





# NEWSLETTER

Newsletter No. 26

March 1981

The Newsletter is the official publication  
of the Australian Systematic Botany Society.

## A.S.B.S. COUNCIL

- President Dr John Jessop, State Herbarium of South Australia,  
North Terrace, Adelaide, S.A. 5000.
- Vice-President Professor Roger Carolin, School of Biological Sciences,  
University of Sydney, Sydney, N.S.W. 2006.
- Secretary Ms Judy West, Herbarium Australiense, C.S.I.R.O.  
P.O. Box 1600, Canberra, A.C.T. 2601.
- Treasurer Mr Barry Conn, Department of Botany, University of  
Adelaide, P.O. Box 498, Adelaide, S.A. 5001.
- Councillors Mr Andrew Mitchell, Territory Parks and Wildlife Comm-  
ission, P.O. Box 1046, Alice Springs, N.T. 5750.  
Dr Roger Hnatiuk, Western Australian Herbarium, George  
Street, South Perth, W.A. 6151.

## CONVENERS OF LOCAL CHAPTERS

- |               |                    |             |                   |
|---------------|--------------------|-------------|-------------------|
| ADELAIDE      | Dr Helmut Tolken   | MELBOURNE   | Dr Dianne Simmons |
| ALICE SPRINGS | Mr John Maconochie | PERTH       | Mr Chris Robinson |
| BRISBANE      | Mr Laurie Jessup   | ROCKHAMPTON |                   |
| CANBERRA      | Dr Michael Crisp   | SYDNEY      | Dr Jocelyn Powell |
| DARWIN        | Dr Clyde Dunlop    | TOWNSVILLE  | Dr Betsy Jackes   |
| HOBART        | Dr Tony Orchard    |             |                   |

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Affiliated Society : Papua New Guinea Botanical Society.

### INFORMATION FOR CONTRIBUTORS

The Newsletter is produced four times each year and deadlines for copy are the last day of February, May, August and November.

Please send contributions, preferably typed in duplicate and double-spaced, to the Editor, at the address below. Items from any source and of interest to members are acceptable. All items incorporated in the Newsletter will be duly acknowledged.

Please Note: Next deadline for articles is 31 May, 1981.

Editor  
Barry Conn  
Department of Botany  
University of Adelaide  
P.O. Box 498  
Adelaide, S.A. 5001

### SUBSCRIPTIONS

Subscriptions for 1981 were due on the 1st January.  
Both Australian and Overseas members:

Aus. \$8.00 if paid by 31st March  
Aus. \$10.00 thereafter

Barry Conn, Treasurer.

### A.S.B.S. DINNER

The Australian Systematic Botany Society, in association with Section 8 of the International Botanical Congress, will hold a dinner (with an after-dinner speaker) on Thursday, 27th August, 1981. Cost will be Aust. \$18. Anyone wishing to attend please send cheques/drafts, made payable to 'Australian Systematic Botany Society', to: Mrs K. Wilson, Royal Botanic Gardens, Sydney 2000 NSW.

A.S.B.S. COUNCIL ELECTIONS: 1981 - 1982 TERM

In accordance with the Constitution of the Society, nominations are called for all positions on the Council for 1981 - 1982 term of office : President, Vice-President, Secretary, Treasurer, 2 Councillors.

Each nominee must be proposed by two members and his/her acceptance of nomination must accompany the nomination itself. Nominations must be on the form at the back of this issue of the Newsletter or on a facsimile of that form.

All nominations must be in the hands of the Secretary, Ms J.G. West, Herbarium Australiense, C.S.I.R.O., P.O. Box 1600, Canberra, 2006, A.C.T., by Friday 22nd May, 1981.

Ballot papers will be sent out with the May issue of the Newsletter (Newsletter No. 27) and the results of the election will be announced at the Society's General Meeting on 24th August, 1981 in Sydney.

CONVENERS

Please notify me of any changes to the list of Conveners on the first page.

Editor

Summary of the Treasurer's Report for the Financial year of 1980

The constitution of the Society requires that a statement of our financial transactions be prepared for every calendar year (i.e. from 1st January to 31st December of the same year). It also requires that this financial statement be audited.

I have presented below, an audited account of the 1980 financial year:

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

Summary of the Treasurer's report for the financial year of 1980 (1.i.1980 - 31.xii.1980),

CREDIT

Balance brought forward (1.i.1980)	891.13	Newsletter 21	186.44
Subscriptions	2382.80	Newsletter 22	159.78
Donations to N.T. Burbidge Memorial Lecture	54.00	Newsletter 23	201.31
Donations to N.T. Burbidge Memorial Plaque	70.00	Newsletter 24	214.39
Miscellaneous <sup>1</sup>	176.60	N.T. Burbidge Memorial Lecture	100.00
Bank Interest	44.39	N.T. Burbidge Memorial Plaque	70.00
		Miscellaneous <sup>2</sup>	<u>110.00</u>
		TOTAL EXPENDITURE	1041.92
		BANK BALANCE (31.xii.1980)	2577.00
TOTAL INCOME	<u>\$3618.92</u>	TOTAL BALANCE	<u>\$3618.92</u>

1. Miscellaneous Credit

(i) \$44.60 reimbursed from the Brisbane Herbarium to A.S.B.S., being for 200 reprints of 'The Role of Herbaria in Australia' by S.L. Everist; the N.T. Burbidge Memorial Lecture, purchased on their behalf.

(ii) \$130.00 - repayment of loan to the Arid Zone Symposium, Adelaide.

(iii) \$2.00 - reimbursement by Commonwealth Bank for inappropriate stamp duty charges.

2. Miscellaneous Debit

(i) \$100.00 - as deposit for A.S.B.S. Congress Dinner, at the University of Sydney Union.

(ii) \$10.00 - postage expenses for Perth Chapter.

Report from the Auditor

I have examined the books and records of the Australian Systematic Botany Society, as presented to me, for the period of the 1 January, 1980 to 31 December, 1980. Having conducted such tests as considered necessary, I am of the opinion that the above Treasurer's report presents a true and fair view of the results during that period and of the state of affairs of the Society as at 31 December, 1980.

Jon B. Gilbert, A.C.A.  
Honorary Auditor

I wish to thank the Auditor, Mr Jon Gilbert, for kindly offering his services (free of charge) to the Society.

Barry Conn  
Treasurer

SOME IMPORTANT DATES TO REMEMBER

The following meeting/conference dates and details, extracted from the Australian Academy of Science's January 1981 'Calendar of National and International Scientific Meetings in Australia', may be of interest.

The details of the meetings are listed in the following order:

Name of Meeting ... Date ... Location ... Individual or Organisation responsible for arrangements ... National or International Parent or Sponsoring organisation.

1. Climatic Change of Australia and New Zealand Late Quaternary  
... Feb. 8 - 13 ... Falls Creek ... Secretary, Climanz, Department of Biogeography & Geomorphology, ANU, Canberra, A.C.T. 2600 ... Geological Society of Australia.
2. Symposium on Earth Expansion ... Feb. 16 - 21 ... Sydney ...  
The Secretary, Earth Resources Foundation, Edgeworth David Building University of Sydney, Sydney N.S.W. 2006 ... Australian Academy of Science, Geological Society of Australia, University of Tasmania.

3. Golden Jubilee International Symposium on Copper in Soils and Plants ... May 7 - 9 ... Perth ... Prof. J.F. Loneragan, School of Environmental and Life Sciences, Murdoch University, Perth, W.A. 6153 ... Australian Academy of Technological Sciences.
4. Open Forum of the Ecological Society of Australia ... May 11 - 12 ... Muresk Agricultural College, W.A. ... Dr. P. Bridgewater, School of Environmental and Life Sciences, Murdoch University, W.A. 6150 ... Ecological Society of Australia.
5. 'Casuarina and its Uses' ... Aug. 17 - 19 ... Canberra ... Dr. J. Turnbull, C.S.I.R.O., Division of Forest Research, P.O. Box 4008, Canberra, A.C.T. 2600 .. Australian Academy of Science.
6. International Association of Botanic Gardens ... Aug. 18 - 20 ... Canberra ... Mr. J.W. Wrigley, Organising Secretary, National Botanic Gardens, Canberra, A.C.T. 2601. ... International Association of Botanic Gardens.
7. Thirteenth International Botanical Congress ... Aug. 21 - 28 ... Sydney ... Australian Academy of Science, P.O. Box 783, Canberra, A.C.T. 2601 ... Australian Academy of Science.
8. Annual Meeting of the Australasian Society for Phycology & Aquatic Botany ... Aug. 24 ... Sydney ... Dr. B. Allender, Secretary, Department of Botany, Monash University, Clayton, Victoria 3168.
9. Annual General Meeting of the Australian Systematic Botany Society ... Aug. 24 ... Sydney ... Ms. J.G. West, Secretary, A.S.B.S., Herbarium Australiense, C.S.I.R.O., P.O. Box 1600, Canberra, A.C.T. 2601.
10. 6th Australian Weeds Conference ... Sept. 14 - 18 ... Broadbeach ... The Secretariat, 6th Aust. Weeds Conference P.O. Box 11, Broadbeach Queensland, 4217.
11. Australian Academy of Science Symposium on 'Biology of Rare and Endangered Species in Australia' ... Nov. (to be decided) ... Canberra ... Australian Academy of Science, P.O. Box 783, Canberra, A.C.T. 2601 ... Australian Academy of Science.

#### NANCY T. BURBIDGE MEMORIAL - NATIONAL BOTANIC GARDENS, CANBERRA

On Sunday 14th September 1980 we were among the many friends and colleagues of Nancy's who attended the official opening of the Nancy T. Burbidge Memorial in the National Botanic Gardens, Canberra.

The Memorial is in the form of an amphitheatre constructed of stone and timber and is located in the Eucalyptus lawn in the gardens.

The official ceremony was conducted by Dr Robert Boden, Director of the National Botanic Gardens, who paid tribute to the President of the Pan-Pacific and South-East Asia Women's Association A.C.T. for initiating the proposal of open air classroom as a suitable memorial. Dr Boden also thanked The National



Parks Association of the A.C.T., The Royal Society of Canberra, The Australian Federation of University Women and the Australian Systematic Botany Society for their financial assistance towards the Memorial. The actual construction of the amphitheatre was carried out by the staff of the National Botanic Gardens, a task which obviously involved considerable time and funds.

Lady Cowen addressed the group and spoke briefly of Nancy as a person and the impact her beliefs and interest in plants and the environment has had on individuals and the community as a whole.

Professor Sir Rutherford Robertson outlined Nancy's scientific career from the early days in Western Australia through to her involvement in Herbarium Australiense and influence on the 'Flora of Australia' project.

Following the official opening we enjoyed afternoon tea hosted by Mr L. Gillespie the City Manager from the Department of Capital Territory.

We feel that the amphitheatre is a very appropriate memorial to Nancy and we hope that it will be used by many school groups and others wishing to learn more about Australian plants and the natural environment in general.

Next time you are in Canberra, take a short walk up the hill from CBG and have a look for yourself.

Judy West & Estelle Canning

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I wish to thank those members who kindly made donations to the Nancy T. Burbidge Memorial Plaque. The amount of \$70.00, which was advanced by Council, has now been fully recovered (refer Newsletter No. 25, p.3).

Barry Conn, Treasurer

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 CHAPTER NEWS
 

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ADELAIDEAugust to November 1980August 27th: Steve Hopper, W. Australian Wildlife Research Centre, Wanneroo"Some Aspects of Flora Conservation in Western Australia"

Recent approaches in survey of commercialised native plants, as well as the biology and distribution of rare plants, drew much interest and discussion.

September 24th: Margaret Lawrence, Department of Botany, University of Adelaide"Classification of Senecio - a comparison of relationship based on morphological and cytological evidence"

Karyotypes of 35 species ( $2n = 40$  to  $100$ ) were compared on a percentage similarity basis and a dendrogram constructed. Species grouped by the dendrogram correspond with most morphologically derived groups, but the cytological evidence gave added insight as to affinities of inbreeding species.

October 29th: Prof. Peter G. Martin, Department of Botany, University of Adelaide"The use of amino acid sequences in studying plant phylogeny"

(for abstract see Australian Systematic Botany Society Newsletter 25:10 & 11).

November 26th: Brendan Lay, Landuse and Protection Division, Department of Agriculture, Adelaide"Long-term changes in South Australian arid vegetation and possible explanation"

One can only speculate on longterm effects when studies are at present of a short term nature. However, regeneration of perennials, from seeds is doubtful if there is a large population of rabbits living in the same area.

Helmut Tölken

CANBERRAPersonal News

Mr Heinar Streimann (CBG) made a brief visit to Papua New Guinea during January (1981). He spent part of his time (approximately one and a half weeks) at Bulolo where he mainly collected mosses and liverworts.

Extracts from the Australasian Bryological Newsletter: The Newsletter is an informal communication to keep people interested in Bryophytes in Australia and New Zealand informed about what is happening as we are scattered so thinly and widely across the two countries. It is not associated with any organisation, just an attempt to disseminate information. Copies are available to anyone requesting one. Circulation has expanded rapidly, having trebled from 20 to 60 in 3 issues. Both professionals and amateurs are included in our circulation which extends to Europe, North America and Japan. Two issues are produced per annum, one (April issue) containing lists of references related to Australasian bryology or by Australasian bryologists.

News of various activities are included and some lists of new species records reported.

Editors: H.P. Ramsay, University of New South Wales  
P.M. Selkirk, Macquarie University.

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Another Important Date

25th MARCH, 1981

NATIONAL GNOMENCLATURE DAY

(reference: The Official Gnomes Calendar, 1981)

I guess, if they had Council elections, it would  
be called 'GNOMINATE A GNOME'!!

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Australasian Pollination Ecologists Society: The above Society was formed on the last day of the Nectar-feeding Vertebrates/Vertebrate-Pollinated Plants Workshop in Monarto, South Australia, in August 1980. The aims of the Society are to participate in, encourage and communicate research in the field of pollination ecology in Australasia. Pollination ecology is interpreted broadly to include those aspects of a plant's biology which lead to pollination and all aspects of the biology of pollinators. Emphasis in the first workshop was mostly on vertebrate pollinators (honeyeaters, honey - and pigmy possums) but it is envisaged that the Society should include those interested in any animals which regularly effect pollination. Hugh Ford was elected Secretary.

It was agreed that conferences or workshops should be held approximately every two years, with informal meetings to coincide with meetings of A.N.Z.A.A.S. and

the Ecological Society of Australia. It was also suggested that reprints of published papers and abstracts of papers in press should be circulated amongst members.

Interested persons actively engaged in pollination studies who wish to be placed on the mailing list for future notices should contact :

Dr H.A. Ford  
Secretary, A.P.E.S.  
Department of Zoology  
University of New England  
Armidale  
N.S.W. 2351

S.D. Hopper

: : :

#### COUNCIL OF HEADS OF AUSTRALIAN HERBARIA

8th Meeting

Hobart 4-6th November 1980.

The 8th Annual Meeting was attended by the following representatives of State and Federal herbaria:

Dr A.E. Orchard (HO) Chairman  
Dr B.G. Briggs (NSW)  
Mr G.M. Chippendale (FRI)  
Mr A.B. Court (CBG)  
Dr H.J. Eichler (CANB)  
Dr J.W. Green (PERTH)  
Dr J.P. Jessop (AD)  
Dr R.W. Johnson (BRI)  
Mr J.R. Maconochie (NT)  
Dr J.H. Ross (MEL)

Present as observers were Mrs M. Cameron (Queen Victoria Museum, Launceston) and Mr D.R. Gregg (Chairman, CAMD).

An apology was received from Mr M. Galore (LAE)

Dr. Alison McCusker met with CHAH on the afternoon of 5th November.

Australian Botanical Liaison Officer: The conditions and level of funding for this position were discussed at length, and the report produced by Rod Henderson was considered. It was agreed that there was need for funds to cover incidental expenses, and that the level of funding for travel was long overdue for a substantial increase. It was felt that some overlap between successive officers was essential, and that each holder of the position should be assured of a reasonable period (e.g. 3 months) either during or after his tour of duty, for his own research. Concern was expressed over the delays and difficulties being experienced by ABLO's in finding suitable accommodation in London. These views were passed on to ABRIS.

Flora of Australia: The question of Copyright was discussed with Dr. McCusker. Some concern was expressed that contributors to the Flora might have problems if they later wished to publish revisions etc on the same groups. Dr. McCusker thought that these problems could be satisfactorily resolved.

Current Taxonomic Research Index: It was agreed that Dr Johnson should proceed with production of this index and that it should be ready in time for the International Botanical Congress. Overseas workers on Australian plants will be included if they have material on loan at present. Projects included on previous lists will be relisted with an indication of their current status.

CHAH Constitution: This was adopted with minor modifications of the draft prepared by Mr Maconochie and Dr Green. The major change was in our title, which is now "Council" instead of "Committee" of Heads of Australian Herbaria, to conform with the title of the Council of Australian Museum Directors.

CITES: All CHAH institutions will be applying for registration under Regulation 9 of the Customs (Endangered Species) Regulation to avoid the necessity of obtaining a permit each time they wish to export or import specimens of species listed on the appendices to CITES.

Loans Policy: The Council reaffirmed our general policy on loans. This includes the provisions that loans will in general not be made to University Departments when there is a nearby State or Federal Herbarium which could house the loan instead, and that loan requests will only be considered when they come through the Head of the requesting institution. Herbaria are to investigate instituting simpler and more uniform methods of listing loans, in an attempt to reduce sorting delays.

Economic Properties of Australian Plants: A CHAH sponsored working group is to be convened by Mr. Maconochie to study the possibility of setting up a data bank of information on economic properties of Australian plants.

Current Australian Taxonomic Literature: Mr Court is to convene a working group with Dr Johnson and Dr. Briggs, drawing on the experience of Mr. Wilson (Perth) and Dr Barker (Adelaide) to investigate the setting up of a co-ordinated scheme to produce a card index to current Australian taxonomic literature.

Register of Handwriting of Australian Botanist: Mr Court already has a large number of samples and he agreed to circulate these for copying. Other herbaria will attempt to fill gaps.

Research into Curatorial Methods: It was agreed that research into more efficient mounting methods would be worthwhile and could lead to great time savings in herbaria. Dr Johnson was asked to prepare a detailed proposal.

Next Meeting: The next meeting of CHAH will be held in Canbarra in 1981 under the Chairmanship of Mr A.B. Court. The Executive for 1981 will be Mr Court, Dr Jessop and Dr Orchard.

A.E. Orchard  
Chairman (1980)

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NATIONAL HERBARIUM OF NEW SOUTH WALES - ACCOMMODATION PROBLEMS AROUND  
THE TIME OF THE XIII INTERNATIONAL BOTANICAL CONGRESS

At NSW there has been extreme over-crowding of storage and working areas for many years. A new building for the Herbarium is now under construction, adjacent to the existing building. Until very recently we thought that it would not be ready for occupation by August. Latest estimates suggest that it may be completed at the end of June! However, this earlier date is not the unmixed blessing that it might appear.

Our existing building is to be renovated to accommodate the education, clerical and ecological staff of the Royal Botanic Gardens and the Director will retain his office there. The renovation has been included as part of the same building contract - so that we do not again have to wait years for funds to be approved. We shall therefore have only about 4 weeks to move our equipment, library and the herbarium collection - and those weeks are likely to occur just before the Congress.

I regret that we cannot give firmer predictions, but we have learnt not to rely on expected dates of completion of building construction, and a new building may show some initial problems in the settling-in phase.

We look forward to meeting botanists from other countries and elsewhere in Australia at the Congress activities. Most of the botanical staff are involved in the Congress and will not be at the Herbarium around the time of the meetings, being at the sessions or guiding excursions before or after the sessions. The Herbarium will be open for visitors during the time of the Congress. However, I would request that Australian botanists do not plan to work here during the period July to mid-September. If this is inconvenient, please contact us to see whether there has been any change in the expected time of the move of buildings.

I regret any problems for Australian botanists due to this request, but we feel that all our limited resources must be made available to overseas botanists at that time. A note was published recently in Taxon to inform botanists elsewhere of our accommodation difficulties, although at the time that note was submitted we expected the situation to be rather different from what it now appears.

Of course, if there should be more bad weather, industrial disputes or other eventualities, we may perhaps still see you again in these crowded premises.

L.A.S. Johnson

## PERSONAL NEWS

### RETIREMENTS:

Dr Hansjörg Eichler retires from the position of Curator of Herbarium Australiense (CANB), C.S.I.R.O., Canberra on the 31st March 1981. For further comment, refer 'Dr Hansjörg Eichler - On the occasion of his retirement'. (see later in this Newsletter).

Miss Mary A. Todd recently retired from her botanist position at the National Herbarium of Victoria (MEL), Royal Botanic Gardens, South Yarra.

The members of the Society wish Mary and Hansjörg a long and happy retirement. We confidently look forward to both of them maintaining an active interest in Taxonomy.

### NEW APPOINTMENTS

Dr Bryan A. Barlow formerly of Flinders University, South Australia, has been appointed Curator of Herbarium Australiense (CANB), C.S.I.R.O., P.O. Box 1600, Canberra A.C.T. 2601.

Dr Alex S. George formerly of the Western Australian Herbarium (PERTH), South Perth, has been appointed Executive Editor of the Flora of Australia project Bureau of Flora and Fauna, P.O. Box 1252, Canberra City, A.C.T. 2601.

The members of the Society hope that Bryan and Alex find their new challenging positions both rewarding and enjoyable.

## INDEX TO COLLECTIONS

### A Time-saving Computer Package

Those of you who have spent many laborious hours drawing up lists and rearranging or shuffling specimen cards may be interested to know that we have devised a package of computer programs to produce indices to collections. This method saves time and provides increased accuracy and efficiency as well as simple editing and updating procedures.

Roger Carolin (Australian Systematic Botany Society Newsletter 25:5) suggested we stop publishing "lists of specimens" as one way to reduce the size of revisional treatments. If several recent publications are any indication, there seems to be a good deal of sympathy for this practice. Even if this is adopted widely, it is likely that many taxonomists will still wish to produce an index to collections, if only to assist herbaria.

The programs suggested here produce a standard alphabetical collector index. The collections are numerically ordered within each collector with an associated code indicating the identification of the specimen.



The package of programs is designed to minimise the amount of rearranging of specimen cards or lists and to minimise the amount of data which must be typed. The user types the collection numbers in any order in an essentially free format. Each collection number is scanned and reformatted by the program. This reformatting procedure converts various ways of entering the collector's names and initials into exactly the same format (e.g. West J.G.; J.G. West; West, J.G. are all converted to West, J.G.). Up to three collector names may appear on a collection number and the use of initials is optional. The program recognises three different types "number". The first is a simple collector's number (e.g. West, J.G. 6942 or West, J.G. 6953a or West, J.G. 703-708). The second is an herbarium sheet number (e.g. Smith AD96923140 or Smith MEL84106-9). The third is the string form, which covers those specimens which must be cited via a collector and locality &/or date (e.g. Cook South Pacific, 18th Century). Certain special formats (e.g. WA/68 2544) have also been included and the program is written to facilitate the making of alterations to accept other oddities.

The input format is best shown by way of an example. In this case the # symbol indicates that a new species is to be started and in the output this taxon will be identified by the appropriate characters, e.g. "14b", "12". Instead of numbers letters can be used to represent the taxa, e.g. the first three letters of specific epithets. In those situations in which there are many collections by the one collector a blank is used in the first column of each extra line to indicate continuation of the previous collector (e.g. Eichler below).

# 14b

Barker/3277/4133/66

Symon/8042a/816/9185b

Eichler/14982/15083/15084/16217/19087/19159/19247/19257/19322/19323/  
13852/14654

Cleland/AD966030761/AD97316109/AD966031544

West/2687-2691/3437a/3126-3131/3529-3533

Black, J.M. AD96235070

Black, S.H./3016/5647/6759 Moonaree 1894/Black Stump 24.2.1896

Cunningham & Milthorpe/4328

Eichler/15363

# 12

Drummond/187

Martin/9335/6758-6760/2357c/CANB18370/L908.269-871

Brown, J.M./Balladonia/Agnew 1927

Symon/8043/6759

West/1457/2478-2483/3326-3328/916

The data can be typed directly into the program from a terminal or stored on a file via an editor or data entry program, or even punched on cards. The format is simple and can easily be used by clerical staff. The program warns the user of anything it cannot recognise on the first pass through the data.

Once the user is satisfied that the data is being read without errors, it is sorted and prepared for the output program. Again the output is best

shown by an example. The list is sorted by collector surname(s) and initials and the collection numbers follow in the order: simple numbers in ascending order, herbarium numbers in alphabetical and numerical order and 'oddities' in alphabetical order. Details, such as punctuation and formats of the collector's names are easily varied. Appropriate page headings and footnotes are printed and separators are placed between collector names beginning with different letters of the alphabet. In order to save space these are not shown in the example below:

Output format -

Barker 66/14b, 3277/14b, 4133/14b; Black, J.M. AD96235070/14b;  
Black, S.H. 3016/14b, 5647/14b, 6759/14b, Black Stump 24.2.1896/14b,  
Moonaree 1894/14b; Brown, J.M. Agnew 1927/12, Balladonia/12;  
Cleland AD966030761/14b, AD966031544/14b, AD97316109/14b;  
Cunningham & Milthorpe 4328/14b; Drummond 187/12; Eichler 13852/14b,  
14654/14b, 14982/14b, 15083, 15084/14b, 15363/14b, 16217/14b,  
19087/14b, 19159/14b, 19247/14b, 19257/14b, 19322/14b, 19323/14b;  
Martin 2357c/12, 6758-6760/12, 9335/12 CANB18370/12, L908.269-871/12;  
Symon 816/14b, 6759/12, 8042a/14b, 8043/12, 9185b/14b; West 976/12,  
1457/12, 2478-2483/12, 2687-2691/14b, 3126-3131/14b, 3326-3328/12,  
3437a/14b, 3529-3533/14b

The programs were developed on a UNIVAC 1100/82 system using ASCII FORTRAN. The coding has been limited so that it will run with most FORTRAN IV compilers with little difficulty. Final output was produced on a Diablo "daisy-wheel" typewriter which gives a choice of type faces, pitches and ribbons. The output program automatically adjusts the printing to fit the page size required by the user. Line printer outputs are useful for checking the preliminary runs for typing errors and are satisfactory quality for distribution to herbaria. Even at commercial computing charges the cost of running the program would be insignificant compared with the researcher's time taken to prepare the data.

The programs have already been used successfully to produce the collection index associated with a revision of Dodonaea (J.G.W., Ph.D. thesis). With the ordering of over 7000 specimens into more than 70 taxa there is no doubt that, even with the time involved in initial program development this manner of producing the index was a time saving method. An added advantage was that the specimen card index did not have to be rearranged into one large file and then resorted into species for future use.

If you want to know more about the program please write to either of us at the following addresses:

Dr I.R. Noble, Department of Environmental Biology, RSBS, Aust. National University, P.O. Box 475, Canberra City, A.C.T. 2601.

Ms J.G. West, Herbarium Australiense, CSIRO, P.O. Box 1600, Canberra City, A.C.T. 2601.

AUSTRALIAN PLANTS IN SOUTH AFRICA

BYRON LAMONT, WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY.

Having just spent a year in South Africa, I cannot let David Symon's (1980) last sentence go unchallenged, "...and the whole question of the inability of Australian species to compete in alien floras seems worth more study." I assure him, the South Africans are studying Australian species very seriously indeed - for the opposite reason! Of Hall and Boucher's (1977) list of 25 serious terrestrial weeds in the Cape flora, 14 are Australian. Acacia saligna, A. cyclops, A. longifolia, Hakea suaveolens, Leptospermum laevigatum and a Callitris sp (probably preissii) were introduced to the Cape flats (via Kew be it noted, guilt-feelings receding slightly) about 130 years ago for dune stabilization purposes (Low 1979). These (except Callitris) have now spread over much of the 5 million ha. of the renowned and threatened Cape Floral Kingdom (Hall et al 1980). To these can be added five somewhat less aggressive Australian Acacias, Albizia lophantha (the only non-endemic), Hakea gibbosa and H. sericea (both much more aggressive than H. suaveolens) and Eucalyptus lehmannii. Hall (1978) estimated 24% of the remaining undisturbed areas of fynbos (mainly mountain heath and Scrub) have been invaded by these Australians, plus Pinus pinaster. In a nutshell, Acacias are taking over the sandy lowlands, and Hakeas (and Pines) are taking over the sandstone mountains.

I was staggered (secretly, quite proud about) how well our plants are doing - just imagine pure stands of Acacia saligna, with their winter displays of golden-orange, for as far as the eye could see! Sue Milton (1979) counted 2500 intact seed per m<sup>2</sup> under a stand of A. cyclops, while I have never before seen these, or E. lehmannii and E. ficifolia, so heavily laden with fruit. Hall et al (1980) considered invasive alien plants contributed 33% (23% by Australian Acacias) of the threats to the survival of 70 species (some extinct) in the south-west Cape. Of course direct clearing of 60% of it has been the prime cause for the demise of 20% of its 6000 species. In addition, I saw many more Australians, e.g. E. cladocalyx, E. botryoides, confidently moving away from their parents, but these have yet to be recognized as a threat. On the other hand, Hakea salicifolia, traditionally grown as a windbreak around orchards, appeared much more obedient - is this where the South Africans were misled 130 years ago?

But this 'Advance Australia Fair' is not without considerable resistance from the South Africans. The twelve year burning rotations described by Lückhoff (1980) shows how much trouble the Forestry Branch is prepared to take to remove aliens from the water catchments. Numerous 'Hakea Hacks' were held on Table Mt. by ad hoc action groups ("...bring your lunch") while I was there. Methods of biological control are also in full swing, concentrating on seed-eating insects.

So the most pressing question, really, is why have Australian plants competed so successfully in the South African flora? Milton (1979) has done a good job at trying to answer it, focussing on two factors, pre-adaption to the summer droughts and infertile soils, and the lack of predators.

Phyllodiny (absent from the South African Acacias) may well be a clue to the success of Australian Acacias on the flats. And certainly my impression was that the south-west Cape has a much milder climate than what, at least the western, Australian species are used to. As Fred Kruger noted at the recent International Conference on Mediterranean-type Ecosystems, "These invasions challenge all conventional use of the ecology of invasions, including the notion that diverse communities resist invasion, and that invaders rely on disturbance for an entry." With respect to succession theory, we have here the paradox that the colonizing and climax species are now the same !

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Dr HANSJÖRG EICHLER

On the occasion of his retirement

During the last few months, I have occasionally wondered about the format and, in particular, the appropriateness of an article celebrating Dr Eichler's career, on the occasion of his retirement. Some people have quite sincerely felt that such an article might be construed as a 'premature obituary'. Furthermore, one's retirement from office possibly does not deserve the expression of congratulatory remarks, particularly when the event is usually not exactly welcomed by the person involved.

Dr Eichler does feel that there are so many things which could have been done better. However, I feel that he has every reason to be satisfied with an honest and successful life. He has always maintained a firm attitude and intense dedication to the principals of taxonomic botany. There is no

doubt that his pronounced personality and character has, on occasions, contributed to conflict. However, conflicts aside, retirement does not mean the end of a career, but rather, a landmark from which we may now look back. It seems most appropriate to invite a number of Dr Eichler's friends and colleagues to contribute to this article which is celebrating his distinguished career. Since the title of the Australian Systematic Botany Society was originally suggested by Dr Eichler, at the inaugural meeting of the Society in August of 1973, it is very appropriate that the following articles should be published in the Australian Systematic Botany Society Newsletter.

Freed of the administrative duties that he has ably performed, I trust and sincerely hope that Dr Eichler will be able to continue his research on Ranunculaceae, Umbelliferae and Zygophyllaceae. I am sure that he will continue to willingly share his expert knowledge with all those who seek his opinion.

B. J. Conn  
Adelaide.

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## EICHLER AND FLORA MALESIANA

As a consequence of the magnitude of Flora Malesiana I have always been trying to attract specialists to share in the work, especially from abroad, in conjunction with its international scope and importance. In the early years my power of persuasion led to a satisfactory number of promises which were very welcome perspectives and additions to the output of the then small team at Leiden. My esteemed professor Pulle, with his experience on the compilation of the Flora of Surinam, shook his head when I told him of these perspectives. He said to me, young man, "veel beloven, weinig geven, doet de gek in vreugde leven", in English: I feel that you are living in a fool's paradise. That was that; he proved quite right.

Times have fortunately changed, and the increasing number of important, even essential contributions and activities are testimony that the botanical world has become fully aware of the true international set-up and need of this fascinating creation out of the chaotic botanical knowledge of this most important part of the palaeotropics.

Returning to these early years; at the instigation of Dr Sleumer we could attract Dr Eichler, whose career had more or less gone astray through the war. As a refugee from East Germany he succeeded in getting a grant from the West German Government to get a further training in plant taxonomy, which he developed at Leiden, in joining the Flora Malesiana team as a honorary collaborator. Because he was familiar with the European flora it seemed attractive to entrust him with work on a smallish temperate family, and that became the buttercup family. He started work on the first of January 1954. Though reticent by nature, he proved to be an enjoyable person, very helpful, as almost all botanists are. He was also very hard-working, tenacious, not deviating from achieving his goal, a capacity not shared by all botanists. As to his work, Eichler appeared to be punctual, orderly and conscientious, with great attention to detail, in my frank opinion inclined to hyperconsciousness, a tendency shared with other conscientious colleagues of which they should constantly be aware, because in my considered opinion this is a very time-consuming and mostly not rewarding attitude.

In the course of 1955, the grant being finished, and the manuscript completed, he looked for a permanent position and found one with our antipodes. As far as the manuscript was concerned, this had become an elaborate piece of work which he wanted to have published as a whole; it was published in the sumptuous Bibliotheca Botanica, Heft 124. There appeared no urgent need to have this at that time extracted for republication in Flora Malesiana style, as the main thing was that it was available in excellent shape. An important additional argument was that at that time the Leiden project for exploring the alpine flora of New Guinea had just started, and it could be well expected that in the forthcoming decades many new specimens would be collected, especially of the genus *Ranunculus*, which has in New Guinea an abundant development. These new collections should then be an essential check on the status of the many new species proposed by Eichler and also possibly add still more. As Flora Malesiana is intended to be, we hope, an almost final, complete account - in which it has

hitherto with an occasional exception succeeded - the extraction at that time would have most probably resulted in an incomplete revision, and appeared premature. I feel that at present such a reconsideration could well be achieved and I hope Dr Eichler will seriously consider it.

C.G.G.J. van Steenis  
Leiden

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### THE FLORA OF SOUTH AUSTRALIA

I have known Hansjörg Eichler almost from the very moment that he came to Australia, first as one of the undergraduates mounting plants in his herbarium at Adelaide, then as his student in taxonomy, and now as his colleague and life-long friend. Over that time my view of him has changed little, so constant has he been. If I can single out three characteristics that affected and impressed me, in particular, they were his single-minded dedication to the cause of systematic botany, his generosity of spirit in encouraging and leading students, and his ever gentle and gentlemanly manner. Together they have inspired a deep and abiding admiration and affection.

Perhaps his reserve was my hardest hurdle, for the rough-and-ready egalitarianism of Australian university youth does not lie easily alongside ingrained formality. If I thought he was a bit of a stick-in-the-mud at times, he must have felt constantly harassed and bewildered by our boisterousness as undergraduates. (We, particularly the girls, delighted in mounting abstract patterns on herbarium sheets). This, compounded above all by his misunderstandings with the Director of the Botanic Gardens at Adelaide, made him rather homesick at first. Then the flora got to him and his friends grew, notable among which was E.S. (Ted) Booth of Mt Lofty who made that all-important cultural bridge in the early years.

I really came to know Hansjörg not at the herbarium but through bike-riding. He always rode a bicycle to work during the 1950's, and so, mostly, did I, and as both of us lived out on the same side of Adelaide, we gradually began to ride together going home, usually about an hour or so after office-hours finished. We never joined going in because I never got up early enough. He perceptively nursed my deep interest in taxonomy then, on the one hand telling a doubting mother that it was the corner-stone of biological science, and on the other by telling me that I didn't have the patience for it. That was like a red rag to a bull.

Hansjörg Eichler became more of an administrator than a writer of revisions in Australia. For those who might tilt at his published production, one can point to his massive supplement to Black's Flora of South Australia and to the circumstances in which systematic botany found itself in the 1950's and early 60's.

Systematic botany then was the butt of ridicule and disinterest among the sciences, and published revisions - most necessarily at alpha-level - were seen as little else than technical reports. When exploring post-graduate courses at the University of Adelaide, I was told that taxonomy was unacceptable in zoology and was encouraged to do ecology in botany. Eichler realized that the quickest way to redress the situation was to form a power base and lobby. He associated actively with taxonomists and heads of herbaria interstate, supported convocations and the Flora of Australia project with great persistence, and went out of his way to befriend important figures in science like Professor R.N. Robertson for their support. May be his quiet, courteous manner did not have quite the impact of a messiah, but it did win him friends, and his pressure for the 'cause' was always there, at work, nagging away with a natural altruism. During the 1960's and early 70's, six PhD students passed through his hands, and through that example too, the word was spread.

Today plant taxonomy is no longer a cinderella science. Of course, the changes in attitude that came during the 70's were inevitable and helped by many, but they would have filtered down more slowly and less forcibly without Eichler's constant championing. Now, at the end, he can rightfully draw comfort from the knowledge that his own trials and tribulations have made the taxonomic road a much easier one to hoe for others who come after. His science and his students owe him much.

R. Schodde  
Canberra

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Mr E.S. Booth acted as 'Caretaker Keeper' of the old Adelaide Herbarium until Dr Eichler took up the position of Keeper in 1955. Mr Booth assisted Dr Eichler for approximately five months by familiarising him with the administrative procedures. During that period, Mr Booth found Dr Eichler to be a person of "great integrity and a first class taxonomic botanist". Subsequently, both have remained close friends.

The technical staff at AD were meticulously trained by Dr Eichler. He emphasized that all of his staff were to strictly follow the rules and procedures which he had set down. He conscientiously encouraged his staff to always be punctual. While pointing at his watch, the Doctor was heard to say, "Mr Donner you are late!" The reply was in full agreement, "Yes Doctor!" Each person was thoroughly trained in the system used to process the incoming plant material. A slightly modified version of this system is still used at AD. As pointed out by Nik, there may be other systems, however, "if we follow his system, everything is rational, but if we do not, then total chaos usually eventuates".

Mr David Whibley joined the staff of the Adelaide Herbarium in 1956. As part of his field training, David was rigorously instructed in the various procedures of collecting plants. During this period, the first 12 months,



David collected under Dr Eichler's numbers. The main joint collecting trips were to the Gammon range and to the far NW of South Australia (Musgrove ranges).

Dr Eichler strove, often seemingly without compromise, for what he regarded as the necessary (in fact, essential) highest standard, he often trod on many egos. However, as pointed out by Mr Eric Jackson (AD), even though feelings were occasionally disturbed, "it was a pleasure to work with Dr Eichler because he was a thoroughly scientific person and he was always willing to listen to any problems." Miss Vilja Jaegermann (AD) remembers that Dr Eichler affectionately regarded the staff as his 'adopted family'. This attitude, in conjunction with the small number of staff, resulted in a very closely knit group.

Mr Nik Donner (AD) went on a number of field trips with Dr Eichler. The day started at dawn for the Doctor, although Nik is not too sure about that, since he was always still asleep! Eventually, the Doctor would appear with a number of plant specimens for the presses.

Dr Eichler did not like to collect into plastic bags, but rather, he preferred to press the specimens as soon as they were collected. He did not like Cassia petals sticking on to Dodonaea stems and leaves! However, there is a photograph, taken by some unscrupulous photographer, of the Doctor collecting into a plastic bag on some mountain in the Everard Ranges!

Dr Eichler's field equipment included a vasculum which was used in the early days. It was eventually converted into a useful portable library container. There is one item of field equipment which has puzzled many and no one has seen it being used - one European ice pick!

Although Dr Eichler was, and still is, very dedicated to taxonomic botany, he sometimes did not pay sufficient attention to detail. Consequently, there were times when he temporarily lost interest in it. Once at the base of the Marble Ranges (Eyre Peninsula, South Australia), the Doctor was pressing specimens, so Nik Donner went to offer his assistance. Suddenly, both leapt into the air - Dr Eichler had spread his press over a Bull ants nest! Apparently, much agony followed.

On another occasion, the principles of taxonomy ran a very bad second best to a special shaving brush left on a stone somewhere in South Australia. Fortunately, after some driving, the offending article was recovered and Taxonomy once again regained its former status.

On collecting trips a great deal of time was spent changing presses everyday and drying blotters, which were used to absorb the moisture from the specimens. The drying of blotters was achieved in a number of ways. The Doctor pegged the blotters on to a 'Hills' clothes hoist at Minnipa (S.A.) much to the puzzled amusement of the 'locals'. At Esperence (Western Australia), the blotters were pinned to a fence so that the wind would help to dry them. However, cows (or horses, Nik cannot remember which) came up and started to eat the blotters. A highly agitated and very energetic Dr Eichler retrieved the blotters in time.

The Doctor appears to have had only one scrap with the Law, which resulted in him spending the night behind bars! Perhaps the full story should be told.

While on the trip to the far North-west of South Australia, David Whibley and Dr Eichler decided not to camp in tents while in Kingoonya. They asked the local Policeman if there were any empty houses in which they could sleep. However, all the Policeman could offer was a couple of cells in the local jail, so David and Dr Eichler had a bench each !

Without trying to take any credit away from Dr John Jessop, the present Chief Botanist of the Adelaide Herbarium, the high standard of efficiency and professionalism maintained by the staff of the Adelaide Herbarium is largely accreditable to Dr Eichler's example and previous influence.

B.J. Conn  
Adelaide

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On behalf of some University colleagues, I salute Dr Eichler on the occasion of his retirement and wish him great success with his ongoing plans.

I recall our first expedition together, in the Musgrove ranges. R.N. Robertson was there. So were Nigel Wace and David Whibley. I still have the photos. One showing Peter Brownell knee-deep in Spinifex is reproduced in Ray Specht's 'Vegetation of South Australia'.

We learned much about Hansjörg on that trip. First, that he can climb mountains and open cans faster than any of us. Second, that he is excellent company in the field; cheerfully sharing the rough as well as the smooth. But, most of all, we learned that he really is the epitome of the genuine taxonomic botanist. When his all-important trailer (containing all the botanical collections) broke down and his back-up failed to send the requested spares, we shared his dismay. Then we lent him our trailer, left the wrecked one for his back-up to recover, and shared his laughter. We left the Musgroves with fresh insights and have been firm friends ever since.

I cannot list here the many ways in which Hansjörg commands my great admiration and respect. His quiet, solid help over the years, as taxonomic mentor to me and my graduates, has been of incalculable value to us. By discussion, he has helped me test many ideas, ranging far beyond taxonomy. Most of all, he has given us an admirable example of rigorous professionalism and unswerving adherence to high standards. Botany will remain a coherent discipline only so long as it continues to cast taxonomists in those features of the Eichlerian mould.

Knowing Hansjörg, I fear that he might now disappear into the bowels of an herbarium and rarely surface for air. I hope he will spare some time for lesser pleasures. I would very much like him and Marlies to visit Middleback Field Centre now that it is more tangible than the enthusiastic idea I discussed with him long ago.

R.T. Lange  
Adelaide.

I am very grateful for this opportunity of telling the story of my dealings with the master of my apprenticeship in botany.

In 1961, the South Australian Education Department, in its wisdom, decided to hold an Education Week to broaden the understanding of education in the community. The committee of our small primary school on the northern York Peninsula met to decide what should be . . . and on my shoulders fell the job of publicising information available on the biology of the region. I visited the Adelaide Herbarium for a plant list of northern Yorke Peninsula, and there came face to face with Dr Eichler. "Mr Copley, there is no such thing! No-one collects there. We need someone to do it . . . . . But, Mr Copley, you must have a cup of tea".

In 1965, after several more cups, I decided to become a collector. My first aim being to fill the northern Yorke Peninsula hole. First, however, I had to serve my apprenticeship, entailing a collection of 100 specimens. If this met the standard, then and only then would a field note book be issued. Some of my specimens were despatched to the bin, but fortunately, most were approved of. Mr Copley was issued with his note book.

That my collection number 550 (from my own farm) was chosen as a type of Stipa exilis says something for the coach getting my collections up to scratch at an early stage.

I have been told several times, as a farmer, that there were no such things as weeds, only plants. With Dr Eichler's approval, I approached the local Weeds Officers and offered a plant identification service by way of my notebook, much quicker than they were used to from the Department of Agriculture. Three new Australian records of Hypocoum pendulum and, as yet unpublished, Filago pyramidata and Polycarena leiopoldtii eventuated in this way.

Since 1974, my health has deteriorated and little collecting has been possible. I have been just an observer, but have retained my friendships and associations in the botanical world, the background in botany obtained from all of them, and the ability of keeping up with what is going on in botany through the literature. It has all been good medicine, and it all can be traced back to that first cup of tea in 1961.

B. Copley  
Bute

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Soon after I met Dr Eichler, he asked me to collect herbarium voucher specimens of any plant which I painted. He also encouraged me to collect live material (mostly as cuttings and seeds), both from within South Australia and interstate, for the 'Wittunga' Botanic Gardens (Blackwood, South Australia). I found his enthusiasm for more and more specimens undaunted. I asked him how much information he wanted and I remember being told "I could never give him too much!".

Some years later a specimen of a reasonably common Western Australian species was sent to the Western Australian Herbarium (PERTH) for identification. However, PERTH did not have a specimen of this species. This prompted me to send duplicates to PERTH whenever possible, so that it would be possible for the two herbaria to compare notes without mailing specimens. Initially, I used biro pens to write the field label and collection number. This proved to be an unfortunate choice because the Western Australian Herbarium's method of poisoning specimens faded the ink.

I appreciated Dr Eichler because of his dedication to his work and for his fine sense of humour, but not for having to sign his Visitors Book, which he loved. One day, while trying to think of a suitable few words to explain the reason for my visit to the Herbarium, I heard a giggling, spluttering noise near by. There was Dr Eichler at the turn of the passage, near the entrance desk, obviously highly amused. The cause - David Whibley, Joe Weber and Kosmyrn Chorney had silently queued up behind me with problem Herbarium sheets awaiting an audition before I left the premises.

I only saw Dr Eichler when I was leaving on a collecting trip or when I was returning with 'booty'. As always, he wanted to see all of my paintings. Once, due to the lack of space on an Acacia painting, I painted a seed falling below a pod. This left him helpless with chuckles!

Apparently I had quoted Dr Eichler so much as my authority, that when he left South Australia for Canberra, Dane Wimbush, of waggish nature said "I am going to ask Dr Eichler," what is Miss Ashby going to do without you?".

A.M. Ashby  
Victor Harbour

The Kangaroo Island Flora and Fauna Club was formed some time in the fifties, flourished for a time and then faded out. While it was still active, I read a newspaper account of the appointment of Dr Eichler to the South Australian State Herbarium. The article seemed to indicate that the collection in the Herbarium was not as extensive as it should be. This article prompted me to suggest to the Club that we offer to collect the plants found on Kangaroo Island. I wrote to Dr Eichler and had a very kind letter from his secretary accepting our offer. This was in May 1960 and was the beginning of a long and happy association with the Adelaide Herbarium.

None of us had any idea of what collecting for a herbarium entailed, but Dr Eichler was remarkably patient. As a matriculation student in England, I had learned how to use a Flora, but I found 'Black' much more difficult to handle. I learned a lot from Dr Eichler. I think my husband, Garth, and I were the only club members who actually did any collecting. One lady, I remember, was quite willing to collect provided that the Herbarium gave her specimens back! Others expressed an interest and left it at that!

I remember visiting Dr Eichler in the old Herbarium building that looked like a cross between a school shelter shed and a rather superior, glassed-in chook house. With very expressive gestures, the Doctor condemned my rather small, fragmentary specimen and strongly recommended that much bigger specimens were required. One phrase I often heard (until he had me trained!) was "At the Herbarium, we are not interested in colour". So disappointing to a Field Naturalist, when one has just discovered a white form of Correa pulchella! Of course, I now realise that there are so many white forms of so many species.

Dr Eichler visited Kangaroo Island on many occasions with his wife and often came to see us. Once, while looking at the garden, he found a particularly persistent weed, Kickxia sieberi. He called me over to admire the remarkable way in which it is adapted to its environment. I found admiration of a weed, and an exotic at that, very difficult!

On one of his trips to the Island, the Doctor found a colony of Stylidium tepperanum growing along the track to the mouth of Stun'sail Boom River. It had only been recorded previously for Mount Taylor, but has since been found in several areas along the South Coast.

Finally, I should like to wish the Doctor a long and happy retirement filled with interesting specimens of every kind.

I. Jackson  
Kingscote

Dr Hansjörg Eichler's contributions to botanical nomenclature.

Dr Eichler was elected to the Committee for Spermatophyta at Seattle in 1969 and has been a well respected and active member ever since. He takes a particular interest in any case which involves problems of orthography, a subject on which he holds strong views. His interest and comments, going back over a few years, have certainly inspired the Committee to try to get to grips with problems, culminating in the proposals to rewrite Art. 75, published in Taxon of February 1981. - Indeed Eichler's comments on orthography in his paper in Taxon 12:15-20 (1963) certainly seem to be the clearest attempts to pull formalized nomenclature out of the muddle of terminology which has clouded discussions up to now. His distinction between homonyms, paronyms (a valuable term, invented by Eichler there) and orthographic variants has been fundamental to all discussion in the Committee for Spermatophyta on this subject in recent years. We hope that the essence of this paper will at last be incorporated into the Code at Sydney in 1981; on the occasion of the International Botanical Congress, which will again review the International Code of botanical Nomenclature. Parts of the proposals put forward by the Committee for Spermatophyta are, in fact, word for word those put up by Eichler in correspondence.

It is thanks to the quiet but consistent, painstaking, time-consuming and highly professional contributions to the work of the international nomenclature committee by colleagues such as Dr Eichler that botanists have succeeded in obtaining a world wide consensus on nomenclatural rules and procedures. It is a happy circumstance that we can pay this tribute to Dr Eichler on this occasion for his contribution to this important part of the infrastructure of plant taxonomy. Workers like Eichler, certainly in this respect, tend to work quietly in the background and the effects of their efforts become evident only in an indirect way. Botanists are grateful to Dr Eichler and those who work with him for their unselfish contribution to the plant sciences.

R.K. Brummitt (Kew)

F.A. Stafleu (Utrecht)

The arrival of Dr Eichler, as Keeper of the new State Herbarium of South Australia, was welcomed by many people with a sigh of relief, in the earnest hope that some order would emerge with a proper collation and storing of all scattered South Australian herbarium collections. They were not to be disappointed. Dr Eichler immediately made contact with interested parties in country districts and in Adelaide, and soon had both his professional staff and other collectors contributing voluminous collections to the Herbarium vaults! Indeed, persons like Alison Ashby, Doreen Hunt, Kevin Rohrlach, Ray Alcock, Bruce Copley, Ron Hill, Kath Alcock, Tony Spooner and Brian Blaylock alone, have enriched the Herbarium collections by well over 100,000 numbers. Dr Eichler had the ability to quietly coerce you to collect plants for him. He was ever ready to render his assistance, and was most patient with your enquiries. You felt a part of the Herbarium team (admittedly peripheral), and that your humble efforts were a valuable contribution to botanical science.

I cannot honestly say that Dr Eichler had a total influence on my own botanical attitudes and activities for there were others, including J.B. Cleland, Richard Schodde, Noel Lothian, Jim Willis and Cliff Beauglehole, from whom I gleaned most admirable advice and techniques of collecting in the field. But Hansjörg taught me the correct requisite of thoroughness - that a plant should be pressed and neatly, that the collection of both flowers, fruit and bark was important, and that a fragmentary collection could reflect upon the reputation of a collector. He regularly suggested it was wise to make a moderate number of duplicate sheets whenever possible, so exchange material could be sent overseas. I always found him willing to listen and advise on any problem. In particular, he had a wealth of knowledge of the European approach to conservation. But I must reiterate that it was his attitudes towards scientific thoroughness that had a most profound influence upon me.

Another field where he helped me greatly was in aspects of historical botany. He was the first to unlock for me the mysteries of obscure German botanical publications, and gave me the necessary enthusiasm to pursue this field of work, which now is one of my most consuming activities.

To some people, Dr Eichler had an outward appearance that appeared stiff, dour and unsmiling, but I can vouch he has a most dry humour, that most were unaware of. The Doctor was not one to suffer fools gladly and much needless administrative book work and petty enquiries irritated him somewhat. Relations between him and the Director of the Botanic Gardens, Adelaide, were not always on amicable terms, and the further eroding of his valuable time at the expense of revision into his beloved Ranunculaceae and Zygophyllaceae, probably clinched his decision to move to Canberra.

Dr Eichler could have accepted a botanical position in Chile, instead he chose Sth. Australia. That will forever be Chile's loss and our gain. Overall his contribution to South Australian botany was considerable, and he earned that respect and admiration of the botanical fraternity in Adelaide.

D.N. Kraehenbuehl  
Adelaide

I really only met Dr Eichler late in 1968 when I donated about 200 specimen to the State Herbarium (AD). 140 or so, of these, were from the Everard Ranges and from other places in Central South Australia. Some of these collections were somewhat sub-standard, although I believe the most interesting ones were reasonable. Dr Eichler was extremely helpful in guiding me to collect more useful specimens. In this, he encouraged me to collect the more unusual. In retrospect, I believe that this was his way of encouraging an amateur botanist, such as myself, to collect for Herbaria. With his encouragement (and that of the late John Garrick) I had donated over 2,500 collections by the time he had moved to Canberra in 1973.

On at least two occasions he conducted the Botany Club of the Field Naturalists' Society from the State Herbarium. These evenings were full of lucid details which further maintained ones enthusiasm for collecting.

Although I did not know Dr Eichler as well as I would have liked, I felt a sense of loss when he moved to Canberra.

A.G. Spooner  
Adelaide

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For me Hansjörg Eichler is the person who, twelve years ago, did what the Australian Education System had failed to do - he taught me to write English. After reading this, he may well disagree, but I can assure him that for the first time, I learnt to avoid "splitting the infinitive"; beginning a sentence with the participle and ending a sentence with a verb. I also learnt the importance of being consistent and paying attention to detail when presenting scientific information.

In retrospect, for him the task must have been arduous and frustrating yet he remained patient and helpful always providing constructive criticism and guidance. For me, to discover the enormity of my inadequacy was devastating, and the ducks in the Botanic Garden often shared emotional out-pourings as I toiled, dejected, back to the Botany Department.

The training I received, both scientific and in written expression has been invaluable and I thank you Hansjörg.

C.E. Offler

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My first contact with Hansjörg Eichler came in early 1968, when as an undergraduate fledgling who had just developed an interest in taxonomy. I was given a holiday job preparing and mounting specimens in the Adelaide herbarium. He was then as now a man who was the epitome of correctness, in everything he did and espoused, such that his presence pervaded every corner of the building.

Hansjörg's association with potential and developing taxonomists is obviously something very dear to him. He encourages them at every opportunity. I know of several instances where, in response to sending him reprints of initial papers, people with sometimes little association with him received a warm congratulatory letter with an invariable reminder that one must not stray too often from the revisionary path. He is more than happy to adapt to different philosophies of his charges, even when set and somewhat outmoded, as in the case of the fixed creationist view of the species held by the late Mr Ernest Ising, the worker in Chenopodiaceae. As an adviser on nomenclature he is first-rate with his almost instantaneous ability of applying the Code to the problem at hand. As a supervisor he is tremendous. He maintains that moderate-sized natural groups are more suitable for taxonomic doctorates than large artificial groups because they allow for more specialised (peripheral) areas to be investigated and so, incorporated into the revision.

In my case he acted as a valuable sounding post for testing ideas, with his wide-ranging background, remarkable memory of literature, and thought-provoking discussion. Forewarned of my tardiness with the Honours year deadline, continually coaxed and worried over me like a mother-hen, such that I almost feared leaving my desk. He always seemed to turn up for a lengthy discussion just before I departed for baseball practice.

Another group of people he encouraged was the private collectors. Perhaps over one half of the modern South Australian collections in the Adelaide herbarium come from such people, and the large number and high quality of their specimens are substantially due to his convincing them of the significant role they play in Australian plant taxonomy.

These then are but two important facets of what has undoubtedly been Hansjörg Eichler's paramount aim in life over the past 20 years, the promotion of Australian plant taxonomy. He arrived in South Australia when plant taxonomy was widely held by Australian botanists to be a second-rate science if a science at all. His painstaking desire to promote taxonomic research led to recognition at the local university level with the awarding of a doctorate and an honorary lectureship in Botany. His promotion of taxonomy also led to a continuing series of post-graduate students in angiosperm taxonomy. I refrain from discussing his significant and substantial endeavours at the national level because it can be far more authoritatively discussed by others.

Anyone who has met Hansjörg cannot fail to be struck immediately by his strong personality. He is so honest and forthcoming with his deeply considered and strongly held views, that when disagreeing with another he sometimes risks damaging a relationship. It can be difficult if one has perhaps not fully considered the question being discussed, to be confronted by his concerned persistence. However, this forthrightness is an admirable trait.

Hansjörg is a battler German-style - he certainly would not fit onto one of Henry Lawson's selections! The rare passing reference to what he and Marlies experienced during and after the war, and the successful building up of the Adelaide herbarium against the backdrop of a momentous clash of personalities are ample testimony of this, but it seems untimely to expand on these here.

He has been known to give up. One holiday saw him fail to ascend the Barrington Tops, having tumbled several times from a cumbersome borrowed motor-bike into the 'crevasse' which had replaced the washed-out road he had hoped to travel along. On another he had to abort his steep climb of Mt Bogong from the plain below (not the easy way) in stifling heat. Both were, of course, in the quest of additions to his monumental Australian collections.

Hansjörg's way of criticism is to confine himself very much to the problem, not the person. As such he is a rare breed in this nation of Knockers. He has been labelled by some a perfectionist and too much the idealist. If these people would only hear him out, they would probably find him aware of all the limitations and as a consequence discover either the ideals to be feasible or their pursuit worthy. Certainly nothing that he has produced can be considered impractical. Take the suggestion of what to do with a bequest of a few thousand dollars for a quick new Flora of Australia. His detailed proposal, rubber-stamped by the Adelaide taxonomists culminated in the production of Arthur Chapman's Index to Australian Plant Names. The amount that he has published is possibly surprising, especially when one considers that he had a large amount of administrative and advisory responsibilities. For example, let us look at the Supplement to Black's Flora and its accompanying reams of synonymies at the Adelaide herbarium, with the thousands of references (not simply protologues, but all relevant taxonomic and South Australian references). This work is primarily a nomenclatural revision of the South Australian flora, whose usefulness extends beyond Australia. It pre-dates, in many cases undoubtedly by years, the future revisions which would otherwise have brought these changes to light.

I cannot see him retiring into obscurity and devoting his time to leisure, not can I see him dropping his general involvement in Australian taxonomy. With the release from his administrative load it will be a welcome sight to see his research interests reach fruition.

In Hansjörg I see parallels with a fellow country-man of an earlier era of Australian botany, Ferdinand von Mueller. Their formal personalities and strong views, held in great respect by many, contributed to personality clashes which seriously affected the furtherance of their scientific ideals. In his century Mueller was the Australian who had the most influence over the botany of his country. Now Australian botanists have become masters of their own destiny. I believe Hansjörg Eichler will go down as one of the strongest influences on Australian plant taxonomy in this century.

I certainly count myself fortunate that I have had close contact with such a man, particularly in my formative years as a taxonomist.

W.R. Barker  
Adelaide

## THE FLORA OF AUSTRALIA

Hansjörg Eichler was one of a small band of taxonomists concerned with promoting the production of a new flora of Australia to replace the magnum opus of George Bentham. His activities in this endeavour must have begun soon after he came to Adelaide and his influence in shaping the project was profound. Progress began when the Australian Academy of Science was provided with generous donations from industry following an appeal directed by Sir Maurice Mawby F.A.A.

Dr Eichler was a member of the Standing Committee on a flora of Australia established in 1972 by the Academy and he was a member of the small Executive Committee appointed to supervise the work done under the aegis of the Academy. The main work initially, on his recommendation and urging, was to compile an Index of Names of the Australian Flora, collect protologues of type species and to prepare trial treatments of selected families for a flora. In this work, Dr Eichler was particularly effective in shaping the decisions arrived at by the Standing Committee after prolonged discussion. He was a product of the rigorous schools of taxonomy in Europe and had strong opinions, freely expressed, as to what ought to be done and how it should be done. Not least was the Churchillian view that given the money and the taxonomists - in necessary abundance - the job could be done. He thought the new flora should be detailed and based on extensive revisions. Gradually, he was led to see that in practice the ideal had to be accommodated to what was possible within the present political and economic climate. In the event, the flora project has been launched. The products will bear much of the stamp of Dr Eichler's influence and so be scholarly in character.

D.G. Catcheside  
Adelaide

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## EICHLER AT HERBARIUM AUSTRALIENSE

Hansjörg Eichler was known to me in several guises long before I first met him in 1973; as the author of that splendid supplement to Black's Flora, as a determined herbarium builder, and as a taxonomist who played an important role in reviving the idea that a new Flora of Australia could, and should, be attempted.

Nancy Burbidge had indicated to me, as Chief of the CSIRO Division of Plant Industry at that time, that she wished to relinquish the position of Curator of the Herbarium Australiense in order to concentrate on her preparatory work towards a revised Australian Flora. She added that she thought Hansjörg would make a splendid successor if we could persuade him to come to Canberra, and so it turned out. Although very different in their personalities and in their taxonomic attack, Hansjörg and Nancy were complementary in many ways and respected and supported one another strongly. They made a formidable combination on behalf of plant taxonomy in Australia.

Hansjörg's role as Curator slowed his own taxonomic research on Ranunculaceae, Hydrocotyle and Zygophyllum when he came to Canberra, but his rigorous approach and wide knowledge of the Australian flora were always on call by his colleagues in the Division and elsewhere. I once asked him the identity of a plant when he and Marlies visited our house at the coast, and received in reply not only the name of the species, but also that of the rust on its leaves and an account of the work of a specialist working on the disease. For a moment there on Burrewarra Point I imagined I was being instructed by "the Baron", a century earlier.

Hansjörg had already established his reputation as a builder of herbaria before he came to Canberra in 1973, and he and I thought the time was propitious for further development of the Herbarium Australiense, which moved into its new building soon after his arrival. Unfortunately, a succession of staff cuts in the Division put paid to any chance of building up the taxonomic staff, but Hansjörg nevertheless managed to develop the Herbarium in other ways. He attracted visiting taxonomists to increase the amount of revisionary work. He brought the collections of the CSIRO Division of Forest Research into closer association, and set in motion the gazettal of the Herbarium Australiense. In turn, this led to negotiations to secure duplicates of many early type specimens from the British Museum.

As part of the wider process of building up the Herbarium, Hansjörg also transformed our sporadic series of taxonomic publications into Brunonia, a regular journal whose high editorial standards reflect his care, his capacity for detailed attention, and the long experience of botanical nomenclature recognized by his membership of the International Commission.

At the time when Brunonia was conceived, there was considerable doubt as to whether the revisionary work needed for a new Flora of Australia would be supported, and we thought that one role Brunonia might have to play was as a Trojan Horse for major taxonomic revisions. Fortunately, that need has not arisen, but Hansjörg's profound concern to ensure progress towards an Australian Flora is illustrated. For many years now he has urged that Australia's plant taxonomic resources should be concentrated on this great task, as a worthy

challenge to the science to which he has devoted his life.

Once when I, as a plant physiologist and erstwhile ecologist, showed some glimmerings of taxonomic interest, Hansjörg sought to convert me to his opinion that taxonomy was the highest form of botanical life. I replied that Charles Darwin had given up taxonomy (of barnacles) to become a plant physiologist. But Hansjörg could not regard that as progress. I'm sure you all agree, and would join me in saluting this champion of plant taxonomy in Australia.

L.T. Evans  
Canberra

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When Dr Hansjörg Eichler opted for a change relatively late in his career and applied for the post of Curator at Herbarium Australiense (CANB), he probably did this for a variety of reasons, the relative importance of which can only be guessed at by others. It is certain, however, that he was hoping to contribute more substantially towards the envisaged Flora of Australia when working in the national capital. The position did look promising in this respect, particularly as the out-going Curator, Dr Nancy T. Burbidge was to be seconded to the Australian Academy of Sciences as director of a project in preparation of such a Flora. Because of his long-standing interest, Hansjörg had already been appointed to the Committee on the Flora of Australia under the auspices of the Academy and also to its inner Executive Committee.

When Hansjörg joined the staff at CANB in the middle of 1973, he found of course a situation vastly different from that encountered upon his arrival in Adelaide. Whereas he had to build up an institute and staff at AD almost from scratch, at CANB there existed a well established herbarium, if only of medium size by Australian standards. At that time there was an atmosphere of optimism about further developments at CANB. Just before his appointment, the plant-taxonomic staff of the then Division of Land Research had been transferred administratively to join their colleagues in the Division of Plant Industry (C.S.I.R.O.) and the construction of stage 1 of a new herbarium building was well advanced. Unfortunately, a deterioration in economic circumstances began to affect C.S.I.R.O. soon afterwards, particularly divisions such as Plant Industry with a strong agricultural orientation in their research programs. Moreover, the termination in 1974 of contributory funds from Papua New Guinea towards research at CANB resulted in the loss of two technical positions and only the allocation of two "pool positions" to CANB prevented any retrenchments. As a result, Hansjörg's period at CANB became one of consolidation rather than expansion and only more recently has it been possible to rejuvenate the staff to some extent, partly through temporary appointees.

Hansjörg brought goodwill to CANB through his national and international contacts. In connection herewith one should mention his membership of the Committee for Spermatophyta, one of the Permanent Nomenclature Committees under the auspices of the International Association for Plant Taxonomy. Of his achievements while at CANB, the most outstanding one is probably the establishment of Brunonia a journal of plant taxonomy published by C.S.I.R.O. from 1978 onwards, Hansjörg worked enthusiastically towards the development of the earlier series Contributions from Herbarium Australiense into a more fully fledged journal, catering for a wide range of publications in taxonomy and related fields with an Australian content. As Chairman of the editorial Advisory Committee for Brunonia, he insisted on the painstaking attention to detail necessary for a taxonomic journal of international standing. There is no doubt that he contributed substantially to the high standard of the journal maintained from the beginning. It is a pity that economic circumstances again proved a limiting factor, so that subsequent volumes could not match the first one in size.

It is anticipated that Hansjörg will remain active as a plant taxonomist for some years yet and it is therefore too early for a final assessment of his career. However, his efforts to develop a budding "house journal" into one of a national scope are perhaps typical for his approach to the work at hand. It is fair to say that his influence on plant taxonomy in Australia generally has been more important than that on the functioning of his home institution in particular; at least while at CANB. Through advice to his divisional chiefs, the Committee of Heads of Australian Herbaria and others in positions of influence, he certainly helped to mould policies vitally concerned with his chosen field of research. Besides, his willingness to help all those who were seeking his opinion on relevant scientific matters, particularly post-graduate students, resulted in an invaluable contribution towards the future development of taxonomic botany in this country. His direct involvement with the Flora of Australia Project has perhaps not been as intensive as hoped initially. This became inevitable when the Australian Biological Resources Study gradually moved out of CSIRO and when the Bureau of Flora and Fauna was established within the Australian public service. However, he kept a positive interest in the development of the Flora Project within the Bureau and he continued to favour a policy of close cooperation between the Bureau and CSIRO. More recently he willingly accepted a position on the Editorial Committee for the Flora. His interests were recognized further last year when he was also included in the reconstituted Flora Committee of the Academy, now much reduced in size but with a field of interest beyond the actual Flora Project. Although Hansjörg will retire as Curator of Herbarium Australiense on the 31st of March this year, there appears to be ample scope for him to remain active in plant taxonomy, both in research and on the national scene.

A. Kanis  
Canberra

Eichler, Hansjörg (Hansjoerg)

SYNOPSIS OF BIOGRAPHICAL DATA

**Born:** 1 April 1916 at Ravensburg (south-west Germany).  
**Parents:** Gustav Eichler, architect;  
Anna Eichler (née Sellin), portrait and landscape painter.  
**Spouse:** Marie-Luise (Marlies) Eichler (née Möhring)  
**Nationality:** Australian Citizen since January 1961;  
formerly German.

Formal Education

1923-1936 Volksschule and Oberrealschule, Ravensburg.  
Feb. 1936 Abitur (final examination, matriculation certificate).  
1938-1944 Enrolled at University of Berlin, Mathematisch-naturwissen-  
schaftliche Fakultät (major subjects: botany and chemistry).  
1946-1949 Enrolled at University of Halle-Wittenberg,  
Naturwissenschaftlich Fakultät (major subjects:  
botany and genetics).  
**Degrees:** Dr.rer.nat. (Halle, 1950); Ph.D. (ad eundem gradum,  
Adelaide, 1959).

Interruptions to formal education

1936 National labour service (6 months).  
1936-1938 Military service (signal corps, German Air Force).  
1939-1944 War Service (signal corps, German Air Force)  
(winter-semester 1941-1942 and 1943-1944 study leave to  
continue chemistry studies).

Events beyond control which influenced career

- (1) 1943 (1 March): Destruction of Botanisches Museum Berlin-Dahlem (B), the envisaged place of a life's career, and in the same night loss of home and first private herbarium (about 8000 numbers) with botanical library (containing most of the important modern European floras and specialized literature on water plants) through war action.
- (2) 1944 (1 February): Exemption from military war service by secondment to the Kaiser-Wilhelm-Institut für Kulturpflanzenforschung, then newly established at Vienna, later transferred to Gatersleben (via Stecklenberg, a village in the eastern Harz mountains) in central Germany and placed under the auspices the German Academy of Sciences.



Professional employment history

- 1936-1943 Official honorary working place at the Botanisches Museum Berlin-Dahlem.
- 1944-1953 Research scientist at the Kaiser-Wilhelm-Institut für Kulturpflanzenforschung, Wien, which became the Institut für Kulturpflanzenforschung der Deutschen Akademie der Wissenschaften zu Berlin in Gatersleben. (In charge of the herbarium in the Division Systematik und Pflanzengeographie.)
- 1953 Guest scientist at Instituto Botanico dell' Università, Parma (Italy).
- 1954-1955 Visiting scientist at the Rijksherbarium, Leiden (Netherlands), with German postdoctoral research fellowship.
- 1955-1973 Keeper, State Herbarium of South Australia, Adelaide.
- 1961-1962 Seconded to Kew (England) as Australian Botanical Liaison Officer.
- 1965-1975 Honorary Lecturer in Botany, University of Adelaide.
- 1973-1981 Curator, Herbarium Australiense, Division of Plant Industry, CSIRO, Canberra.

Past research activities

Floristics and phytochorology of central Europe with special interest in vascular hydrophytes (particularly Potamogeton and Batrachium). Botanical nomenclature (since 1936). Early participation in the promotion of the project of a Flora Europaea (before World War II). Taxonomic revisions of Montia (following an interesting discovery in the Riesengebirge) and Caucasian Alopecurus. Allelopathy and germination physiology of weeds. Population genetics of Verbascum phoeniceum at the border of its distribution with particular reference to colour variation and teratological mutants and their evolutionary significance. Ranunculaceae of Malesia. Floristics of South Australia. Phytochorology of Australia. Conservation of natural vegetation in Australia.

Continued research activities

Taxonomy of Ranunculaceae (SE Asia and Australia; worldwide interest in Ranunculus), Zygophyllum (Australia), and Hydrocotyle and related genera (Australia and New Guinea). Botanical nomenclature.

Supervision of taxonomic work for higher degrees at the University of Adelaide (Names of candidates, degrees with dates of conferment)

E.A. Shaw (Ph.D., 1966); P.G. Wilson (M.Sc., 1968); R. Schodde (Ph.D. 1970); C.E. Offler (Ph.D., 1971); A.E. Orchard (Ph.D., 1972); W.R. Barker (Ph.D., 1975); A.A. Munir (Ph.D., 1976).

Plant collecting activity

- 1936-1955 Central Europe (most parts of Germany and the Alps); Hungary; the Crimea and Daghestan; Sicily. (About 8000 numbers lost; second collection of about 12000 numbers mainly at GAT and HAL, some at AD and CANB.)
- 1955-1980 Australia, all States and Northern Territory; New Guinea (few). (About 10000 numbers, mainly at AD and CANB).

Participation at congresses, international scientific symposia and celebrations

- Prior to 1953 Annual meetings of German botanists and phytosociologists (Deutsche Botaniker - and Pflanzenphysiologen-Tagungen).
- 1954 VIII. International Botanical Congress, Paris.
- 1968 Celebration of the 25th anniversary of the Institut für Kulturpflanzenforschung and 20th anniversary of its transfer to the German Academy of Science, Berlin, at Gatersleben.
- 1969 XI. International Botanical Congress, Seattle (with field trip through Grand Canyon); Workshop in plant-biosystematics, Corvallis, Oregon.
- 1971 XII. Pacific Science Congress, Canberra.
- 1973 I. International Congress of Systematic and Evolutionary Biology, Boulder/Colorado (with Bryologists' excursion in Rocky Mountains nearby).
- 1975 XII. International Botanical Congress, Leningrad (with field trip to Armenia); XIII. Pacific Science Congress, Vancouver.
- 1979 Celebration of 300th anniversary of the Botanic Garden, Berlin. (Award: Willdenow Medal).

Working visits to overseas institutions include the following herbaria:

A, AK, B, BM, CAS, CAT, CGE, COLO, E, ERE, FI,  
 G, GAT, GH, GOET, HAL, HBG, K, L, LAE, LAM, LE,  
 M, MNA, MW, NY, OSC, P, PAL, PARMA, POM, RSA, SING,  
 TI, TNS, TUB, U, UBS, UC, US, W, WH, Z, ZT.

Membership of committees etc:

- \* ANZAAS Committee for a New Flora of Australia (1958-1959).
- \* Systematic Botany Committee for ANZAAS (1961-1979; Chairman 1976-1979).
- \* International Commission on Botanical Nomenclature of the International Union of Biological Sciences (Committee for Spermatophyta 1968-).
  
- \* Standing Committee on a Flora of Australia, Australian Academy of Science (1971-1979); executive 1973-1979).
- \* Advisory Committee, Australian Journal of Botany (1972-1977).
- \* Advisory Board (international), World Pollen and Spore Flora (Sweden) (1972-1975).
- \* Advisory Panel, Contributions from Herbarium Australiense (chairman (1973-1976)).
- \* Committee (since 1980 'Council') of Heads of Australian Herbaria (1973-1981).
- \* Editorial Board (international); Index Holmensis (Sweden) (1974- ).
- \* Pacific Science Committee, Australian Academy of Science (1975- ).
- \* Advisory Committee for Brunonia (chairman, 1977- ).
- \* Flora Committee, Australian Academy of Science (1979- ).
- \* Editorial Committee for the Flora of Australia (1981-1982).

Membership of professional associations and societies

- 1936- Bayerische Botanische Gesellschaft.
- 1949-1953 Thüringische Botanische Gesellschaft.
- 1950-1953 Floristisch-soziologische Arbeitsgemeinschaft Deutschlands.
- 1952-1953 Deutsche Botanische Gesellschaft.
- 1955- International Association for Plant Taxonomy. (life Member).
- 1956- Royal Society of South Australia (Council 1971-1973).
- 1958- Australian and New Zealand Association for the Advancement of Science.
  
- 1961- American Society of Plant Taxonomists.
- 1962- Linnean Society of London (life Member).
- 1962- International Organization of Biosystematists.
- 1962- Association pour l'étude taxonomique de la flore d'Afrique tropicale.
- 1962-1976 Nature Conservation Society of South Australia.
- 1964- Society for the Bibliography of Natural History (London).
- 1970- Verein zum Schutze der Bergwelt.
- 1973- Australian Systematic Botany Society.
- 1974- Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area.
  
- 1974- Museums Association of Australia.
- 1976- Pacific Science Association.

List of publications and completed papers

- 1946-1954 Several reviews of papers and books in the following journals: Berichte über die wissenschaftliche Biologie, Züchter, Biologisches Zentralblatt, and Zeitschrift für Pflanzenzuchtung.
- 1946 Treatment of numerous families and genera (mainly water plants) for O. Schwarz, Exkursionsflora von Mitteleuropa (c.110 pages). This is an entirely revised edition of O. Wünsche, Flora von Deutschland. With the division of Germany, publication by B.G. Teubner, Leipzig, was blocked. The ms was used later by W. Rothmaler for his Exkursionsflora von Deutschland).
- 1947 Theoretische und methodische Ergebnisse der Cytogenetik in den letzten 10 Jahren mit besonderer Berücksichtigung der landwirtschaftlichen Kulturpflanzen and ihrer Anwendung in der praktischen Züchtung. (Sammelreferat). (Theoretical and methodological results in cyto-genetics during the past ten years with special consideration of plants cultivated in agriculture, and of their application in practical plant breeding. - Review paper issued by the Kaiser-Wilhelm-Institut für Kulturpflanzenforschung, Gatersleben, translated into Russian by I. Grebenstschikov.) (type-script, 225 pages).
- 1950 Floristische und phytozoölogische Untersuchung des Hakels und seiner nächsten Umgebung. - Gatersleben, 1950. (221 pages) - Halle, Faculty of Science, Diss. (Dr.rer.nat.).
- 1953 Boden, Klima und Vegetation in Raum um Gatersleben. - Kulturpflanze 1:11-17 (anonymous).
- 1956 (Booth, E.S., and Eichler, H.). The collection of plants and its importance for systematic botany. - S. Austral. Naturalist 30(4):55-57.
- 1958a The Ranunculus sessiliflorus group in South Australia - Trans. Roy. Soc. S. Austral. 81:175-183, t.1-2.
- b Revision der Ranunculaceen Malesiens. - Biblioth. Bot. 124:1-110, t.1-7.
- 1959 Rheum (in R. Mansfeld, Verläufiges Verzeichnis Landwirtschaftlich und gärtnerisch kultivierter Pflanzenarten). - Kulturpflanze Beih. 2:34-35.
- 1962 (Hj. & M.-L Eichler). Publication dates of J.E. Brown. The Forest Flora of South Australia. - S. Austral. Naturalist 36(3):39-42.
- 1963a Homonyms, paronyms and orthographic variants. - Taxon 12(1):215-220.
- b Proposal for the conservation of the generic name Naravelia DC. - Taxon 12(5):206-207.

- c Barbarea or Campe? - Taxon 12(7):262-264.
- d Some new names and new combinations relevant to the Australian flora. - Taxon 12(8):295-297.
- e Ranunculaceae (in C.A. Backer & R.C. Bakhuizen van den Brink jr., Flora of Java 1:140-146).
- 1964 Proposal for the conservation of 9009 Podotherca Cass. (1822) versus Podosperma Labill. (1806). - Regnum Veg. 34:62-64.
- b Bibliographic catalogue of the vascular plants of South Australia (with nomenclatural notes, synonymies and type localities). Part I: Casuarinaceae - Capparaceae. - (Type-script, 265 pages).
- 1965 Supplement to J.M. Black's Flora of South Australia (second edition, 1943-1957). - 385 pages; Government Printer, Adelaide.
- 1966a Corrigenda and Addenda to the Supplement to J.M. Black's Flora of South Australia (second edition, 1943-1957). - 3 pages; Government Printer, Adelaide.
- 1966b Book review: Meusel, H., Jäger, E., & Weinert, E.: Vergleichende Chorologie der zentraleuropäischen Flora. Jena 1965. Review in Aust. J. Sci. 28(10):398.
- 1970a Flora und Vegetation des Hakels. - Willdenowia Beih.6:1-204.
- b Comment on "Linnaean species and Rubus fruticosus" by J.B. Cleland. S. Austral. Naturalist 44:55-56.
- 1971 Anigozanthos and its orthographic variants. - Austral. Pl. 6:82-84.
- 1972 The role of the herbarium in botanical studies. - Issue, March 1972:24-25.
- 1974a Proposal to conserve the generic name 5909a Dichosciadium Domin (1908). - Taxon 23:437-438.
- b Conservation of rare and endangered species in South Australia (in: R.L. Specht & al. Conservation of major plant communities in Australia and Papua New Guinea). - Aust. J. Bot. Suppl. 7:239, 292-318.
- 1975 Book review; Chippendale, G.M.: Eucalypts of the Western Australian Goldfields (and the adjacent wheatbelt). Canberra 1973. - Review in Taxon 24:378.
- 1977 Guidelines for the preparation of botanical taxonomic papers. 28pp. CSIRO: Australia.

- 1978 Nancy Tyson Burbidge: Synopsis of biographic data, and List of publications. - *Brunonia* 1: 126-129.
- 1979 Herbarium Australiense. - CSIRO Division of Plant Industry, Annual Report 1978:32-35.
- 1980 (Hara, H., & Eichler, Hj.) Proposal (67) to amend Art. 29.1 on effective publication and recommendation to establish a special committee on Art.29. - *Taxon* 29:515-516.
- 1981a Eight proposals to amend the International Code of Botanical Nomenclature. - *Taxon* 30:294-296 (February issue, 1981).
- b (Eichler, Hj., & Kanis, A.) Two alternative proposals concerning article 69 of the International Code of Botanical Nomenclature. *Taxon* 30:333-334.
- c *Zygophyllaceae* ( in Jessop, J.P., & al. (eds.): *Flora of Central Australia*).
- d A further note on effective publication. - *Taxon* 30:? May issue, 1981).
- *Botanische Garten in Australien*. (Invited contribution to the symposium held at the celebration of the 300th anniversary of the Berlin Botanic Garden). Submitted for publication in 1979).

In preparation:

- (Benl, G, & Eichler, Hj.) *Ptilotus pedleyanus*, a new species of *Amaranthaceae* from Queensland.
- *Hydrocotyle* Nomenclator: a bibliographic and nomenclatural preliminary towards a taxonomic monograph of *Hydrocotyle* L. (*Apiaceae*).

Eponymy

*Ranunculus eichleranus* Briggs (1960); *Bassia eichleri*: Ising (1961); *Atriplex eichleri* Aellen (1965); *Manginula eichleri* R.T. Lange (1969); *Ptilotus eichleranus* Benl (1970); *Haloragis eichleri* Orchard (1975); *Eichlerago* Carrick (1977); *Lamiaceae* trib. *Eichleragineae* Carrick (1977); *Euphrasia eichleri* W.R. Barker (in prep.)

REQUEST FOR MATERIAL

Judy West (Herbarium Australiense, CSIRO) would appreciate material of Portulacaceae, particularly of Calandrinia and Anacampseros. It is most useful if dry specimens are supplemented by wet collections, i.e. leaves flowers, and fruits preserved in 70% alcohol. Dry plants with mature fruit and seed would also be appreciated. Please note details such as leaf shape and flower colour - they are not well preserved in herbarium specimens of succulent species.

Lyn Craven (Herbarium Australiense, CSIRO) would like as many specimens of Calytrix (excluding C. tetragona!), Calythrospia, Lhotskya, Homalocalyx and Wehlia as you can collect. An area of special interest is the semi-arid/arid regions of south-west Western Australia (roughly the country south-west of a North West Cape - Eyre line). Don't worry if the material looks scruffy - it might actually have some seeds.

XIII INTERNATIONAL BOTANICAL CONGRESS

REGISTRATION

If paid by  
15 May 1981 Thereafter

Members	A\$130	A\$160
Student Members	A\$ 40	A\$ 40
Accompanying Members	A\$ 40	A\$ 40

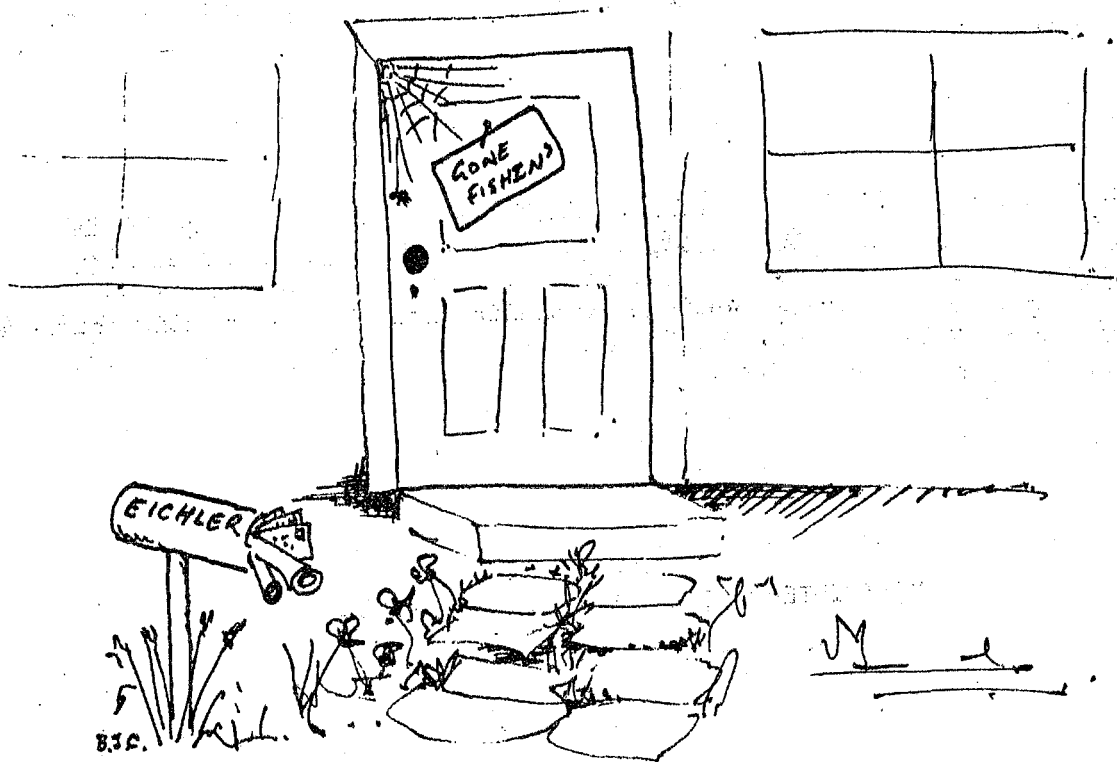
PAYMENT OF FEES

Overseas participants must send their fees by bank draft in AUSTRALIAN DOLLARS, PAYABLE ON AN AUSTRALIAN BANK, made payable to 'Australian Academy of Science'. Only participants resident in Australia may send Personal cheques. Send registration forms and fees to:

XIII International Botanical Congress  
Australian Academy of Science  
P.O. Box 783  
CANBERRA CITY, A.C.T. 2601, Australia.

CORRIGENDUM PLANISSIME NON!

1<sup>st</sup> APRIL, 1982



836.



NEW BOOK RELEASE

'PLANTS OF WESTERN NEW SOUTH WALES'

A comprehensive book PLANTS OF WESTERN NEW SOUTH WALES has been prepared by the Soil Conservation Service of N.S.W. and is due for release in mid-1981.

This book which has been prepared by G.M. Cunningham (Soil Conservation Service), W.E. Mulham (C.S.I.R.O.), P.L. Milthorpe (Soil Conservation Service) and J.H. Leigh (C.S.I.R.O.) contains about 900 pages and describes the 2020 species found in western New South Wales.

As well as full descriptions of each species, details are given on habitat preferences and distribution within western New South Wales and also within Australia, generally. Details of poisonous properties, general usefulness and management are also included.

The majority of species are illustrated with colour photographs or line drawings and, in total, the publication will contain approximately 1500 colour photographs and about 300 line drawings.

The introduction discusses the physical background to the area-climate, geology, geomorphology, soils and vegetation communities. A total of 34 such communities are described. Past and present land use and the associated effects on vegetation are detailed.

PRE-PUBLICATION OFFER

In order to make this book available to interested persons at a reasonable price, a special pre-publication price offer will be made in the near future.

It is expected that the book will be available for about \$45 under this offer.

Those interested in purchasing a copy of this book may have their name placed on a list to receive the pre-publication offer and brochure by contacting Mr G.M. Cunningham, Area Director, Soil Conservation Service of N.S.W., P.O. Box 390, Goulbourn N.S.W. 2580.

The brochure and order form will be sent in the near future to persons expressing an interest in the book.

ACT NOW IF YOU WISH TO AVAIL YOURSELF OF THE PRE-PUBLICATION OFFER

BOOK REVIEWS

CATCHESIDE, D.G. "Mosses of South Australia"

GOVERNMENT PRINTER, STH. AUST., 12/12/80

364pp. \$13.20

This long-awaited Handbook is now available. It is the first comprehensive account of South Australian mosses and has been awaited with anticipation for many years.

As detailed by the author only 56 species of moss were recorded for South Australia before he began serious work on bryophytes. Now 179 species are recognized.

The book contains an introductory 29 pages dealing with the history of South Australian records, life history and structure of mosses, vegetative reproduction, perennation and survival, ecology, cultivation, cytology and general information for collection and study of bryophytes.

A general key (13 pages) identifies genera, and species keys are included within the treatment of each genus.

Species are fully described and clearly illustrated with excellent detailed black and white pen drawings. A group of 16 colour plates (45 prints) are included. These are useful for plant recognition, but their printed photographic is disappointing.

Descriptions of species are introduced by notes on general classification of mosses and a summary of the major taxonomic groupings recognized in South Australia. Floristic divisions of South Australia are also delineated, including a reference map. There is also a useful glossary of bryological terms.

This book is the result of incalculable hours of detailed investigations and no doubt represents a milestone in the knowledge of Australian bryophytes.

It will serve as a stimulus to naturalists as well as an accurate scientific reference for bryologists and students of the Australian Flora.

E.M. Wollaston.

ABERDEEN, J.E.C.

"An Introduction to the Mushrooms, Toadstools and larger Fungi of Queensland. Handbook No. 1 of the Queensland Naturalists' Club, 1979, 120 pp.

Copies may be obtained from the Queensland Naturalists' Club, G.P.O. Box 1220, Brisbane, for \$4.95 plus \$1 postage and packing.

This book contains useful keys to the genera of the larger fungi occurring in Australia and keys to the species of a few genera. The macroscopic characteristics of individual genera are outlined. The terms used and the features that need to be observed, together with notes on collecting and describing specimens are covered in various chapters and a useful glossary of terms is included. Numerous excellent line drawings and three rather mediocre colour plates are included.

There is no general picture of the fungus flora of Australia and there is a paucity of information on the distribution of individual species. Since the publication of Cleland's monograph in 1934, there has been no attempt to deal systematically with these organisms in a way that would be helpful to the serious student. This book should fulfil this need and, although the author is concerned primarily with Queensland fungi, the book clearly has a much wider application and will be an invaluable addition to the library of those interested in the higher fungi.

C. J. Shepherd

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SUPPLEMENT TO A.S.B.S. THESIS LIST

ABBREVIATIONS:-

ANUDB - Department of Development Biology, Research School of Biological Sciences, Australian National University.

ANUF - Department of Forestry, Australian National University.

ADDITIONS:-

The following are additions to the thesis list published by the Society in 1978. Further titles were included in a supplementary list in the A.S.B.S. Newsletter No. 19, June 1979, p.p. 13 & 14.

- |                        |  |         |
|------------------------|--|---------|
| AULD, T. (1978)        | Survival and Reproduction in <u>Angophora hispida</u> (Sm.) Blaxell in Hawkesbury sandstone  | SYD-B   |
| BALOG, C. (1978)       | A study of univalency and dyad segregation patterns in meiosis I of triploid <u>Allium triquetrum</u> and living cell studies of the univalent X-chromosome of <u>Acheta domestica</u> .     | WELTU-P |
| BARSON, M.M. (1978)    | The distribution of <u>Eucalyptus viminalis</u> and <u>Eucalyptus camaldulensis</u> in Victoria.   | MELU-M  |
| BELL, G.H. (1980)      | Arid zone mosses of South Australia: A morphological perspective.  | ADU-B   |
| BLACKBURN, D.T. (1973) | The macromorphological leaf spectrum of a lower middle Eocene Carbonaceous clay lens at Maslin Bay, South Australia.   | ADU-B   |
| BLACKBURN, D.T. (1978) | Numerical studies of leaf architecture of dicotyledons: <u>Saurauia</u> as a test case.  | ADU-P   |
| BRATSBY, W.J. (1978)   | Leaf shape variation in <u>Eucalyptus stjohnii</u> (R.T. Bak.) R.T. Bak.   | ANUF-B  |
| BREEN, P.F. (1977)     | Environmental factors influencing assimilation rates and the resulting productivity of <u>Hydrocotyle verticillata</u> Thunb. and <u>Fissidens rigidulus</u> Hook. f. & Wils. at Ewens Ponds | MONU-B  |
| BROWNING, A.J. (1978)  | Development structure and function of transfer cells in the haustorium of <u>Funaria hygrometrica</u> .  | ANUDB-P |

- CAHILL, D.M. (1977) The taxonomy, distribution and waterlogging tolerances of Eucalyptus ovata Labill, and E. yarraensis Maiden and Cabbage. MONU-B
- CARGILL, D.C. (1978) A comparison of two Hypnodendron species. MONU-B
- CONN, B.J. (1978) A taxonomic revision of the genus Geniostoma sensu stricto (Loganiaceae). MELU-M
- DRAKE, D.W. (1979) Hybridization success and the reproductive and survival capabilities of two contrasting wild interspecific Eucalyptus hybrid populations. BRIU-P
- EVANS, P.J. (1978) Studies on the mycorrhizal association of
- EVERETT, J. (1979) A biosystematic study of Bauera. SYD-B
- FOORD, P.C. (1978) Salinity and waterlogging tolerance of some populations of Melaleuca ericifolia Smith. MELU-B
- FRIEND, D.A. (1977) The ecology of Amsinckia (Amsinckia spp.) in wheat crops in Victoria. MELU-P
- GAMEREN, M. van (1977) Problems of regeneration in mature Leptospermum laevigatum (J. Gaertn.) F. Muall. stands in the absence of fire. MELU-B
- GLOURY, S.J. (1978) Aspects of fire resistance in three species of Eucalyptus L'Herit. with special reference to E. camaldulensis Denh. MELU-B
- GOODVACH, V.R. (1977) Productivity and growth of Amphibolis antarctica (Labill.) Sonder & Aschers. ex Aschers. MONU-B
- HAGEL, M. (1977) Studies on airspaces and intercellular projections in some fern species with emphasis on Histiopteris incisa (Thunb.) J. Sm. MONU-B
- HARDHAM, A.R. (1978) Microtubules and morphogenesis in Azolla pinnata roots. ANUDB-P
- HASSAL, D.C. (1978) Systematic studies in Australian Euphorbieae (Euphorbiaceae). BRIU-P
- HENDERSON, R.J. (1978) Cyto-taxonomic studies in Dianella Lam. ex Juss. (Liliaceae) in north-eastern Australia. BRIU-M
- HERSCOVITCH, J.C. (1979) Pollen compatability studies in two species of Grevillea. SYD-B

- HILL, R.S. (1980) The Eocene megafossil flora of Nerriga, New South Wales ADU-P
- JOHNSON, K.A. (1977) Studies on some crustose coralline algae of New Zealand and aspects of the systematics of the family Corallinaceae. AKU-P
- JOHNSTONE, P.C. (1977) Intra- and interspecific variation in some mallee species of Eucalyptus. MONU-B
- KENNEDY, T.W. (1977) An introductory microbiological survey of leaf nodule formation on plants found in the tropics. JCT-B
- LANG, P.J. (1976) Pollen analysis of swamp sediments in the Mount Lofty ranges, South Australia ADU-B
- LEWIS, C.K. (1977) A preliminary study of Nothofagus forest composition and age structure on the St. Arnaud Range. WELTU-B
- LOW, C.S. (1977) Higher level taxonomy, and evolution of the Palms (Arecaceae) with special reference to seedlings. BRIU-P
- MCCONCHIE, C.A. (1977) A study of the variation of Lepidosperma laterale R.Br. on the Mornington Peninsula. MELU-B
- MARSDEN, C.R. (1979) Morphology and taxonomy of Isoetes. ADU-P
- MORRISON, D. (1979) Genecological differentiation in Leptospermum flavescens Sm. SYD-B
- NGUYEN, T.N. (1978) Effects of light, temperature and osmotic potential on seed germination of Eucalyptus tereticornis Sm. ANUF-B
- OSBORNE, A.J. (1978) A taxonomic study of some eucalyptus in the Yarra Valley. MONU-B
- PARR-SMITH, G.A. (1977) Taxonomy of Atriplex vesicaria Heward ex Benth. (Chenopodiaceae) and related species. MELU-P
- PETERS, M.D. (1977) A study of a new Taxodiaceous Megasporangiate Cone from a Siliceous Fossil plant assemblage, Winton, Queensland. ADU-B
- PHILLIPS, J.A. (1977) The morphology, anatomy and life history of Ulva and Enteromorpha. MONU-B
- PILLMAN, A. (1978) A study of the primary vascular system and evolution in the family Cupressaceae. ADU-M
- QUIRK, H.M. (1978) Taxonomy and evolution of the fern genus Cheilanthes in Australia. MELU-M

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|--------------------------|--|---------|
| ROWLAND, R.E. (1977)     | Chromosome banding and heterochromatin in <u>Vicia faba</u> .  | WELTU-P |
| SHIRREFS, P.V. (1977)    | Interaction between <u>Eucalyptus regnans</u> F.Muell. and <u>Acacia dealbata</u> Link.  | MELU-B  |
| SNEDDON, B.V. (1978)     | A biosystematic study of <u>Microsaris</u> subgenus <u>Monermos</u> .  | WELTU-P |
| STEVENS, G.N. (1979)     | Lichens on mangroves along the east coast of Australia   | BRIU-M  |
| SYEDA, S.H. (1979)       | The genus <u>Calandrinia</u> in Australia.   | SYD-M   |
| TIDEMAN, J. (1979)       | A taxonomic study of the <u>Polygonum aviculare</u> L. complex in South Australia, with reference to other members of <u>Polygonum</u> section <u>Polygonum</u> .        | ADU-B   |
| TRUEBENBACHER, S. (1978) | Studies on <u>Spinifex hirsutus</u> as a sand dune stabiliser in Victoria.   | MELU-B  |
| UMORU, B. (1978)         | The effect of fertilisation on the anatomical and chemical characteristics of <u>Eucalyptus globulus</u> and their influence on the resultant pulp and paper properties. | ANUF-M  |
| VENNING, J. (1974)       | Appraisal of methods used to study species diversity and their application in an analysis of pyric succession.   | ADU-B   |
| VENNING, J. (1979)       | Character variation in Australian species of <u>Callitris</u> Vent. (Cupressaceae).  | ADU-P   |
| WEBER, J.Z. (1980)       | A revision of <u>Cassytha</u> L. (Lauraceae) in Australia.   | ADU-M   |
| WEST, J.G. (1980)        | A taxonomic revision of <u>Dodonaea</u> Miller (Sapindaceae) in Australia.   | ADU-P   |
| WILLIAMSON, M.A. (1978)  | An investigation of species delimitation in fungal genus related to <u>Seimatosporum</u> and found in <u>Eucalyptus</u> leaf spots.                                      | MELU-B  |
| WRIGHT, D.F. (1977)      | A north Queensland mangrove pollen flora.  | JCT-B   |

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both manual data entry and the use of specialized software tools. The goal is to ensure that the data is both accurate and easy to interpret.

The third section provides a detailed breakdown of the results. It shows that there is a significant correlation between the variables being studied. This finding is supported by statistical analysis and is consistent with previous research in the field.

Finally, the document concludes with a series of recommendations for future research. It suggests that further studies should be conducted to explore the underlying causes of the observed trends. This will help to develop more effective strategies for addressing the issues at hand.





