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Lucy Cranwell, 1929.

IN A 1985 LUCY CRANWELL LECTURE, CRANWELL'S HUSBAND WATSON SMITH WROTE TO BOTANIST DR. LUCY MOORE, WHO WAS TO DELIVER THE LECTURE –

"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."

"In Eleanor Percy's letter, she expresses incredulity that 'girl students so long ago could go off so unconcernedly into the wilds.' She should know better! I'm sure that Wilds never inhibited a Lucy."

WATSON SMITH TO LUCY MOORE, SEPTEMBER 28, 1985

DEDICATION

For V.P., my own Lucy.



I Watson Smith, quoted by Lucy B. Moore, "Auckland Botany in the Cranwell Era," Lucy Cranwell Lecture, September 4, 1985, Auckland Botanical Society Newsletter, 41 (1986): http://bts.nzpen.org.nz/bts_pdf/auck_1986_41_2_19-35.pdf.

BIOPHILIA

Pollen and spores travel – wind-borne, insect-transported, our biological companions are adventurers of their own.

Like these biotic wonders, the renowned Dr. Lucy M. Cranwell Smith also traveled the winds (1907–2000). Raised in Henderson, the noted botanist and palynologist left her mark around the planet: Stuart Island, Scandinavia, Amsterdam, Arizona. She ventured east, and found further affinity with nature. She wrote, "To see the Nile is a very stirring thing, and I find that it means more to me than the Pyramids with their eroded sides, possibly because it speaks of the future as well as of the past." Throughout her travels, Lucy collected samples of her beloved pollen grains, fossils, and seaweed — a botanical sublime.

Her spirited approach to life was infused with biophilia. Conservationist Edward O. Wilson defines this as the "innately emotional affiliation of human beings to other living organisms." Lucy Cranwell shared this love widely, through helping build the Anawhata university hut in the 1920s, developing a robust herbarium at the Auckland Museum consisting of 3600 of the specimens she collected, leading "botany trots," and writing extensively about the natural world.

² Lucy M. Cranwell, "Egypt, the Gift of the Nile," Enzed Junior, February 22, 1936, n.p.

³ Edward O. Wilson, "Biophilia and the Conservation Ethic," in The Biophilia Hypothesis, eds. Stephen R. Kellert and Edward O. Wilson (Washington, DC: Island Press, 1993), 31.

Hers was a conversation that sprawled and took root amongst familiars. In knowing nature, Cranwell knew herself. In knowing Cranwell, we know the tapestry of the natural world. Karl von Frisch, the animal behaviorist captivated by the honeybee, recognized knowledge — at once scientific and divine — that rewards the researcher when one looks closely. "The layman may wonder why a biologist is content to devote fifty years of his life to the study of bees and minnows without ever branching out into research on, say, elephants, or at any rate the lice of elephants or the fleas of moles," he tells. "The answer to any such question must be that every single species of the animal kingdom challenges us with all, or nearly all, the mysteries of life."4

The same is to be said of the botanist – a haul of horopito bushels is not just a "mass of rosy leaves," but also a religion to be unraveled. In the afternoon sun, they are to Lucy, "as vivid as the blood-red fragments of some Christian church window." 5



⁴ Karl von Frisch, quoted in Scott McVay, "A Siamese Connexion with a Plurality of Other Mortals," in The Biophilia Hypothesis, 11.

Have you had dreams of tidal waves rushing in to flood cities, the seabed raised and subtidal kelp forests lying exposed to the elements? Have patterns appeared to you – tui that emerge when you grieve, the silence always underfoot on black sand beaches? Do you sleep, like Lucy did in 1934, at the crater of Mount Pirongia, curled inside a rata tree? Archetypes and myths coil nature around us: snakes; pollinators; thorny plants; swamps; unsightly weeds that heal and poison. Their stories are our stories.

How do we talk about the seasons of man? Is it the simple trajectory of conception, birth, the elasticity of maturity, followed by slow decline? Would the language of science, so fixed on the material universe, suffice? Lucy talked of the kohekohe and its existence — is its journey the same as our own? "But what of the living tree?" she asked. "It is beautiful in all its parts." Though, splendid from afar, it still has its sharpness. "All parts of the plant are bitter and tonic," she said, "but the milky juices of the fruit are the nastiest of all, and the most potent in their action."

Scientific rigor may be impossible to use to chronicle Lucy's life. Her botanical companion Lucy Moore described LMC, as she called her, "rather unpredictable." Perhaps then, instead of using human language to describe Lucy Cranwell Smith, nature is given a voice. There have been notable experiments when our nonhuman friends have been taught our words — Koko, the lowland gorilla, with her sign language, and Chaser, the good-natured border collie, with her thousand nouns and verbs. Would Lucy's specimens respond in an equally respectful fashion?

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⁵ Lucy M. Cranwell, "Horopito, or Maori Painkiller," Auckland Star, August 11, 1934, n.p.

⁶ Lucy M. Cranwell, "Kohekohe of the Coasts," Auckland Star, June 23, 1934, n.p.



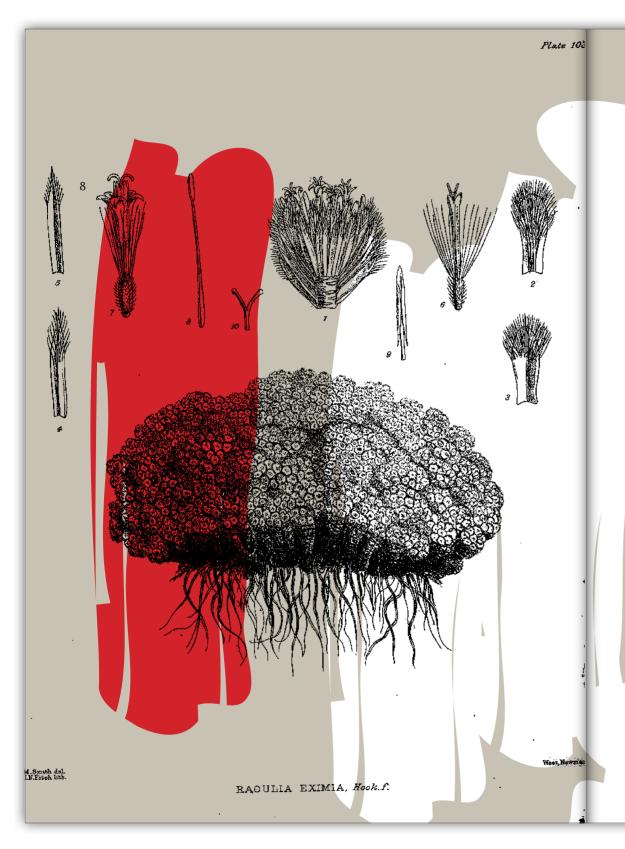






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cy Moore and Lucy Cranwell at Linnés cottage, Uppsala, 1935.



RAOULIA EXIMIA

Jocular. Now that's a word you don't hear much anymore. Not that I hear a lot from my rock plinth, tucked in storage in the museum.

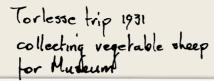
I'm old but aging well though the latest slang isn't my forte. Jocular isn't a word I'd use to describe myself, but one wouldn't hesitate to apply it to Lucy. In my view (and how spectacular it was), I'd use it in the same breath as rapscallion or ratbag. I know you're judging me, especially in light of the praises sung by the other specimens in this field guide. For science! they say. For the betterment of humanity! Nonsense. Would you put grandmother in a museum display cabinet? I didn't think so.

In hindsight, her chum Lucy Moore (also a member of the marauding party) was dismayed about extracting me from my native habitat. "I shudder now to think how anyone could be so vandalous as to climb Mount Torlesse purposely to dig out one of these marvellous cushion plants," she said. It was 1931 though. Almost one hundred years. Though our kind — Raoulia eximia — still recently made it into *The Telegraph*'s "Top 10 Ugly Plants," along with tree tumbos, bastard cobas, and stinky squids. Do you see *ugly* as a synonym for *marvellous* in the dictionary? Me neither.

Leonard Cockayne, mentor and friend to the two Lucies and widely regarded as New Zealand's greatest botanist, thought our type was at service to the profession. Yes, I admit I am large (61kg) and look like a billowous sheep from afar. I also profess our exterior pelt whispers *Pet me*. But still,

Lucy B. Moore, "Auckland Botany in the Cranwell Era."

^{8 &}quot;Top 10 Ugly Plants," The Telegraph, June 12, 2009, http://www.telegraph.co.uk/gardening/gardening-picturegalleries/5506103/Top-10-ugly-plants.html?image=7.





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for a leading scientist to proclaim we make "an excellent and appropriate seat for a wearied botanist" is beyond the pale. Don't you think? No, it doesn't matter that Lucy Moore said of the expedition, "Luckily it was only later that we learned of dicky hearts and other risky conditions in some of our bearers." 10

We mainlanders are rough mountain warriors, and I like to think I made things difficult when the five fingered discounters pried me from my alpine ledge. Lucy recounted the extremities — the "never-ceasing, maddening nor'-west wind" that dashed the party across the stones. There they were, "lying prostrate round that 'sheep,' feeling for injuries." They had to submit, those humans — I "was an anchor for the four . . . during later gusts." This is the way to acknowledge your dependence on your biophilic friends, don't you agree?

I didn't particularly like Professor Arnold Wall's (the poet of the party) rendition of the saga — Before the monster yielded to our picking and our harrying; We laid his carcass on the brier to start the dreadful carrying. ¹² To think, me, a carcass! Laid out, plump and hairy on an ambulance stretcher. It should have been majestic in the telling, not a stretcher but a sedan chair. Not a monstrosity but an object to be revered. After all, in other periodicals our kind have been placed "alongside singularities like the surface of the moon, dinosaurs, and the praying mantis." ¹³

Still, perhaps I'm being too hard on Lucy. After all, she was singular. A woman who goes bogging in pearls. Like me, a pearl in the desert. And she did say, "When you are older and hardier, you will find nothing better than days fossicking for strange plants, and nights spent under the quiet stars." ¹¹⁴







⁹ Leonard Cockayne, New Zealand Plants and Their Story (Wellington, New Zealand: Government Printer, 1927), 146.

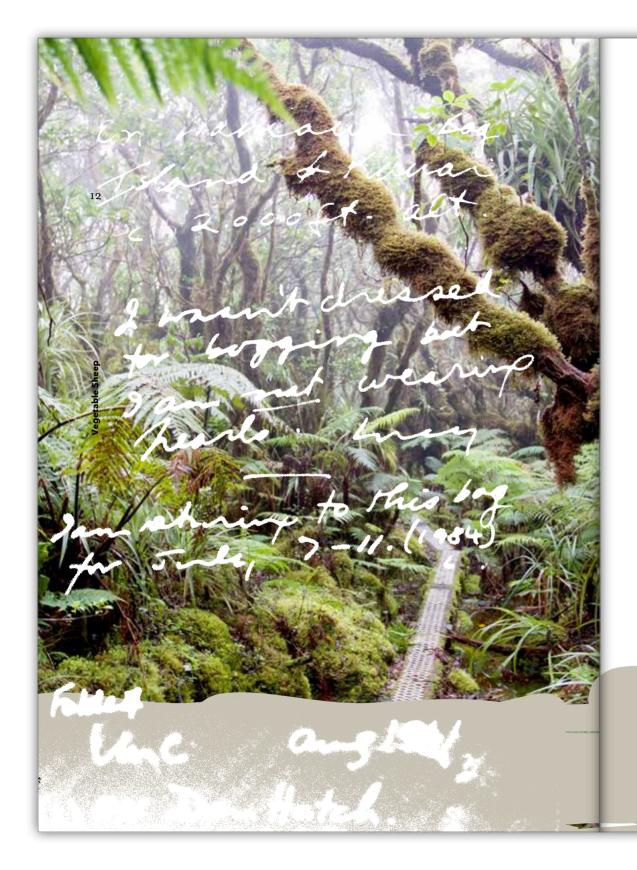
¹⁰ Lucy B. Moore, "Auckland Botany in the Cranwell Era."

II Lucy M. Cranwell, "Our 'Vegetable Sheep,'" Auckland Star, March 16, 1934, n.p.

¹² Arnold Wall, "How They Brought the Good Sheep from Torlesse to Christchurch," 1930. In Jacqueline Winston-Silk, "Fossicking for Strange Plants," MA thesis, University College London, 2012, 165.

¹³ Ibid., 41.

¹⁴ Lucy M. Cranwell, "Our 'Vegetable Sheep,'" Auckland Star, March 16, 1934, n.p.



METROSIDEROS POLYMORPHA

There have been thieves at work. Like Victorian mortuary bandits preying on the defenseless in their afterlife, the bog had been raided. Lehua Makanoe, a slip of a primeval mountain bog in Kaua'i, is exposed to northeast trade winds.

Constant mist and rain settle over it. This shroud, though life-giving, covered the thieves as they caught sea birds in their traps. But still the bog was loved. This was in contrast, Lucy said, "to the fear of the Alaka'i swamps, where travellers could be fatally engulfed, or attacked by criminals and packs of wild dogs." ¹⁵

Along with predators, the gracious were also attracted to the bog. Queen Emma of Hawaii, determined and curious to see it in person, ventured in to the area in 1870. Inconsolable after family deaths, where better for her to grieve than the mountainous hinterlands? Still a royal, Lucy reports, "a corduroy surface had been laid down in Queen Emma's honor. The wide impression of the trail was still visible in 1938." The Queen took a retinue of one hundred with her, singers and dancers to lift her darkened spirits. One can imagine her dwelling there amongst the mosses and the mud, her Victorian skirt pluming in the wilderness.

¹⁵ Lucy M. Cranwell, "Lehua Maka Noe – An Endangered Hawaiian Bog," Hawaiian Botanical Society Newsletter, 23 (1984): 4. https://archive.org/stream/newslette182519791986hawa/newslette-182519791986hawa_djyu.txt.

¹⁶ Ibi

A century later, similarly attired in lady's wear yet no less unwilling to 14 tramp through the mire, Lucy Cranwell recognized hope in the high Hawaiian mountains. It thrilled her that Lehua Makanoe was rich in endemic species, including the ōhi'a lehua bush with its blood-red stamens. The bush gives the bog its name - misty-eyed ōhi'a. The crying plant.

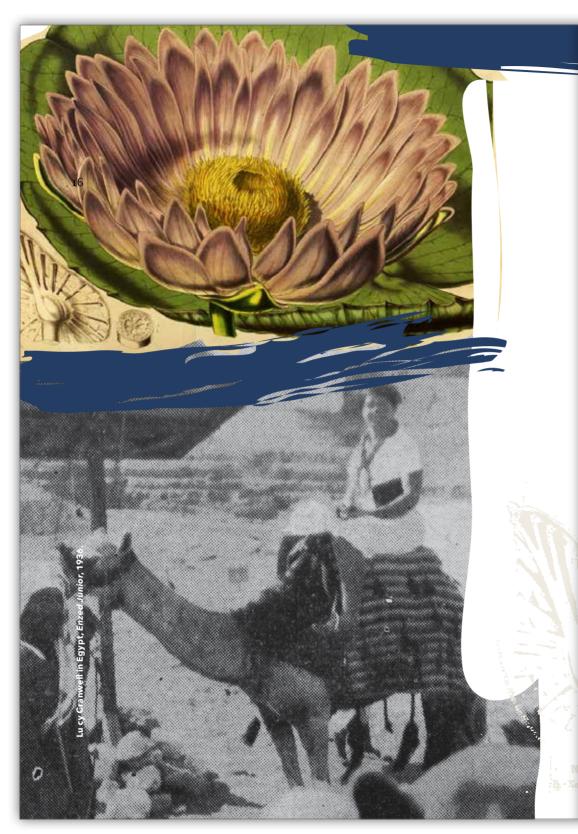
> In 1984, there was a proposition to create an earthen dam, which would encroach upon the bog. In mourning at the thought, Lucy wrote, "This will inevitably hasten drainage, robbing the bog of the water needed to sustain it. We do not know all details of the proposal, but we do know that theft of the clay is essential to the successful maintenance of the dam." She continued, "To rob the clay would be like killing an elephant to profit from its tusks."17 There have been thieves at work. Like a Victorian mortuary preying on the defenseless in their afterlife, there are designs to raid the bog.





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Queen Emma of Hawaii, c. 1870.



EPIPHYTES & PARASITES

If we, the natural world, speak to humans simultaneously, is there cacophony? Would they liken it to the festive season or a crisis in a megalopolis, with their senses turned inside out? So much drags your attention now on an indiscriminate riptide of noise.

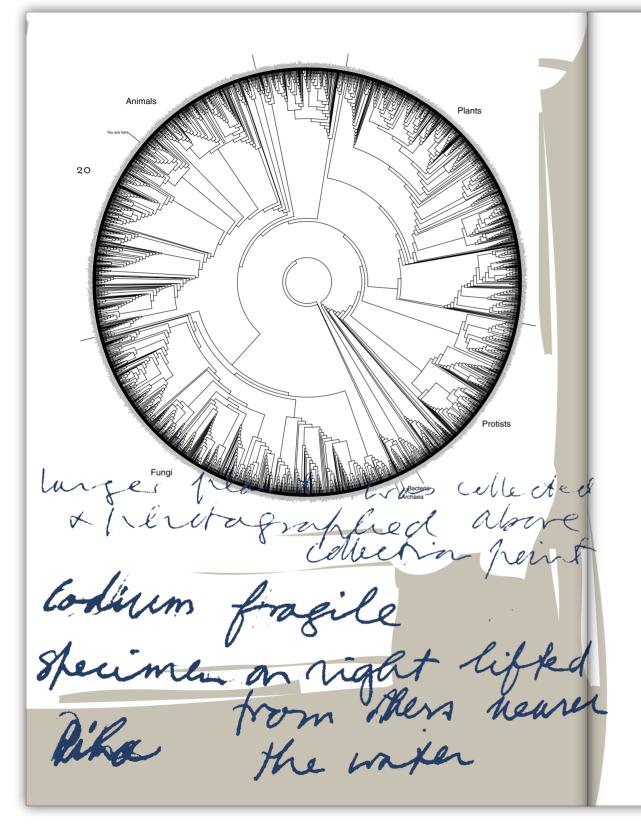
Do you remember when you were a child and nature came in sharp points that demanded you focus immediately — bee stings; an unexpected wave at an East Coast beach; a prickle on the soft underside of your foot in summer?

If she were an insect, Lucy would be an entomologist's fancy. Delicate but advanced antennae and tympanal hearing organs would be found on her body: nestled behind her knees, scattered across the abdomen, blooming on her thorax. If she had wings (for she travelled so), they would even be found there. As a human, Lucy acutely turned her hearing to the ecosphere — she preferred it to the manmade.

Anthropomorphism was no stranger to she; her writing was equally as fantastical as it was scientific. She told of the Victoria regia, at once mysterious and fleshy. In 1849, living plants were transported from the Amazon to the great botanical garden hothouses. "A thermometer always hangs up to tell you the heat of the room, and it is, of course, very humid," she writes. "After a few minutes you will feel as dewy as a naiad, and you wish you had the elegant 'drip-tips' with which the leaves of many tropical trees are endowed." "18

¹⁸ Lucy M. Cranwell, "A Botanist Abroad: Victoria Regia, Queen of the Water," Enzed Junior, March 14, 1936, 230.





MACROALGAE

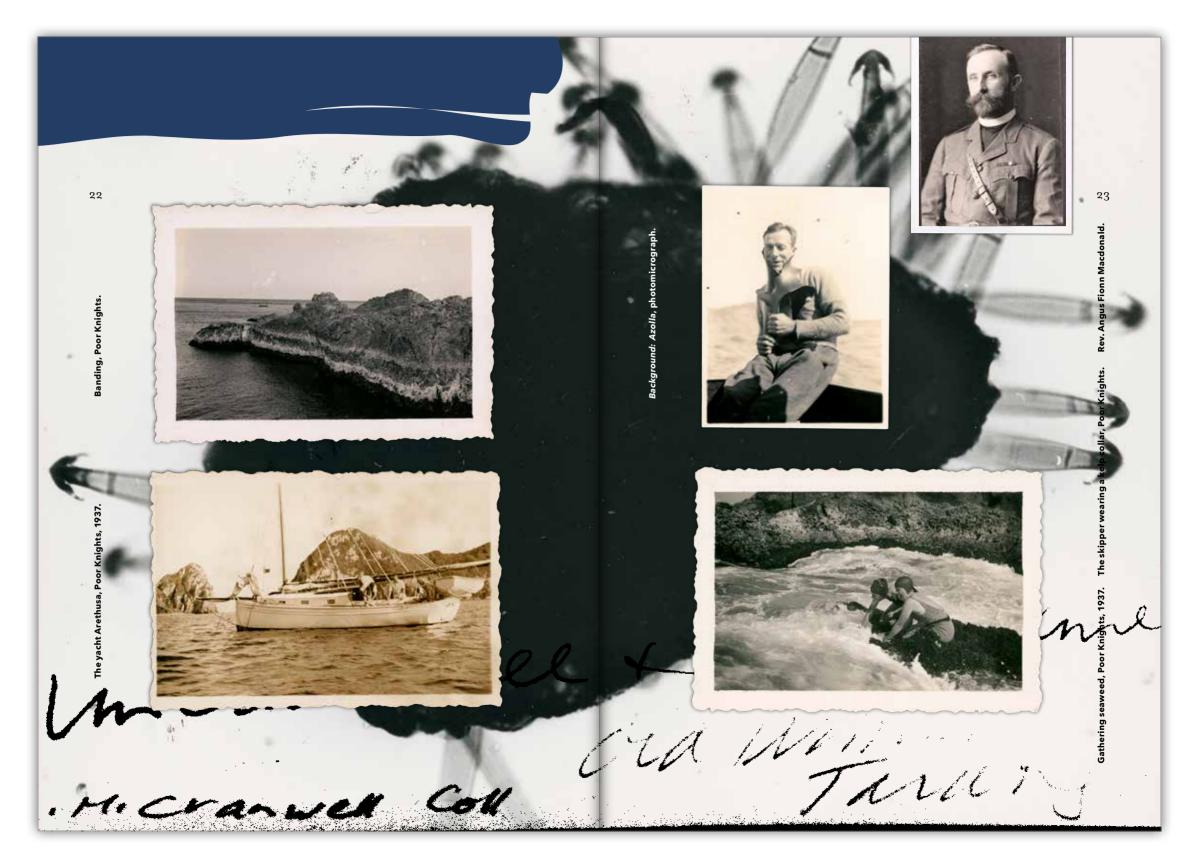
The Tree of Life in scientific form shows the vast interconnectedness of life on the planet. This is not anthropocentric though – humans are not its center, nor kings and gods expanding from the upper crowns of branches. Instead, the Tree of Life depicts our genealogical relationship to other organisms in an unending circle. Mammals form one part of the tree, no greater, no lesser, than mosses or mollusks, algae or water lilies. The chart shows complexity. Our earth pulses with life. There is impossibility in mapping every surface. It alludes to the difficult choices that botanists make when choosing their field of study.

We are in there too. Lucy categorized us next to "flowering plants – their humbler brethren, the seaweed." She said, towards the end of her life, that she had one regret. She wished that she had devoted her life to us. The vegetable sheep has character, simultaneously gruff and tender. Peat bog has the soft squelch that reminds you of being reckless and muddy in your youth. And yet, as others have mentioned, she chased or was chased by pollen. Algae remained, for the most part, described in her unpublished notes, though she collected us in Anawhata and many of the inner Hauraki Gulf islands.

We are humble, we concede. We are populous, muted in our color range. But our spongy surface soaks up what is around us — like a therapist listening intently to a patient. Our openness means we are receptors to the health of the ocean. But Lucy saw our value. We are delicacies. We heal.

Perhaps that is why she loved us so. We can be such unattractive clumps to the untrained eye. At first we are smudges — black spots in your line of sight to a more becoming horizon. Then our edges sharpen. Your mind

²¹ Lucy M. Cranwell, "Uses of Seaweed," Auckland Star, March 9, 1935, 6.



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Sense hetros Eustern sid

plays tricks on you as we turn into a Rorschach test. To some, such slimy blots would be best forgotten. To Lucy, we are shapeshifters — our jagged furls more than a slick embrace around your ankles.

She wrote of iodine, obtained from seaweed. It is used to treat goiter, swollen like a bird's crop. "I saw a young girl so cruelly afflicted that she could barely gasp out a few words," Lucy writes. Seaweed would help her speak, untangling her vocal cords. On wild coasts, it has meant livelihood. "Seaweeds rot quickly, keeping the soil moist On the bleak ice-swept shores of Scandinavia they helped to form enough soil to grow a few handfuls of grain." 22

In Portuguese, there is a word: <code>saudade</code>. It describes the longing for something, someone who has permeated us but is no longer present. My mother when I was a child. A lover who was the first. The husband who was the last. It calls up the backdrop to these reminiscences of long past: that ashy morning — you remember the one — when Lucy snuffed out the campsite fire on Poor Knights Island and ventured toward the rocky coast. Or when, she said, "frosty weather comes to Auckland and we narrow our eyes to take in the greater sea view to the east." Her writing captured not only the transitory temperament of the natural world, but also the human response to it.

Saudade is the slippery present being slowly submerged to the past. Lucy saw that seaweed as continuance, as prosperity, was "always challenged by discoveries in the outer world." This she was shown by her friend, the Rev. Angus Macdonald. Born in the blustery Outer Hebrides but with travel in his veins, he had moved to India, Canada, Egypt, France, and New Zealand. "He showed me more," she said, "that a man might live half a world away, yet his thoughts would ever be roving back to his childhood, and that he would die with the taste of the sea tangles still sweet on his lips." ²⁴





25



HERBARIUM

Ecklonia radiata

vas Richardiana

Locality: Poor Enights Is: N. Auckland.

Date: 15/2/37.

Collector: L.M. Cranwell.

Auckland Institute and Museum, New Zealand

northern Island of For Knights Lide-pool not very abundant: 14

²² Ibid.

²³ Lucy M. Cranwell, "Our 'Vegetable Sheep.'"

²⁴ Lucy M. Cranwell, "Uses of Seaweed."

Inside cover Lucy M. Cranwell's handwriting throughout was obtained from her archives at the Auckland Memorial Museum.

- **P. 2** Lucy Cranwell, Masters graduation, University of Auckland, 1929. Private collection.
- P. 6 University shack, Anawhata, c. 1934. Auckland Memorial Museum botanist Ewen Cameron says, "The Anawhata hut just after it was finished in 1928. This was a favourite place for Lucy Cranwell in the late 1920s and 1930s to escape to and as a base to study the west coast algae." Auckland Memorial Museum Library. B.14.697. Folder 5. PH2008/6f5.

Ewen Cameron recounts that this is the "two Lucys' second trip to Hen Island. The party of four women being dropped off by the crew of the Ariel (fishing boat) for a week's botanizing. From left to right: Lucy Cranwell, Lucy Moore, Dorothy Ellen, and Katie Pickmere (later Reynolds), and a junior Pickmere at the front. The Pickmere dinghy was used to explore the coastline." November, 1934. Photo: Mrs. A. Pickmere (Katie's mother). Auckland Memorial Museum Library. Folder 1. PH2008/6f1e6.

- P. 7 Lucy Cranwell with Sir Edmund Hillary at Grant Rd., Arizona, 1957. Lucy shows Sir Ed an Antarctic slide outdoors. Auckland Memorial Museum Library. Folder 4.1. PH2008/6f4. Lucy Moore and Lucy Cranwell at Linnés
- cottage, Uppsala, 1935. Auckland Memorial Museum Library. Folder 4. PH2008/6f4.
- P. 8 See Cover above.
- **P. 10** Collecting the vegetable sheep for the Museum, Torlesse trip, January 5, 1931. Auckland Memorial Museum Library. B14746. Folder 5.3. PH2008/6f5.

The vegetable sheep, *Raoulia eximia*. Auckland Museum AK209589, CC BY.

- **P. 13** Pepe'opae Bog, Molokai, Hawaii. Photo credit: Andrew K. Smith. Flickr: IMG_9272 goo.gl/mcfvFs. CC BY 2.0.
- P. 14 Lucy Cranwell, Wahiawa Bog, Island of Kauai, c. 2000ft alt/c.610 m. Auckland Memorial Museum Library. Folder 4. PH2008/6f4.
- P. 15 Queen Emma of Hawaii, c. 1870. Photo credit: Menzies Dickson, Bishop Museum.
 Public domain.
- **P. 16** Giant water-lily, *Nymphaea gigantean*. Photo credit. Biodiversity Heritage Library. Flickr: n388_w1150 goo.gl/yRerk4. CC BY 2.0. Lucy Cranwell in Egypt, *Enzed Junior*, February 22, 1936, n.p.
- **P. 18** Lucy Cranwell in taro leaves, Te Hope Valley, Cape Colville, 1939. Auckland Memorial Museum Library. Folder 2. F4.3. PH2008/6f1e5.
- P. 20 David M. Hillis, Derrick Zwickl, and Robin Gutell, University of Texas, "Tree of Life."
- P. 22 Azolla, photomicrograph by Lucy Cranwell. Auckland Memorial Museum Library. Folder 5.1. PH2008/6f4.
- P. 22 Banding, Poor Knights. C60435. Folder 1.1. Auckland Memorial Museum Library. PH2008. The yacht Arethusa, Poor Knights, 1937. Photograph by Lucy Cranwell. Auckland Memorial Museum Library. Folder 1.1–16. PH2008/6f1.
- P. 23 Rev. Angus Fionn Macdonald. Photo credit: http://www.aucklandmuseum.com/war-memorial/online-cenotaph/record/C33562. The skipper wearing a kelp collar, Poor Knights. Auckland Memorial Museum Library. Folder 1.4. PH2008.

Gathering seaweed, Poor Knights, Southern Island [Aorangi], 1937. Auckland Memorial Museum Library. Folder 1.13. PH2008/6f1.

P. 25 Dense Metrosideros excelsa forest, Eastern side of Southern Island [Aorangi], Poor Knights, 1937. Large leaved Macropiper undergrowth. Photograph by Lucy Cranwell. Auckland Memorial Museum Library. Folder 1.2. PH2008/6f4. Authors and artists retain copyright of their work.

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