

species and forming a solid base for subsequent work. Some of her species have been recombined or synonymised by Egon Horak, from Switzerland, who has spent some time collecting in New Zealand and is preparing an agaric flora of this country. Some Stevenson species are Tylopilus formosus, Hygrophorus salmonipes, H. (Gliophorus) chromolimoneus, H. (G.) viridis, Mycena (Galactopus) parsonsii, Mycena mariae (named after Marie Taylor), made a synonym of M. morris-jonesii by Horak but which I hope to resurrect one day), Entoloma haastii, Marasmius curranii, Crinipellis procera, Armillaria novae-zelandiae, A. limonea and Agrocybe parasitica.

The next contributor to the field of the larger fungi was Ross McNabb, from Plant Diseases Division, whose first interest was in the jelly fungi, of which he published many new species and records for New Zealand. These were followed by studies in several agaric genera, e.g. Cantharellus, Laccaria, Lactarius and Russula (which was published posthumously after his untimely death in 1972) and also Boletus and allied genera. Examples of his species are Cantharellus wellingtonensis, Russula acrolamellata, R. griseoviridis, Porphyrellus viscidus, Suillus subacerbus. I am indebted for some of the photographs shown here to the late Mr R. Lediard, who was president of the Auckland Botanical Society for a number of years. His fine collection of photographs of the larger fungi is housed in the Botany Department of the University of Auckland.

One influenced by Greta Stevenson to take up a study of the larger fungi was Marie Taylor of Auckland University. I have included one or two photographs here to remind you of her elegant paintings, some of which are shown in the poster display. She has published a selection of these in two books, 'Mushrooms and Toadstools in New Zealand' and the Mobil Nature Series 'Mushrooms and Toadstools', bringing the fungi within reach of the amateur collector.

Finally I would like to show you pictures of two fungi with local Botanical Society connotations: Gomphus dingleyi, to record Joan Dingley's great contribution to our knowledge of all groups of fungi, particularly in the Auckland area, and Pleurotus rattenburyi to remind you of our chairman's long support of the Auckland Botanical Society.

## AUCKLAND'S MOSS COLLECTORS

Jessica E. Beaver

What follows is an historical and somewhat nostalgic account of those botanists interested in mosses, who have been associated with the Auckland Botanical Society.

Without doubt the moss collector who has had the greatest influence on New Zealand bryology (the study of mosses and liverworts) is G.O.K. Sainsbury. An entry in the March 1944 issue of the Newsletter, under News of Members, reads "Mr G.O. Sainsbury has been investigating mosses on the slopes of Mt Egmont. We hope the hunting was good". Sainsbury was born in 1880. He became a lawyer, at Wairoa. At the age of 40 he took up botany as a hobby, beginning with the higher plants. Two years

later he switched to bryophytes. He corresponded extensively with H.N. Dixon in England, who, although he never visited this country, was an authority on New Zealand mosses. Thus it was, by the 1930s Sainsbury was a skilled bryologist, and was sent material from all over the country by other collectors. This enabled him to build up a tremendous knowledge of mosses from many parts of the country. In 1955 he produced the 'Handbook of New Zealand Mosses', (Sainsbury, 1955) which is still our moss bible today.

Another effect of Sainsbury's co-operation with botanists around the country was that a second generation of knowledgeable bryologists emerged. Amongst this second generation was the late Dr Lucy Moore. In her early years Lucy Moore collected mosses widely, and sent a lot of material to Sainsbury. Over the last few years I have been doing studies of the mosses on some of the northern New Zealand offshore islands, and in a number of places I have visited I find Lucy Moore is the only significant bryologist to have been there before me, 50 years previously. In 1933, and again in 1934, she visited the Hen and Chickens Islands with Lucy Cranwell. In 'Botanical notes on the Hen and Chickens Islands' (Cranwell and Moore, 1935), the species list included 263 species of vascular plant, 65 species of moss, 79 species of lichen and 78 species of alga, indeed an impressively broad coverage of the flora. Among the mosses they found on Mauitaha in the Chickens Islands, was a species we now know as Ischyrodon lepturus. It was new to Lucy Moore, who sent it to Sainsbury. He misidentified it as Brachythecium albicans, and it appears under that name in the 1935 paper. This mistake is quite understandable, since Ischyrodon lepturus was not known in New Zealand, and the two mosses are very similar, both to the naked eye and in the microscopic detail of their leaf cells. Sainsbury later realised his error, and in his Handbook he includes the moss under 'Doubtful Species', commenting that it matches substantially Fabronia leptura, an Australian moss 'which may be referable to the genus Ischyrodon'. In 1981 I had the opportunity to visit the Chickens Islands with the Offshore Islands Research Group, and one of my hopes was to re-find this moss, which to my knowledge was known in New Zealand only from Lucy Moore's original finding. To facilitate the hunt I took pieces of Brachythecium albicans, the look-alike moss which is common in our front lawn, sealed in plastic bags, and gave them to other members of the party, with instructions to let me know if they saw a moss that resembled it. Largely thanks to the activities of Anthony Wright, who is an expert at leaping in and out of small boats, Ischyrodon was found to be locally abundant on four of the small islands and rock stacks of the Chickens (Beever, 1984).

Lucy Moore also collected mosses on the Poor Knights Islands, which I visited in 1984. On Aorangi, in the Poor Knights group there are a number of coastal rock platforms with seepages across them. Here I found to be common a moss which I recognised as being a species of Campylopus, but which I could identify no further. It was subsequently identified by Prof. J.-P. Frahm as Campylopus catarractilis (C.Muell.) Par., a species known from South Africa (Beever, 1986). Subsequently I have found specimens of this moss in Lucy Moore's Poor Knights collections labelled just 'Campylopus' - obviously she had got as far as I had, but had not had the appropriate expert to pass it on to.

Closer to the mainland Lucy Moore went bryologising on Rangitoto Island. Here on the sea coast she found a moss which she could not

name, and sent it to Sainsbury. He decided it was new to science, and named it in her honour, Tortella mooreae. I found no records of it having been seen again, so I went to look for it, fifty years later, and found it in abundance. It occurs just above high tide mark, on humus at the base of Scirpus nodosus and Stipa stipoides clumps, as well as on the bare lava.

There were other Botanical Society members who sent specimens to Sainsbury for identification, and helped to build up his knowledge of the New Zealand moss flora. These included Dr Laurie Millener, Miss Betty Molesworth (Mrs G.H. Allen) and Miss Ruth deBerg (now Mrs Ruth Watson). Another 'second generation' New Zealand bryologist that Sainsbury helped was K.W. Allison. His association with the Auckland Botanical Society is rather tenuous, but he did help a number of its members. After Sainsbury died in 1957 Allison took over the role of identifying difficult material for other people interested in mosses. Although Sainsbury left a fine book, other publications, and a very valuable herbarium, there is nothing like having a **person** to ask when you are stuck identifying a plant. Among Auckland Botanical Society members for whom Allison identified specimens were Bob Cooper, formerly botanist at the Auckland Museum, Carrick Chambers, now Director of the Sydney Botanic Gardens, and Mrs Phyllis Hynes, also of the Auckland Museum.

In 1962 the Botanical Society began a new project - a vegetation study on the West Coast of the Waitakere Ranges. Two members took on a study of the mosses, Mrs Blanche Wormald and Mrs Iris Barr. Mrs Wormald has been a very active member of the Society, and held the position of Secretary and of Vice-President for a number of years. Mrs Barr no longer studies mosses, but her herbarium and her bryological correspondence with K.W. Allison are preserved in the Auckland Museum. Allison agreed to help with identification of mosses for the Botanical Society project, and thus began a long and fruitful correspondence with both Mrs Barr and Mrs Wormald from Allison's home in Dunedin.

In a letter dated 23rd October 1963 Mr Allison writes to Mrs Barr 'Thank-you for your letter and valued collection of bryophytes. I know you will not mind the delay in answering as I had some critical mosses from a local enthusiast, a Mr Linzey, who is starting on mosses, but being a trained chemist of mature years, he has the scientific approach and surprises me at the relevant details he spots in the specimens. He has already picked up several species in the Dunedin District not previously spotted by Wm. Martin or myself'. In 1966 John Linzey moved to Auckland from Dunedin, and with his wife Edith joined the Auckland Botanical Society. He now lives in retirement in Dominion Road. It is a particular pleasure for me to speak about him, because in this chain of knowledge John Linzey has been my 'bryological mentor', identifying material for me when I am stuck, and sharing a wealth of knowledge. His very useful account of the mosses of the Waitakere Ranges was published in Arthur Mead's 'Native Flora of the Waitakere Range'. Another person whom John Linzey helped enormously in their early stages of studying mosses was John Bartlett, who died last year at the age of 40. As far as I know he was never a member of our Society, but he was author or co-author of several Auckland Botanical Society Bulletins. With Rhys Gardner he published the 'Flora of Great Barrier Island', and on his own the 'Mosses of the Waitakere Range Auckland'. A further bulletin on the lichens of the Waitakere Ranges was in preparation at the time of his

death, and will be published posthumously. John Bartlett was a remarkable botanical collector. A secondary school teacher, he used his school holidays to explore remote parts of the country. He had a very skilled eye for new plants, and added many species to the New Zealand flora. Although well known for his discovery of the tree rata in the Far North, now named Metrosideros bartlettii in his honour, he focused also on the smaller plants, making substantial contributions in the mosses, liverworts and lichens, and corresponding with experts in these groups all over the world. As far as the mosses go he added some 50 species to the New Zealand flora, a number of which are new to science. And all this was achieved in only one decade. He has two moss genera named after him, Bryobartlettia (Buck, 1981) and Hypnobartlettia (Ochyra, 1985) and one family, the Hypnobartlettiaceae. The moss incorrectly known as Physcomitridium readeri in New Zealand, has been renamed Bryobeckettia bartletti (Fife) Fife by Allan Fife of DSIR Botany Division, honouring T.W.N. Beckett, a Christchurch bryologist of last century in the genus name, and John Bartlett in the species (Fife, 1985).

Bryology is still healthy in the Auckland Botanical Society, with John Braggins, Jack Mackinder and myself all taking an interest in the mosses. We are always keen to assist new recruits, if anyone feels ready to take the step that Mr Sainsbury took at the age of 42, and move down, or should I say up, from the vascular plants.

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