

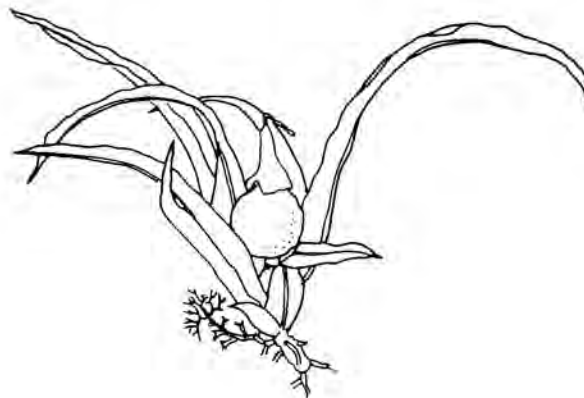
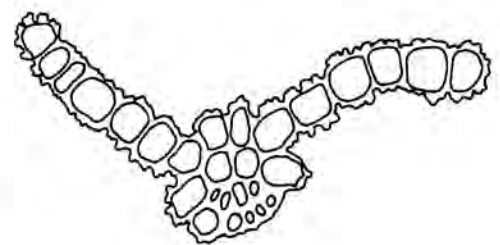
# AUSTRALASIAN BRYOLOGICAL NEWSLETTER

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**A special issue in honour of Ilma Grace Stone to commemorate the occasion of her 80th birthday**



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### Legend to Front Cover

A selection of taxa from Ilma's wide-ranging studies in Australasian bryology, scales various (from top left, anticlockwise): *Fissidens integerrimus* Mitt., Beever & Stone 1992; *Tortula pagorum* (Milde) De Not. (peristome), Stone 1971; *Trachycarpidium brisbanicum* (C. Muell.) Stone, Stone 1975; *Bryobartramia novae-valesiae* (Broth.) Stone & Scott (leaf cross-section), Stone 1977; *Mittenia plumula* (Mitt.) Lindb., Stone 1961. Photo of IGS courtesy 'The Age' Melbourne.

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### Ilma G. Stone, Bryologist

George A.M. Scott

It might seem strange to think of Ilma Stone as a "pillar of the establishment", but so she has been - in the sense that, before her retirement she was one of a group, indeed a lineage, of remarkable ladies on whom much of the reputation of Melbourne University School of Botany as a teaching institution has been sustained. Dedicated, talented, and knowledgeable, they taught generations of students with unfaltering competence. It is these same characteristics and in that same way, that Ilma has made and continues to make her mark in Bryology. I have sometimes differed from her in matters of wording, occasionally even in matters of interpretation, but never in matters of observation and understanding; in these she is unsurpassed. Her observation is meticulously accurate and thorough, as a glimpse at any of her papers will show, and over the last 30 years she has built up a vast accumulation of precisely recorded information on Australian (and other) moss species, all of which she can bring to bear on an individual problem.

Added to this extensive knowledge (which extends to Pteridophytes and Angiosperms and presumably other groups as well) and the high quality of her investigation, is a third attribute of amazing acuteness in field observation. She has been legendary among bryologists for the ability to see almost invisibly small plants on the ground, to pick out from a mass of ground species the few stems of something new and minute. Even now, with two cataract operations behind her and hence considerably impaired vision, she can see enough to be the envy of most other bryologists.

Endowed with these formidable talents and provided with all the experience to which they have led, she has made contributions particularly in two areas of bryology. In the morphology and taxonomy of the small mosses she has had a particular delight: anything cleistocarpic, or minute or ephemeral, anything which stretches her powers of observation to the limit, she has made peculiarly her own: *Acaulon*, *Pleuridium*, *Eccremidium*, *Astomum*, *Nanobryum* and many others. More recently, arising out of this pre-occupation, she has been collaborating with David Catcheside on the Australian *Fissidens* and a string of papers has resulted. The taxonomy of the genus has been permanently changed, and clarified, by her work and it is a genus where fine and accurate observation is not only invaluable but indispensable.

These seem to me to be the two areas where she has had, and is having, the greatest and most lasting impact on world bryology, but of course there are plenty more: her fascination with mosses that have permanent protonemata, dating back to her earliest paper on *Mittenia*; the Calymperaceae; and all the other tropical mosses of Australia. She always enjoys hot weather and retirement brought more opportunities for field work in Queensland, opportunities which she seized with joy. It is there that her most memorable discoveries have been made. Although she first mastered the Victorian moss flora, no one knows the Queensland moss flora as well as she now does, and only a long run of poor or non-existent wet seasons

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has prevented her from greatly expanding the list of remarkable novelties. May she have many more years of fruitful research before she decides to hang up her hand-lens!

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### A Stone that gathers moss

Rod Seppelt

While at the University of Adelaide I completed an Honours B.Sc. and M.Sc. on the hepatic genus *Riccia* in South Australia, and swore I would never work on anything that grew on soil again (Ho, hum!).

When I arrived at the University of Melbourne in 1974 to take up a Tutorship in Botany, I was looking around for a suitable topic for a Ph.D. George Scott, then at Monash University, told me that to complete a doctoral study I needed to really want to do what I set out to do. Ilma Stone, then a Senior Tutor, said to me quite firmly that she believed it was not her role to supervise Higher Degree students, so forget asking her involvement. Carrick Chambers, as Professor, told me equally firmly not to work on anything that possessed an archegonium.

Two and a half years, many hundreds of herbarium sheets, seed germination trials, pollen viability counts, leaf measurements, odd phenotypes, and many frustrations later I was accosted in the glasshouse by my supervisor, Malcolm Calder, while weeding my study plants (*Viola*) from the rampantly invasive *Oxalis corniculata*. "Where are you at, and where will you be in 18 months time", or words to that effect. Several hours later, he and I departed the glasshouse - he to go home, me to contemplate my future having mutually reached the conclusion that *Viola* was getting us nowhere fast and that I should return to the realms of archegoniates.

As a result of some arm twisting on Malcolm's part, next morning Ilma tossed me a carrot and offered the *Ditrichum* project she had just commenced. Back to scratching around in the dirt! But, I guess it relieved Ilma of one problem and left her time to scratch around in the dirt herself for other fascinating minutiae.

"This is *Ditrichum punctulatum*, get to know it well". A short time later followed *cylindricarpum*. A few weeks after that we put together a paper comparing the two species which, unlike most other *Ditrichum* species as I came to find out, are relatively easy to differentiate on leaf characters alone.

Eighteen months later I submitted my doctoral thesis: "A revision of *Ditrichum*, *Distichum*, and *Pseudodistichum* in Australasia, and the moss flora of Macquarie Island."

The *Ditrichum* study has continued, along with the Antarctic and subantarctic flora work. It was George Scott who encouraged me to expand the *Ditrichum* work to a World monograph. I decided to do that, not knowing what I was letting myself in for. Ilma was, I think, somewhat noncommittal while offering her encouragement. Perhaps she knew what was in store!!

I can lay claim to the unique privilege of being Ilma's only postgraduate student. Thrown in the deep end, I was left to sort out the Australian *Ditrichum* story with a large degree of independence. I learnt quickly to cut thin sections with a razor blade - day 1, moss 1! Leaves, cells, sections, capsules, peristomes, spores by the thousands - measure, draw, count. Doing it the hard way? Perhaps, but the door across the corridor was always open; the specimens freely available; the advice freely given; I still have Ilma's original notebook with her preliminary literature search, ideas and notes (I hope you don't want it back); but, I never did get the hang of drawing on blue drafting film!

Ilma, I shall remember and be grateful for your willingness to pass on just a small part of your experience and to have given me the opportunity to develop your project into a Ph.D and then to carry the *Ditrichum*



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work far beyond Australia's shores. One day Ditrichaceae should all be finished. Thanks a heap.

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### Encounters with Ilma Stone

Helen Ramsay

In late 1966 my husband and family arrived by ship in Melbourne for a day on our way to U.K. (we travelled in style in those days) for a Post Doctoral year. While Frank took the children (as was usual on such occasions) to the Zoo I went to meet Ilma Stone at Melbourne University. This was before I knew of her interest in Bryology but it had been suggested that I should meet her. On this first occasion she showed me *Mittenia* and told me of her fascination with the moss with the luminescent protonema. My studies had dealt with moss chromosomes but taxonomy and the life histories of individual species were still a mystery. I was on my way to learn more in North Wales.

Since then Ilma and I have met at Conferences and on field excursions in many parts of the world. I have even been mistaken for her at times. Her publications have been held up to me as models of excellence for their attention to detail. Her husband Alan has acted as chauffeur in the U.K. as well as in a number of places in Australia. On these occasions Ilma and I take the opportunity to talk about bryophytes and I always learn something new and interesting. Frank and I have visited her in Victoria where I have been able to learn techniques for sectioning and studying mosses and for recording of data. We have visited her at home where her collections of mosses, housed in shoe boxes, started in the front hall and were stacked from floor to ceiling in almost every room. Her routine of study is exhausting to contemplate.

Earlier in 1966 Professor David Catcheside, and eminent geneticist, was introduced to me for the first time in the tea room at Sydney University, because of his interest in bryophytes. He was only the third person I had ever met with such an interest. The first was Dr. Geoff Berrie my supervisor, and Dr. Jim Willis from Melbourne Herbarium. David warned me that bryology would not earn me a living. There is no doubt, however, that the study of bryophytes provides a wonderful and rewarding hobby for retirement years.

Ilma has taught many of the need to crawl on the ground with hand lens at the ready to find the tiny ground mosses, the smaller the better, and to carry a spray bottle with water to dry places for squirting onto dry soil or tree trunks. Her ability to spot tiny ground mosses is legendary. Any specimens bigger than a few millimetres are not considered nearly so interesting.

Her contributions to our knowledge of Australian mosses is immense. The book she and George Scott wrote 'Mosses of Southern Australia' as an introduction to the temperate species, has led to an upsurge in interest in Australian mosses. Ilma's hate of cold weather leads her north to the Cairns district each winter. Instead of just relaxing in this idyllic atmosphere, she occupies her time hunting for and discovering fascinating tropical species. As a result of these studies she has added many new records and new species to the bryoflora of Northeast Queensland.

Encounters with Ilma are always interesting and enjoyable. We go into huddles to talk about bryophytes while our husbands listen in amazement. Any mention of mosses in Queensland and immediately I am asked do I know Ilma. Her reputation is legendary. Her attainment of the grand age of 80 years as an active bryologist with an agile mind is a model for us to wish to attain.

Congratulations!!!

Ilma Stone's eightieth birthday: a tribute from  
the British Bryological Society

Paul Richards

It was a privilege to be asked to join in celebrating Ilma Stone's eightieth birthday. She has been an honorary member of our Society since 1982 and came to some of our meetings when she was in England in 1972 and 1973. As well as meeting her then, after the International Botanical Congress at Sydney in 1981, my wife and I had the good fortune to be asked to join Ilma and Alan on a rainforest and bryological tour which took us north to Cape Tribulation and back to Melbourne.

Ilma's research career has been remarkable. After graduating in 1933 she spent over twenty years in bringing up her family before embarking on a Ph.D. She did some excellent work on ferns which were her first love, but it was a lucky day for the mosses when she shifted her interest to them, with the encouragement, I believe, of my old friend John Turner, who was then Head of the Botany Department at Melbourne University. Ilma was then, as she is now, particularly attracted by 'little mosses' such as *Archidium* and *Acaulon*, in which the Australian flora is so rich. Later she did valuable work on the difficult genus *Fissidens*.

When Ilma began studying Australian mosses in the late 1960s, their taxonomy was in what might be called a pioneering state. Since then she has published over 30 papers on Australian mosses which are models of accuracy and clarity. The publication in 1976 of *The Mosses of Southern Australia*, written jointly by Ilma and George Scott has been a landmark. There is still a vast amount to be done on Australian mosses, but this book provides a firm basis for future work. As the number of moss species known from Australia has grown, so has the number of bryologists, who are now an active and coherent group to whom we in Britain send our greetings on this happy occasion.

Ilma is not only a very good moss taxonomist in the laboratory, she has a very keen eye for them in the field. In spite of eye troubles she sees and discriminates 'little mosses' in the field in a way few of us can equal. She has also trained her husband, Alan (who would not call himself a bryologist) to become a remarkably efficient 'spotter' of interesting mosses. I have vivid memories of Ilma on Mt. Belleden-Ker and elsewhere in the Queensland rainforest, disappearing into the undergrowth invisible, except for her little red hat.

All Ilma's friends in the British Bryological Society join in sending her their warmest good wishes. Long may she flourish and remain active. Happy birthday, dear Ilma, happy birthday to you!

List of Publications by Ilma G. Stone

- Stone, I.G. (1958). The gametophyte and embryo of *Polyphlebium venosum* (R.Br.) Copeland (Hymenophyllaceae). *Aust. J. Bot.* 6, 183-203.
- Stone, I.G. (1960). Observations on the gametophytes of *Grammitis billardieri* Willd. and *Ctenopteris heterophylla* (Labill.) Tindale (Grammitidaceae). *Aust. J. Bot.* 8, 11-37.
- Stone, I.G. (1961). The gametophytes of the Victorian Blechnaceae I. *Blechnum nudum* (Labill.) Luerss. *Aust. J. Bot.* 9, 20-36
- Stone, I.G. (1961). The highly refractive protonema of *Mittenia plumula* (Mitt.) Lindb. *Proc. R. Soc. Vict.* 74, 119-124..
- Stone, I.G. (1961). The gametophyte and sporophyte of *Mittenia plumula* (Mitt.) Lindb. *Aust. J. Bot.* 9,

124-151.

- Stone, I.G. (1962). The ontogeny of the antheridium in some leptosporangiate ferns with particular reference to the funnel-shaped wall. *Aust. J. Bot.* 10, 76-92
- Stone, I.G. (1963). Ph.D. Thesis, University of Melbourne: A morphogenetic study of stages in the life-cycles of some Victorian cryptogams.  
[Part A: Ferns, especially Hymenophyllaceae, Grammitidaceae, Blechnaceae.  
Part B: Morphology and morphogenesis of the gametophyte and sporophyte generations of the moss *Mittenia plumula* (Mitt.) Lindb.]  
Part B in the form of two papers.
- Stone, I.G. (1971). The sporophyte of *Tortula pagorum* (Milde) De Not. *Trans. Brit. Bryol. Soc.* 6, 270-277.
- Stone, I.G. (1973). Two new species of *Archidium* from Victoria, Australia. *Muelleria* 2, 191-213.
- Stone, I.G. (1973). A new species of *Brachydontium* from Australia. *J. Bryol.* 7, 343-350.
- Stone, I.G. & Scott, G.A.M. (1973) Name changes in Australian mosses. *J. Bryol.* 7, 603-605.
- Stone, I.G. & Schelpe, E.A.C.L.E. (1973). Two new generic records of mosses for southern Africa. *J. S. African Bot.* 39, 131-132.
- Stone, I.G. (1975). *Trachycarpidium* in Queensland, Australia. *Muelleria* 3, 122-129.
- Stone, I.G. (1975). A remarkable new moss from Queensland, Australia. *Viridivellus pulchellum*, new genus and species (new family Viridivelleraceae). *J. Bryol.* 9, 21-31.
- Stone, I.G. (1976). *Alaticosta*, a new subgenus of *Acaulon* in Australia. *J. Bryol.* 9, 213-227.
- Stone, I.G. (1976). A new species of *Pleuridium* from Australia. *J. Bryol.* 9, 229-238.
- Stone, I.G. (1977). Some morphological and anatomical features of the monotypic genus *Bryobartramia* Sainsbury (Musci). *Aust. J. Bot.* 25, 141-157.
- Seppelt, R.D. & Stone, I.G. (1977). A comparison of vegetative features of *Ditrichum cylindricarpum* and *Ditrichum punctulatum*. *J. Bryol.* 9, 321-325.
- Stone, I.G. (1977). *Bruchia queenslandica*, a new moss from tropical Australia. *J. Bryol.* 9, 509-518.
- Stone, I.G. (1978). *Tortula oleaginosa*, a new moss from Australia. *J. Bryol.* 10, 117-124.
- Stone, I.G. (1979). *Acaulon eremicola*, a new moss from the Australian arid zone. *J. Bryol.* 10, 467-474.
- Scott, G.A.M. & Stone, I.G. (1979). In defence of *Dawsonia superba* Grev. *Lindbergia* 5, 71-72.
- Stone, I.G. (1980). *Phascopsis rubicunda*, a new genus and species of Pottiaceae from Australia. *J. Bryol.* 11, 17-31.
- Catcheside, D.G. & Stone, I.G. (1980). The peristome of *Ischyrodon lepturus* (Tayl.) Schelpe. *J. Bryol.* 11, 99-104.
- Stone, I.G. (1980). *Weissia* subgenus *Astomum* in Australia. *J. Bryol.* 11, 231-243.
- Stone, I.G. (1981) Spore morphology and some other features of *Goniomitrium* Hook.f.&Wils. (Funariaceae). *J. Bryol.* 11, 491-500.
- Stone, I.G. & Scott, G.A.M. (1981). *Leptodontium paradoxum*, a new moss from Australia. *J. Bryol.* 11, 701-707.
- Stone, I.G. (1981). *Sciaromium elimbatum* Broth.&Watts and *S. forsythii* reduced to synonymy in *Cratoneuroopsis relaxa*. *J. Bryol.* 11, 843-845.
- Stone, I.G. (1982). Some new and noteworthy records of mosses mostly from Queensland, Australia. *Austrobaileya* 1, 511-520.
- Stone, I.G. (1982). *Erpodium australiense* (Erpodiaceae), a new species of moss from Australia. *J. Bryol.*



- 12, 191-197.
- Stone, I.G. (1982). *Nanobryum thorsbornei*, a remarkable new moss from Australia. *J. Bryol.* 12, 199-208.
- Stone, I.G. (1983). A re-evaluation of the species of *Mesochaete* Lindb. (Rhizogoniaceae). *J. Bryol.* 12, 351-357.
- Stone, I.G. (1983). *Fissidens traversii*, a new species from Queensland, Australia. *J. Bryol.* 12, 359-364.
- Stone, I.G. (1983). *Buxbaumia* in Australia, including one new species, *B. thorsborneae*. *J. Bryol.* 12, 541-552.
- Stone, I.G. (1983) *Fissidens gymnocarpus*, a new species from Queensland, Australia. *J. Bryol.* 12, 553-557.
- Stone, I.G. (1984). *Uleobryum curtisii* sp. nov. (Pottiaceae) from Queensland, Australia. *J. Bryol.* 13, 19-24.
- Stone, I.G. (1984). Notes on four species of moss which are common to South Africa and Australia. *J. Bryol.* 13, 129-130.
- Stone, I.G. (1984). *Archidium watsii* comb. nov. in Australia. *J. Bryol.* 13, 153-157.
- Stone, I.G. (1984). *Fissidens henryae*, a new species from Queensland, Australia. *J. Bryol.* 13, 159-162.
- Stone, I.G. (1985). *Archidium thalliferum* sp. nov. with a persistent cushion-shaped protonema unique in Musci. *J. Bryol.* 13, 345-352.
- Stone, I.G. (1985). *Archidium minutissimum*, a new species from Queensland, Australia. *J. Bryol.* 13, 353-357.
- Stone, I.G. (1985). New records of mosses in Australia. *J. Bryol.* 13, 475-478.
- Stone, I.G. (1986). The relationship between *Mittenia plumula* (Mitt.)Lindb. and *Schistostega pennata* (Hedw.)Web.&Mohr. *J. Bryol.* 14, 301-314.
- Stone, I.G. (1986). *Calymperastrum*, a new genus of Pottiaceae. *J. Bryol.* 14, 315-318.
- Stone, I.G. (1986). A comparison of the species of *Fissidens* subgenus *Aneuron* in Australia. *J. Bryol.* 14, 319-325.
- Reese, W.D. & Stone, I.G. (1987). New records of Australian Calymperaceae and keys to Australian species of *Calymperes*, *Mitthyridium* and *Syrrhopodon*. *J. Bryol.* 14, 487-493.
- Stone, I.G. (1987). *Tristichella dimorpha* (Sematophyllaceae), a new species from Queensland, *J. Bryol.* 14, 691-699.
- Stone, I.G. (1987). The development of the *Archidium* capsule: clarification of a misconception. *J. Bryol.* 14, 745-751.
- Stone, I.G. (1987). *Fissidens sufflatus* and *Fissidens pseudopallidus* spp. nov. (Fissidentaceae) from Queensland, Australia. *Memoirs of the New York Botanical Garden.* 45, 627-634.
- Stone, I.G. (1988). *Fissidens maceratus* Mitt. (synonym *F. splachnobryoides* Broth.). *J. Bryol.* 15, 117-122.
- Stone, I.G. (1988). *Acaulon granulosum*, a new species in the *Acaulon muticum* complex; a comparison and key to Australian species. *J. Bryol.* 15, 257-268.
- Catcheside, D.G. & Stone, I.G. (1988). The mosses of the Northern Territory, Australia. *J. Adelaide Bot. Gard.* 11, 1-17.
- Stone, I.G. (1989). *Fissidens cucullatus* and *Fissidens inaequiretis* spp. nov. from New South Wales, Australia. *J. Bryol.* 15, 737-744.





## XV International Botanical Congress, Tokyo

The Botanical Congress, held at the Pacifico Yokohama Congress Centre, Yokohama, was attended by over 3000 delegates. Exceptionally well organised but, like all major congresses, absolutely impossible to attend all the presentations that were of interest.

The Bryological and Lichenological fraternity constituted a small but truly international group. It was good to see the Chinese bryologists were well-represented. Their research is largely by dedication, not largesse.

The IAB Workshop meeting: "Bryofloras of the World - current projects", was held at the Polar Research Institute in Tokyo. Some general points regarding bryoflora projects were raised. Should they be group efforts or solo? Who funds the work and how? What is a reasonable time frame for large area floras? Should there be multiple author efforts for large families?

Marshall Crosby outlined the North American Bryoflora project. This is scheduled to be completed before the 1999 Congress, with manuscripts submitted by 1996. There are 1200-1300 moss species and about 700 hepatics. There are 50-60 contributors and the flora will include N. America north of Mexico, Canada and Greenland. Distribution maps will be small and generalized. Cost estimates for production are guesstimated at around US\$250 per species - even relying very largely on voluntary contributors.

Pan-Cheng Wu outlined progress towards the Chinese edition of the Moss Flora of China - one part of the entire Chinese Flora project. There are about 2500 species of mosses - 20% of the World's species in 400 genera - 50% of the World's genera. A massive task facing major problems - a desperate shortage of funds, lack of relevant literature, lack of access to critical and Type specimens. Taiwan will probably not be included. Something I found a little counterproductive is a proposal involving Wu, Crosby, Zen, Iwatsuki and Benito Tan to produce an English version of the Chinese moss flora. This will be synoptical, non-illustrated, and will include Hong Kong and Taiwan. To my mind it would be better to have involved more mainland Chinese bryologists and provided funds and other resources to complete two identical versions of the Chinese flora - in Chinese and in English. The taxonomic approach to both proposed Floras, particularly involving Types, will be different.

Ming-jou Lai outlined plans for the Taiwanese flora - some 1300 species of bryophytes (700 mosses, 600 hepatics). It is being undertaken by local bryologists supported by Japan and Finland.

Zen, Iwatsuki outlined progress on the Japanese moss flora. Part 5 of Noguchi's flora is about to be printed. The project is being masterminded by Hiroshima University (where Hironori Deguchi has just succeeded Zen as Professor of Botany). There are some 1183 species in 411 genera. Work on the Japanese hepatic flora is somewhat at a standstill following the deaths of Hiroshi Inoue and Sin Hattori.

Bill Buck is working steadily towards a Caribbean moss flora. The Pleurocarps are almost complete and he is about to launch into the Acrocarps.

Claudio Delgadillo and 35-40 co-workers are making steady progress on the Mexican moss flora.

Work on the New Guinea region is being masterminded from Helsinki under the guidance of Timo Koponen. Much has been done (54 papers published to date) but some major groups have a long way to go. The affinities lie with the Indo-Malayan region, not with Australia. The South Pacific Islands flora is under the care of Zen Iwatsuki and Noriwo Kitagawa. They reported that work in this vast region of far-flung islands is very much in its infancy.

Rob Gradstein spoke about progress in the Flora Neotropica of Central America. A few parts have been published but with 3-4000 species of bryophytes in the region completion seems a long way off.

Hiroshi Kanda spoke about progress and problems in the Antarctic flora. Isolation, environmental extremes

and virtual absence of fruiting material, together with the paucity of bryologists with field experience in the region only serve to compound the difficulties.

I was able to outline the state of progress towards the Australian flora and offer some introductory comparisons with the New Zealand flora work, which John Braggins then outlined. A checklist of the 530 moss and 500 hepatic species is nearing completion. I feel some useful comparisons need to be made between our efforts for the Australian bryoflora and that of North America. In the latter case the work load has been spread more sensibly over a lot of contributors. That is, each contributor is expected to do much less and in a considerably shorter time frame from conception to completion. I believe we should have adopted a similar and, in my opinion more sensible approach, back in 1980.

Some other interesting snippets from the IAB meeting.

Claudio Delgadillo is producing Labmoss, a computer database for the Neotropics. The Eustace Jones Herbarium of tropical West African hepatics has been deposited in Edinburgh, along with his papers. David Long (Edinburgh) has produced flora lists for Bhutan and Nepal.

Marshall Crosby outlined work on the database - World List of Mosses - held at the Missouri Botanical Gardens. This is to keep up to date the Index Muscorum. Part I included nomenclatural alterations and new names 1963-1989. Part II, currently in proof stage, includes 1990-1992. For the statistically minded, there are about 85000 names for mosses at species level or below, relating to about 30000 basionyms - but there are only about 10000 mosses overall in the World. Isn't nomenclature fun!

**Rod Seppelt, Antarctic Division, Tasmania.**

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### News from the Australian National Botanic Gardens Cryptogamic Herbarium (CBG)

**Field Work.** The only major field work was a three week trip to central Queensland during August-September by Heinar Streimann and Prof. J.A. Elix of the Australian National University, concentrating on the area between Yeppoon, Emerald, Springsure, Roma and back towards the coast to Monto. On the return leg brief collecting was carried out near Noosa, Stanthorpe and in New South Wales near Coonabarabran. During the first half of the trip Dr. Tomas Hallingback (secretary of the International Association of Bryologists Standing Committee for Endangered Bryophytes and chairman for the IUCN Species Survival Commission's Bryophyte Specialist Group) accompanied us to observe bryophyte communities and their conservation.

This trip yielded many interesting records for *Papillaria*, *Sphagnum* and other mosses which will be published later. The Carnarvon National Park relinquished many interesting mosses from the various shaded gorges, but I feel that many more remain to be discovered. The national park is a low rainfall area which supports predominantly dry sclerophyll forest with some *Eucalyptus* woodland, but it has many moist narrow gorges which are fed by seeping groundwater and therefore host rich bryophyte communities under denser forest. The dry monsoon scrub in the region also proved to be very interesting. Many of the collections have not yet been fully determined.

Several day trips were also taken in the Canberra region with staff and visitors.

**Herbarium.** The cryptogamic herbarium amalgamation has commenced with several hundred collections coming over from CANB to be databased, repackaged and to be incorporated with the present CBG collections. Preference in processing will be given to loans which now will be sent out with the CBG material. Initially both collections will continue to use their respective acronyms and accession numbers, but the loan processing will be from CBG site.



We were fortunate to have some visitors during the last six months who as usual generated interesting discussions. These visits make us feel less isolated and forgotten. Ben van Zanten and Phillip Sollman, from the University of Groningen, spent several days in the herbarium and in the field collecting material for their spore dispersal experiments. They managed to obtain a surprising variety of fertile mosses. Helen Ramsay called in for a few days to check collections for *Bryum* and Sematophyllaceae. Rod Seppelt also visited the herbarium to assess the *Ditrichum* and Dicranaceae collections. However, as usual visiting lichenologists outnumbered bryologists.

**Heinar Streimann, Curator of Cryptogams, Canberra.**

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### **The N.A. Burges Australian Bryophyte Herbarium - LIV**

At the recent International Botanical Congress in Yokohama I had the opportunity to talk with John Edmonson, Curator of Botany of the Liverpool Museum (LIV). "Did I know about a large Australian bryophyte collection held in LIV?" "No", was the short reply, "and I doubt if anyone else in Australasia does either."

The N.A. Burges Bryophyte Herbarium (Accession No. 1992.214) includes some 1833 packets and about 60 annotated prepared microscope slides. Most of the packets have been identified to species level. Some are only to genus level. There are some 50 that are unnamed, collected by N.A. Burges, H. Hulton, A.B. Costin in New South Wales; H.B.S. Womersley and A.B. Cribb in South Australia; A.B. Cribb in Western Australia (1 only) and Tasmania; and R.L. Specht in the Northern Territory.

The collection includes Whitelegges's mosses as, according to John, there had been a falling out between Watts and Whitelegge and the latter refused to deposit his collections in Australia. Whatever the history, these collections represent a significant addition to the moss flora collections of Australia.

I have a full list of the collection and would be happy to copy this for anyone undertaking revisionary work for the Flora of Australia. John Edmonson is also willing (keen) to have the collection revised (identifications and nomenclature). He is hoping to hear from parties interested in studying and revising the collection. Please address requests for loans to LIV (Dr. John R. Edmonson, Curator of Botany, Liverpool Museum, William Brown Street, Liverpool L3 8EN, England).

**Rod Seppelt, Antarctic Division, Tasmania**

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### **Request for Loans and Collections**

Dr. Hisa Ando is preparing *Hypnum* for the *Flora of Australia*. He has requested for the loan or donation of *Hypnum* collections from Australia, especially from the northern and western States, to improve the accuracy of his data on distribution of the various taxa. Anyone who can assist should write or send material to: Dr. H. Ando, Yano-nishi 1-chome 7-5-411, Aki-ku, Hiroshima, Japan.

Christine Cargill would like to request the loan of any specimens collected in Queensland, particularly in the far north, of plants in the Anthocerotales group, especially species within the genera *Dendroceros*, *Folioceros* and *Megaceros*. This is part of an ABRS-funded research to review the taxonomy of this group in Australia. Material can be sent to D.C. Cargill, Department of Ecology & Evolutionary Biology, Monash University, Clayton, Victoria. 3168.

Nicholas McLetchie, University of Kentucky is researching the causes and consequences of the sex ratio in *Sphaerocarpos texanus*. He is in search of a bryophyte with particular life history characteristics. These are: dioecious breeding system, sexually isomorphic in the vegetative state and dispersal of spores as tetrads. If anyone can assist contact E-mail [Mclet@ukcc.uky.edu](mailto:Mclet@ukcc.uky.edu).



## Forthcoming Symposium and Workshops

### **Bryophyte Workshop, 7-9 July 1994:**

Members of the Bryophyte Workshop will be based at Kuranda Rainforest Resort from Thursday 7 to Saturday 9 July 1994. It is not necessary to register for the Monsoon Tropics Symposium (which is being held from Monday 4 to Wednesday 6 July) to be eligible to attend the workshop but it is necessary to register for the workshop and fill in accommodation requirements as this is a very busy time of year. The workshop excursions are being held at the same time as the Post Symposium excursion.

The three day trips are designed to cover a range of bryophyte habitats from high altitude montane forests on Mount Lewis to wet tropical lowland forests along the Palmerston Highway and the drier rainforests of the Atherton Tableland (the Hugh Nelson Range and Gadgera State Forest). Those wishing to examine the depauperate but interesting flora of dry limestone deciduous vine thickets should register for the Pre-Symposium excursion to Chillagoe on Sunday 3 July, 1994.

Throughout the Symposium and Workshop a room will be set up as a laboratory with dissecting and compound microscopes available for bryologists to use. Preliminary lists for the bryophyte flora of the Cooktown-Ingham area will be provided and there will be a range of literature present. In addition to the Cryptogam session during the Symposium, papers and talks of specific interest to bryologists will be presented at evening sessions during the workshop (these will be published as part of the Symposium proceedings if the speaker is registered or will be informal if the speaker prefers).

The Kuranda Rainforest Resort has been chosen as the venue as there are few alternatives in this area and they offer some distinct advantages such as the free shuttle service to and from Cairns. Motel style accommodation and two bedroom cabins sleeping 4-6 people (with some self catering facilities) are available at the resort. The second bedroom in the cabins is in a loft accessed by a small ladder. Motel style room (max 2 people), single \$55 per night, twin-share \$27; Pole cabin (2 bedroom, 4-6 people), single/twin/double \$75 per night, additional person(s) \$15. Information on alternative accommodation will be sent out with the registration forms. To make it easier for us to work in the evenings the Kuranda Rainforest Resort is prepared to offer participants a special meal option. We recommend you take advantage of this offer, at least for the duration of the workshop.

Anyone who has registered interest, either through the Bryological or ASBS Newsletters will receive the registration information automatically in the next few weeks (People need to be registered by mid-March 1994). Otherwise write to ASBS Symposium, c/- J.R. Clarkson, Queensland Herbarium (Mareeba Office), P.O. Box 1054, Mareeba, Qld 4880 or you can contact Elizabeth Brown, National Herbarium NSW, Mrs Macquaries Rd, Sydney 2000, fax (612) 2517231, Email elizabet@rbgsyd.gov.au

### **Second Symposium on Endangered Bryophytes 4-8 September, 1994:**

This second international symposium on Endangered Bryophytes in Europe will be held at the Institute of Systematic Botany, University of Zurich, Switzerland. For those interested you may contact the editor of this Newsletter to receive the Preliminary Programme and Application Form or direct to Congress Secretariate, Dr. E. Urmi Fax 01/3854403.

### **The 10th John Child Workshop 24-29 November, 1994:**

This workshop will be held in the Waipoua Forest, North Auckland, New Zealand. To be placed on the mailing list for the first circular contact Lisa Forester, Department of Conservation, P.O. Box 842, Whangarei, New Zealand.