! This was our contribution to Volume 1, Number 1 of the Records of the Auckland Institute and Museum (1931).

A special personality for us in 1930 was Professor Arnold Wall who was then just about to retire from the Chair of English at Canterbury University College. He was noted for his fast solo walks and climbs on the plains and mountains of the South Island, and for bringing back tantalizingly small plant specimens from untrodden places. Also he was known for his newspaper articles and poems, some of them rather tartly flavoured. When we met him in Auckland we thought he might like to see the Waitakeres and our west coast, and something of the northern flora. Whether he liked it or not he wrote a fairly accurate account for an Auckland daily paper (here quoted in part), giving us not quite the kind of publicity we relished. The fourth member of the party, Olive, was Miss Z.O. Lloyd, probably known to some of you later as senior mistress at Avondale.

The heavens lifted up their gates and opened up their sluices,
When I went forth to wander with an Olive and two Lucies;
Rain-laden westerlies blew fierce and roared among the treeses,
A lot they cared, these Amazons, these little Herculeses!

For these were heroines of fame, not skilled in arts cosmetic,
Nor fussy about hygiene or fads or dietetic,
While other girls devote their days to tennis, tea, and scandal,
They brave the pigs and cattle round the steeps of Coromandel.

They've couched upon the cold, cold ground, and in the forest bedded,
In frost and fog and sleet and snow, in places drear and dreaded;
And as for frills and furbelows, I'm sure they had not got any,
But they instead are deeply read in 'ologies and botany.

Although beneath their little belts a dreadful aching void is,
They trouble not if they can find Corokia buddleoides.
From their glib tongues the awesome names come trooping with decorum,
Marattia, Blechnum, Agathis, Panax and Pittosporum.

. . .

They scurry down the slippery slopes, their scanty "duds" defiling,
They trip, they slip, they slide, they fall, and always come up smiling;
Regardless of abrasions dire, contusions, cuts and rigours,
When they see a hill before them they fly at it like tigers.

. . .

Three days we tramped the lonesome hills by wicked ways and miry,
They little recked of mud and slush, their spirits were so fiery;
What comrades these for gloomy days, with boisterous gales and rainy,
So brisk, so bright, so strong, so cheery, and so brainy.

Auckland Star, November 1, 1930

— Arnold Wall

1931

We still had the idea that we should see more mountains to help us interpret Moehau, so we had our first "overseas experience" — we went to the South Island! On the way there and again as we came back we called on Dr Cockayne at his home in Ngaio and found him just as stimulating and excitable in person as in his letters. In Christchurch we joined Prof Wall to go over Porters Pass to the Castle Hill basin where we had several days in the limestone country and on the Craigieburn Range. Our base was amongst beech trees in a charming cottage owned at that time by the Izard family but replete with memories of the earlier runholder/botanist J.D. Enys after whom the place was named. An old diary recorded how many famous botanists had stayed there and what day excursions and discoveries they had made. Prof Wall was involved in collecting seeds of species suitable for rock gardens in Europe and he knew exactly which ones would be ready and where to look for them. We couldn't have had a better introduction to the tussock vegetation and its multitude of herbaceous plants, the shingle slides, and some real alpines.

One reason for our stay in Canterbury was to collect a vegetable sheep (Raoulia eximia) as an exhibit, comparable to those in other institutions, to fill a display case at the Auckland Museum. I shudder now to think how anyone could be so vandalous as to climb Mt Torlesse purposely to dig out one of these marvellous cushion plants. I wonder if ours is languishing somewhere in the museum still. Again Prof Wall put pen to paper with an article two columns long, part of it in verse, and with photographs.

HOW THEY BROUGHT THE GOOD SHEEP FROM TORLESSE TO CHRISTCHURCH

The way was long, the wind was rough, the enterprise was parlous,
Upon the thrice-accursed screes and ridges of Mt Torlesse,
When five went forth to conquer and collect the great Raoulia,
Three of the genus homo, and two of genus mulier.

A fierce nor'wester battered hard against the mountain faces,
High peaks were shifted on that day some distance from their bases,
The ancient rocks themselves were cowed and quivering like jellies;
We often could not stand, but moved, like armies, on our bellies.
. . .
Long poles of mountain beech we bore, and in between them sacking,
A great ungodly pickaxe for the scrabbling and the hacking,
And knapsacks, kodaks, provender, with heaving and with lugging;
Bowed down with burdens, up we strove, the lee spur always hugging.
. . .
Now to avoid the bullying blast, the tumult, and strepitus,
We sought to lunch in shelter, just behind a crag precipitous,
Unheeding Helichrysums, Epilobiums, and Geraniums,
We dropped our date stones and our crumbs on one another's craniums
. . .
The wanted plants were growing in the most exposed locality.
We laboured sore an hour or more and courted dire fatality,
Before the monster yielded to our picking and our harrying;
We laid his carcase on the bier to start the dreadful carrying.

Then we drove forward, staggering, zigzagging and perspiring,
The ladies lent the willing hand, undaunted and untiring,

We crawled, we fell, and on the steepest pinches rather ran well,
And ever in the van were found the Misses Moore and Cranwell.

We shed our gore, broke knees, and suffered bruises and abrasions,
Such as we'd not experienced on anterior occasions
. . .
Upon the narrowest col of all a gust came good and hearty,
And dashed upon the cruel stones the whole devoted party.
Our playful foe grinned horribly as to our cries he harkened,
With hat and scarves and haversacks the very air was darkened.

We toiled and spelled and spelled and toiled, our ponderous burden hating
And nearer, ever nearer, grew the car beneath us waiting,
Till, aching, gasping, gibbering, some wheezing and some grumphing,
Upon the grass beside the Pass we laid him down triumphing.

The Press, February 7, 1931

— Arnold Wall

Anyone who has been on a Canterbury mountain in a nor'wester will affirm that the story does not exaggerate our troubles. Our plant weighed 134 pounds (61 kg) — about the weight of any one of us. Luckily it was only later that we learned of dicky hearts and other risky conditions in some of our bearers.

From Enys we walked to Cass, called briefly at the CUC Biological Station (where we met B.E.V. Parham), and then took train to Arthur's Pass. We stayed in one of the old railway cottages, as guests of R.M. Laing, together with H.W. Gourlay, these two then working on the flora of the Park and trying to sort out the taxonomy of the small-leaved species of Pittosporum. Deluges of rain illustrated the conditions under which a whole new range of plants flourished — more for us to learn.

Here comes a story to show our friend's readiness to recognise and accept a challenge. Our gentlemen hosts were older and by no means as fit as we were, so we decided not to waste all the early daylight. Getting away very quietly at dawn, and without leaving a note, we raced over the Pass, seeing lots of good plants on the way, and it was still quite early when we reached Otira. We probably planned to return by train but the railwaymen said no trains. Lucy asked "Do you mean no trains at all, not even going west to Greymouth?" "No, not a single train, this morning." They must have seen a glint in her eye because they advised us not to tell whatever might be in our minds — or at least in LMC's. We just walked away up the railway line, and presently heard a voice behind us saying "You might find this lantern handy"; so we had a railway lamp to help us as we walked through the unlighted tunnel, 5¼ miles long, 15 feet wide and 850 feet to climb. Emerging at the other end about 11.30 we found we were on the verge of being listed as missing persons lost in the snow that had fallen on the Pass during the few hours we had been away.

Next we went to Greymouth by train and there met Dr William McKay (he pronounced his name to rhyme with stay). Little has been written about him, but he had a fine growing collection of native trees and shrubs and a good herbarium that is now in CHR. With his knowledge of the district and a car — a luxury for us — he showed us the vegetation as far north as Punakaiki and took us to see dredging and sluicing for gold and the special flora of rocky tailings from the dredges. When he left us at Hokitika we were under the wing of Sam Darby of the Forest Service. Big

sawmills were something to see there, and plots designed to record regeneration of rimu; these were a project of C.E. Foweraker and his students of the Forestry School at Canterbury. Darby drove us down to Fox Glacier and back to Franz Josef, botanizing as we went. Next day we two made a quick run up the track for half an hour on the toe of the glacier before setting out on the long walk north. We hoped to spread our sleeping bags near the roadside but everywhere water lay inches deep and, defeated, we spent the night at a small hotel. With no lock on door or ground-level window we felt insecure but it was only next morning that I discovered that LMC had a handy cache of rock-hard ginger biscuits as ammunition against any potential intruder. After all, we were on the wild west coast! Thanks to much generous help we had had a good look at the botany of Westland.

Back in Christchurch we stayed at Mr Laing's home on the Cashmere Hills. Along with his Arthur's Pass interests he was active in seaweed research, and we went with him to Taylor's Mistake, a favourite collecting place. This related to Lucy's many years of work on marine algae, with help from numerous overseas experts.

Altogether we had quite a story to tell Dr Cockayne about our two or three weeks in the South Island. Later that year we went twice to Moehau and saw our first paper published.

1932

A new person met this year was the young Victor Zotov who came visiting from Palmerston North. Another was Norman Potts from Bay of Plenty whom some of you will remember with affection, as we do. He was a good Maori scholar, knew his plants well and grew New Zealand species in his attractive garden. The results of his plantings of native trees will long be a special feature of his home town, Opotiki. With him and Raymond Firth (the Aucklander who later became Professor of Anthropology at University of London) we made a second trip to Maungapohatu, staying a few days this time and ascending the mountain by two different routes.

At Easter, with Norman Potts and his legal partner, N.V. Hodgson, we went to Ruatoria and inland to tackle Mt Hikurangi (1710 m). Weather was unsettled and heavy cloud prevented our getting quite to the summit but we saw most of the mountain plants, including those listed by Adams in 1898, and we had a good look at nearby limestone peaks. It was on this trip that the dainty little Coriaria pottsiana was discovered.

We were at Moehau again, and spent quite a lot of time at Anawhata exploring seaweeds. Encouraged by Dr H.H. Allan we embarked on an ambitious assault on the vegetation of Rangitoto, and this occupied many days of field work over the next few years.

1933

Zotov and Elder were preparing their big paper on the Tararua Range and over the New Year Vic conducted us from Otaki Forks to Tauherenikau and Woodside and back from Masterton over Mt Mitre and Pukematawai to Ohau. We literally tussled with the vegetation and the first kilometre above Field Hut took us half a day, so many plants were new to us. We were impressed too with the contrast betweem the southerm and northern crossings. Joining up with Dr Allan we made a quick detour to Wellington to see Dr Cockayne before turning north to spend a few days with Norman Potts in and about National Park. Again with the luxury of a car, we inspected miles of roadsides, as well as climbing Mt Tongariro

and Hauhungatahi. Later there was still another trip to Moehau, and the beginning of another field of interest.

An Auckland Museum expedition began at Opua in A.B. Deeming's launch, with Bob Falla and A.T. Pycroft whose main interest was in birds. We landed on four of the Chickens Islands and on the northern coast of the Hen. The men had to sleep on the launch which could not safely be left overnight, but we two women were established in a tent near the western landing on the Hen to make use of every bit of daylight. On the way back to Bay of Islands we landed on both the main islands of the Poor Knights, and on a number of smaller ones.

In 1933 the Museum ran the first of its Native Flower Shows that became annual springtime events. Some of you will remember the cart-loads of material arriving, the hordes of excited children from many miles around, the colourful displays that filled the big gallery, and the thrill of seeing flowers or fruits of uncommon species. Some people aver that it was wrong to bring in great boughs of kowhai, flowers of kiekie, and bowls of glowing carmine rata. In fact these shows generated big attendances at the Museum and a tremendous enthusiasm for a knowledge of native plants in dozens of schools, while uncovering new records of rare species; by bringing together like-minded folks they led ultimately to the formation of the Auckland Botanical Society.

It was in 1933 too that LMC began her articles in the Auckland Star, directed towards the same sort of audience that supported the Flower Shows; for example in 1934 she led a "botany trot" to Rangitoto for a hundred children of her Native Flower Circle. These Star articles went on till 1937, one a week, some of them written on the train ready for the morning deadline. All were illustrated, mostly with line drawings — many Lucy's own quick lively sketches, but included also were a series of fine studies by the artist Eunice Reekie, signed EER. Subjects were always topical: flowers seen in the previous week; accounts of field outings, brief replies to letters received, some from children who later became well-known biologists.

One Star article says "My plant table looks very bright with two offerings, one from Huia and one from Ohakune ... I have white rauhuia (that's the true flax), tutu buds, berries of big-leaved mahoe, kohurangi, five-finger, half a dozen tints of koromiko, exquisite white manuka, and, gayest of all big festoons of red kowhai" as well as snowberries and horopito leaves with "their strange ominous tones of red that lighten only when sunlight pours straight through them". This long dark plant table stood in the corridor outside her room and for years she and her friends supplied it with fresh specimens, often more than twenty species at once, each with a neat, informative label. Children, and adults too, were proud to have their treasures on display there.

Papers in that year were two: a short one on the flora of Manihiki Island in the Cook Group, based on plants brought into the Museum by A.M. Linton; the other recording Xeronema on Hen Island where it had only recently been recognised by A.T. Pycroft, though it grows in great numbers on high rock ledges there.

1934

Besides Moehau again we "did" Pirongia, just a run up and round part of the crater rim, sleeping this time, not on the top, but inside an old rata tree. That autumn we travelled to Wellington especially to visit Dr Cockayane on what turned out to be his last birthday on April 5. On

the way south we stopped off at Ohakune between one midnight train and the next to join up with J.E. Attwood who described himself as a bush carpenter there. He deserves to be remembered because he collected generously for the Auckland Museum and fulfilled many requests for material from the Volcanic Plateau. We had a good day with him, up the mountain track to a little above the timber-line. Later that year we camped a week at Waihohonu, helping L.H. Briggs select plants for chemical analysis, and meeting briefly with O.H. Frankel who was investigating Hebes for his chromosome studies.

Then there was a wonderful week on Hen Island. Katie Pickmere (Reynolds), who is here tonight, arranged for a fishing boat to take us there and she and her friend Dorothy Ellen completed our party. We had time to explore the island's backbone from west to east, to poke into valleys and clamber about amongst the rocks, and even rowed along the south coast to see the bush from the outside. We had a good look at land plants, including lichens and mosses, and at seaweeds, so that all these groups were listed in our paper published in the following year.

In 1934 too we saw our first Moehau paper in print. It dealt with bush rice grass, Microlaena avenacea (now known as Ehrharta diplax) that grows along bush tracks. We attributed its dominance over wide areas bared of bush to the activities of introduced animals. Other theories have since been put forward but I still think animal damage was a major factor.

LMC got involved in radio and the text of some of her talks can be read in a booklet on Educational Broadcasts to Schools. At this time too there was a short but important visit to Moanatuatua bog to look at peat with Norman Taylor who later became Director of Soil Bureau, DSIR. This perhaps had a bearing on what happened next year.

1935

This time we had a real "overseas experience". The six-week voyage had plenty of ports: Sydney with herbarium and botanic gardens, Botany Bay and mangroves, eucalypt forests and fern gullies; Melbourne's gardens and herbarium; Adelaide and Mt Lofty, pink and white with epacrids; Kings Park at Perth; Kandy and its Peredeniya gardens from Colombo; desert and an oasis at Aden; Pompeii remembered for poppies and lizards among the ruins; Gibraltar with drifts of blue statice — all these en route to the VI International Botanical Congress in Amsterdam. But before that we went to Scandanavia and found there, as elsewhere, that to most botanists we met New Zealand meant Cockayne. We were proud to have known him and his mana opened every door to us. After seaweeds in Copenhagen with Dr Børgesen and Agardh specimens in Lund, it was Stockholm and Uppsala and an early morning pilgrimage on foot to Linné's Hammarby. At Kristineberg Marine Station on the Swedish west coast H. Kylin demonstrated zonation of algae in the tideless fjord. We walked over fellfields in Norway and heather in Scotland. A two-day Empire Botanical Conference in London immediately preceded the Amsterdam meeting where all the botanists in the world seemed to have congregated. We were especially well looked after by the Scandanavians that we had already met on their various home patches.

It was here that arrangements were made for LMC to return to Stockholm to work with Dr Lennart von Post whom she designated the world-famous head of the pollen "religion". He held peat samples collected by the Swedish geologist C.C. Caldenius in Otago and Southland and was

impatient to know what their pollen content could reveal about the early vegetation of New Zealand, as an indicator of climate history. From the collaboration resulted a joint paper "Post-Pleistocene Pollen Diagrams from the Southern Hemisphere I. New Zealand." The introduction states "From Oct. 1935 to Febr. 1936 the present writers have performed, provisonally, the analysis work. Due to the shortness of the time available, ... we made it our task to find out the general laws of vegetation development only. ... Miss Cranwell took up the identification of the pollen types" using herbarium material of recent pollen kindly provided by various institutions in Europe, and pollen sent by some New Zealanders. The paper is dated February 1936.

To me it seems miraculous that so much was accomplished in five short months of the frigid Stockholm winter: to set off from scratch to get to know the pollen grains well enough to identify them in this difficult medium; and then, with von Post, to translate this information into a picture of the probable vegetation and so deduce the changes in climate; and as well to complete the writing of the paper! In a letter received just the other day Lucy said "Some people think we made some mistakes. At that time the Northern pollen people were still confusing violet pollen with that of oak, so I guess I should be allowed a few mistakes." She had not herself been to any of the peat collecting sites and had to depend on field notes made by Du Rietz in 1926, and her own good knowledge of the plants and of published records, to put together a description of the present plant cover in each locality. This sojourn in Stockholm opened up a whole new field of study, not only for LMC, but for New Zealand botany in general.

1936

Returning to Auckland must have been an anticlimax, with piles of accumulated work competing with the exhilarating prospects for the new interests. The first edition of "The Botany of Auckland" with Prof Wall came off the press and we had another Moehau paper, about kauri at high altitudes there. We continued our seaweed forays and persisted with Rangitoto. There we accompanied Dr J.E. Holloway (not JTH his son) of Otago University in search of gametophytes of Psilotum; the method was to scoop up handfuls of soil and humus from near parent plants and from this the knobby little prothalli were sieved out later to provide material for one of his last papers. He wanted Phylloglossum too so we took him to the part of the Waikumete Cemetery near the railway line, ending up by lighting matches to see what we could find.

1937

I have the syllabus for the first session of the Auckland Botanical Society, founded in 1937. In that year the Australian and New Zealand Association for the Advancement of Science met in Auckland, putting us in touch with many botanists from across the Tasman. Auckland Museum was awarded the Loder Cup in association with the name of its botanist. She, as part of her continuing public relations, wrote a popular account of the plant life of the Coromandel Ranges for the souvenir booklet celebrating the County's Diamond Jubilee, ending with a plea for action against browsing animals in the forest.

Our highlight was a week on the Poor Knights, again with our friend Katie and, as our fourth member, her mother Mrs Pickmere. We camped on Aorangi, the southern island, and managed some hours on Tawhiti Rahi,

the northern one. From this field work came LMC's "New Plant Records from the Poor Knights Islands with special reference to Todea barbara" and our joint account of intertidal communities.

1938

LMC introduced the subject of fossil pollens as the key to the vegetation of the past in a short paper beginning "Peat-bog studies by the pollen-analytic method are in their infancy in New Zealand." She offered as an example a summary of her Stockholm results, and discussed methods, and indicated lines of future work.

The middle of 1938, March to October, she spent in field work on high mountain bogs on several Hawaiian islands. The other members of the Swedish Peat Bog Expedition were the distinguished plant geographer, Prof Carl Skottsberg of Gothenburg and the much younger Dr O.H. Selling of Stockholm. Some of these bogs Lucy revisited in 1984, helping to secure at least one from threatened despoliation.

1939

An article on southern-beech pollens pointed towards an enduring interest in Nothofagus all round the world, and associated problems of Antarctica, the Pacific and Gondwanaland. She was involved also with Grange and Taylor in a paper on soils and agriculture in the Waipa County. We had a one-day look at Moehau, ten years after our first reconnaissance there -- the last until I went back in 1971 to see and photograph changes in the summit vegetation, some conspicuous, some remarkably small.

In this year DSIR first established Divisions at Mt Albert, thus adding more professional biologists to the local scene and causing some changes in the scientific climate.

1940

At last we went south to see the six sites where Caldenius collected his peat samples; Homer Valley, Doubtful Sound and Stewart Island were extensions of that expedition. This was the last of the jaunts together of the two Lucys. Apart from distance (I had moved to Botany Division, DSIR, in Wellington late in 1938), and the war, she was naturally more and more immersed in pollen studies as her publications of the next few years show.

One more journey we had together in 1963, from Tucson to the Grand Canyon and the Painted Desert. Then, from the comfort of a chauffeur-driven car, we recalled the times and the friends of our rucksack botany days. We remembered high adventures, exciting discoveries, lovely places, amusing incidents, and meetings with famous men and women. We avoided, as I have in this talk, all reference to the endlessly demanding backroom work, often almost drudgery, which, imaginatively used, accounts for some of the many Cranwell successes.

In 1944, soon after her marriage to Major Watson Smith, Lucy left to live in the United States, at first in the east, later in Arizona where she still pursues, or is pursued by, her botanical career. Prof Wall expressed the feeling of hundreds of Aucklanders in another poem.

TO LUCY, ON THE OCCASION OF HER WEDDING

We of these happy isles, land of your birth,

Your tried old friends and lovers, while we sorrow
Knowing that you must leave us on the morrow
To follow your new star half round the earth,

Still in our hearts go with you, not repining
Because our loss is grievous, for we know
You sail for new horizons, all aglow
With hope, and with the gold of promise shining;
...
O good and faithful servant! We who have known
How for the nation's weal you've boldly faced
In forest hardship, perils in the waste
Forbidding realms of heartless ice and stone;

The ceaseless toil, vast labours undertaken,
The precious hours so selflessly bestowed,
The zeal unflagging, and the painful load
So bravely borne, with heart and will unshaken, —

We who have known your aims, beyond all praise,
Skill, brains, devotion given unsparingly,
In this blest hour of your felicity
Bid you farewell, god-speed, and happy days.

The Pioneers and Other Poems, 1948

— Arnold Wall

Auckland Botanical Society

SYLLABUS — 1937-38

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Auckland Botanical Society

LECTURES AND OUTINGS

DECEMBER 8th—*"Xeronema,"* our Rarest Lily"—
Miss L. M. Cranwell.
"Alpine Flowers of N.Z." *Professor A. Wall*
MARCH 26th—KAURI GULLY, Northcote.
APRIL 27th—"Botany of the Cook Islands"—
Mrs. Graham Bell, M.Sc.
Colour Film of Native Flowers—*Dr. W. A. Fairclough.*
MAY 28th—WAIKOWHAI (Kohekohe time): Meet there at 2 p.m.
JUNE 14th—"Maori Medicinal and Food Plants"—
Miss O. Adams
"Little Barrier Island"—colour film by *Mrs. R. M. Wilson*
Commentary by *Mr. E. G. Turbott, M.Sc.*
JULY 20th—"The Fungi and Their Uses"—
Dr. G. H. Cunningham
AUGUST—ARBOR DAY: Observance to be arranged.
AUGUST 24th—"New Zealand Orchids"—*Miss M. Crookes.*
SEPTEMBER 3rd—RANGITOTO (Kohurangi Time—
Inglis' boat leaves city at 10 a.m.
SEPTEMBER 24th-27th—NATIVE FLOWER SHOW AT MUSEUM. Displays by children and adults.
SEPTEMBER 25th—"Trees of New Zealand"—
(Auckland Museum Library, 3 p.m.) *Mr. R. Campbell.*

Unless otherwise stated all lectures will commence in the Biology Theatre, Auckland University College, at 8 p.m.

SUMMARY FROM OHP TRANSPARENCIES

YEAR	PEOPLE	PLACES	PAPERS	EVENTS
1925-8	Lancaster Bartrum Mulgan Carse	AUC Tamahunga		MA
1929	Cockayne Allan	Moehau(3) Te Aroha Anawhata		Duffus Lubecki Scholarship Museum appointment
1930	Wall	Moehau(3),Mangapehi Castle Rock Maungapohatu		
1931	Cockayne Wall Laing McKay	Canterbury Westland Moehau(2)	Maungapohatu	Vegetable sheep
1932	Potts Zotov	Maungapohatu Hikurangi Moehau(1) Rangitoto		
1933	Zotov Allan Falla	Moehau(3) Tararua Ra National Park Poor Knights Hen & Chickens	Xeronema on Hen Manihiki flora Star articles	Flower show
1934	Cockayne Attwood Pickmere Taylor	Wellington National Park Hen Island Moanatuatua Moehau(1) Pirongia	Microlaena Education radio	Plant table
1935	Kylin Skottsberg von Post	Scandanavia Amsterdam Stockholm	Hen & Chickens	Empire Bot.Conf. Int.Bot.Congress Stockholm study
1936	J.E.Holloway	Rangitoto Anawhata	Post-Pleistocene Pollens Botany of Auckland Kauri on Moehau	
1937	Pickmere	Poor Knights	Poor Knights Todea Coromandel Ranges	Auckland Bot.Soc. Loder Cup FLS
1938	Skottsberg Selling	Hawaii	Fossil Pollens Xeronema,Island Lily Intertidal Communities	Swedish Peat Bog Expedition
1939	Grange,Taylor	Moehau(1)	Vegetation Waipa County Southern-Beech Pollens	
1940		Otago-Southland peat sites Stewart Island		
1941			Pollen NZ Conifers	
1942	Allan		Vivipary in Phormium Key to Pollen Grains of NZ Families & Genera	
1943	Wall Green,Powell		Botany of Auckland ed.2 Food is where you find it	
1944	S.Watson Smith	USA		Marriage FRSNZ

LUCY M CRANWELL: SOME LATER TITLES (* indicates joint authorship)

1952 New Zealand Pollen Studies: The Monocotyledons
1953 An Outline of New Zealand peat deposits
1954 Hector Medal
1959 D.Sc (NZ)
1959 Fossil pollen from Seymour Island, Antarctica
1960 *Lower Tertiary microfossils from McMurdo Sound, Antarctica
1961 Coniferous pollen types ... Aberration in Acmopyle and Podocarpus dacrydioides
1961 Lyallia of Kerguelen
1962 Endemism and isolation in the Three Kings Islands, NZ, with notes on pollen and spore types of the endemics
1963 The Hectorellaceae: Pollen type and taxonomic speculation
1963 Nothofagus: Living and fossil
1964 Hystrichospheres as an aid to Antarctic dating with special reference to ... erratics at McMurdo Sound
1964 The rise of Pacific palynology
1964 Rapa Island coal and its microfossils
1964 Antarctica: Cradle or grave for its Nothofagus?
1967 *Lower Tertiary microplankton, spores, and pollen grains from southernmost Chile
1969 Palynological intimations of some pre-Oligocene Antarctic climates
1971/7 Pollen (in McGraw-Hill Encyclopedia of Science and Technology)
1981 Botany of Auckland ed.3
1984 Lehua Maka Noe -- An endangered Hawaiian bog
1984 Fellow, Arizona-Nevada Academy of Sciences

Received 9 April 1986



Lucy B Moore