
ASBS

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

N E W S L E T T E R

Newsletter No. 27 May 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 Commission, P.O. Box 1046, Alice Springs, N.T. 5750
	Dr Roger Hnatiuk, Bureau of Flora and Fauna, P.O. Box 1252, Canberra City, A.C.T. 2601.

CONVENERS OF LOCAL CHAPTERS

ADELAIDE	Dr Hellmit Tölken	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		

* * *

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 Febryary, 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 August, 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.

+++ PLEASE SEND CHEQUES/DRAFTS AS SOON AS POSSIBLE +++

** IMPORTANT ANNOUNCEMENTS **

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

An election is necessary to fill the two (2) Councillor positions on A.S.B.S. Council. For further details and the Ballot Paper, refer to the last page of this issue of the Newsletter.

Express your interest in the Society and support for the Nominees by voting. For the election to meaningfully express the views of the members, all members should vote.

++ ANNUAL GENERAL MEETING ++

THE 7TH ANNUAL GENERAL MEETING OF THE AUSTRALIAN SYSTEMATIC BOTANY SOCIETY will be held at the University of Sydney, in Carslaw Lecture Theatre 9, at 5.45 p.m. Monday 24th August.

EUCALYPTUS CONFERENCE

Call for Papers and Posters.

The Perth Chapter of the Australian Systematic Botany Society is arranging a one-day conference on the biology of *Eucalyptus* on:

Monday 16 November 1981

This Venue will be in the Board Room at :

Kings Park and Botanic Garden, Perth, Western Australia

This notice is to call for titles of papers and posters to be given at the conference. Persons interested in attending should contact : C J Robinson or G J Keighery
Kings Park and Botanic Garden
WEST PERTH 6005.

FLORA OF CENTRAL AUSTRALIA POSTERS

Philippa Nikulinsky's poster, printed at the expense of the Conservation Commission of the Northern Territory, has attracted much favourable comment and requests for copies have been received. Unfortunately supplies are limited and must be retained for advertising purposes. However, the Commission is using the same design but without the reference to the book for its own advertising. Through Andrew Mitchell I have obtained a few copies of this Commission version and can let people have these copies for the cost of the postage.

Anyone with an advertising purpose for the book version of the poster may have one post-free, but supplies are limited.

John Jessop
Adelaide.

** ** **

THE FLORA OF AUSTRALIA PROJECT

The first volume of the Flora of Australia went to press in the second week of June, 1981.

PERSONAL NEWS

NEW APPOINTMENTS

Mrs Gwen Harden has recently joined the staff of the National Herbarium as Botanist Identifier. Gwen has spent the last few years at the University of New England, Armidale, working as a tutor, and compiling illustrated keys and books on the rainforest flora of the Western Slopes of N.S.W.

Dr Helen Hewson has recently been appointed as a Botanist (Science 3) to the Bureau of Flora and Fauna, P.O. Box 1252, Canberra City, A.C.T. 2601. Helen will 'co-ordinate, supervise and participate in writing of portions of the Flora of Australia'.

Dr Roger Hnatiuk, formerly of the Western Australian Herbarium (PERTH), South Perth, starts in mid June with the Bureau of Flora and Fauna (address see above), as Assistant Director (Biologist - Science 5) and Head of the Bureau's Biotaxonomic Information Section.

** ** **

Dr Peter Wilson completed his period of employment at the National Herbarium and has returned to the University of N.S.W. to work on Indigofera with Chris Quinn.

** ** **

CHAPTER NEWS

SYDNEY

At the December 1980 meeting Jocelyn Powell and Liisa Lapinpuro were elected as convenors for 1981. Following the business aspects of the meeting, Helen Ramsay (UNSW) gave an interesting account of her botanically-oriented travels in Canada.

The 1981 programme began with a successful barbecue held in Centennial Park. About 50 people came along and Bruce Maslin, visiting the Sydney Herbarium, joined the gathering.

The meetings for the first few months of this year will be held in the Botany Department Seminar Room at the University of New South Wales. The topics include :

3rd March: Paul Gadek (UNSW) - "Pollen morphology in the sub-tribe Meterosiderinae of the Leptospermoidea (Myrtaceae) and its taxonomic significance"

7th April: David Paton (University of California, at present doing post-doctoral work at the Australian Museum)

- "The influence of plant characteristics and pollinator size on levels of pollination"

5th May: David Bedford (NSW Herbarium) - "*Xanthorrhoea*"

2nd June: Gwen Harden (NSW Herbarium) - "Flora of Mt Kaputar National Park"

A number of successful field trips have been undertaken in the last few months :

Peter Weston, revising and studying evolution in *Persoonia*, visited the south-west of Western Australia. He had a very successful trip overall and managed to re-collect a *Persoonia* and a *Goodenia*, both of which were represented only by their TYPE collections.

Further east, Surrey Jacobs and Joy Everett travelled over 4500 km through southwestern N.S.W., South Australia and Victoria, collecting *Stipa*. Their material will help them to complete a revision started by the late Dr Joyce Vickery. During the trip they confirmed three new species and sought a fourth 'suspected species'.

In late January, Jocelyn Powell spent a week studying and collecting *Leucopogon* and other Epacridaceae over a considerable altitudinal range in the Mt Kosciusko area and on Mt Tingaringy, near the NSW-Victoria border. Jocelyn also spent some time in Canberra at the ANU discussing International Botanical

Congress symposia and visited the National Botanical Gardens to look at *Goodia lotifolia* for Alma Lee.

Last August, Peter Hind visited North Queensland, collecting living material of a number of subtropical and tropical taxa. The highlight of his trip was a visit to the 'crocodile-infested' Rocky River - McIlwraith Range, where he collected a number of rare plants, including *Cyathea felina*.

Don Blaxell also visited Northern Australia. He travelled to Darwin for the Australian Orchid Foundation, to look for terrestrial orchids which flower after the onset of the wet season. He collected three species of *Nervilia* in flower and fruit, and one species of *Malaxis*. The latter proved to be a new record for Australia, the specimen having flowered in cultivation. While north Don collected seeds and fruits of a number of other species for growing in the Royal Botanic Gardens, and attended a meeting of the International Botanical Congress field trip guides and leaders. He attended similar meetings in Brisbane, Atherton, Alice Springs, Adelaide and Perth.

Jocelyn Powell
Liisa Lapinpuro
(Sydney)

** ** **

NEWS FROM THE PAPUA NEW GUINEA BOTANICAL SOCIETY

It is planned to have the Proceedings of the 1980 Meeting published. Further details will be announced in the NEWSLETTER as they become available.

A meeting was held at the Papua New Guinea Forestry College, Bulolo, in April 1981. This meeting was organised by Alister Hay.

Any botanists visiting Papua New Guinea are requested to contact Bob Johns (The University of Technology, P.O. Box 793, Lae, P.N.G.) and/or Greg Leach (Department of Biology, University of Papua New Guinea, P.O. Box 4820, UNIVERSITY N.C.D., P.N.G. Port Moresby) so that they can be involved in meetings and discussion sessions in Lae (at PNG UNITECH) and in Port Moresby (at UPNG).

Bob Johns
(Lae, P.N.G.)

** ** **

THE PUTPUT PROGRAM

If one were to believe everything that one reads, a Putput Program constrains a 'daisy-wheel' to print within the margins of a page!

When I edited Judy West and Ian Noble's article on 'Index to Collections - A time-saving Computer Package' (Australian Systematic Botany Society Newsletter 26(1981)14-16, I was not expressing a personal opinion when I inadvertently changed 'output program' to 'putput program'!

My apologies are extended to both authors

B.J.C. (Editor)

** ** **

REPORT OF THE AUSTRALIAN SOCIETY FOR LIMNOLOGY
20TH ANNUAL CONGRESS, 23, 24.v.1981, NAROOMA, N.S.W.

A series of papers of peripheral interest to plant taxonomists were presented at this conference. The Presidential Address was given by Dr Sam Lake of Monash University. He addressed the problem of pollution in aquatic environments resulting from the activities of Developers and the current resource boom. He asked that sound biology prevail in the face of this pressure and questioned the lack of funding. He also stressed the obvious need for a freshwater institute and emphasised the need for centralised and uniform water quality legislation.

These themes were later taken up by Dr David Mitchell of CSIRO, Griffith. He outlined the management needs of wetlands - our lack of knowledge of; the biology of wetland plants, the scales and kinds of fluctuations of the wetland environment, the resiliance of the system and their relationships with catchments. The importance of wetlands as parts of river systems conflicts with their previous history as dumps, areas to be reclaimed or wildlife refuges.

In all, 20 authors presented aspects of their work on Saturday. Russell Sheil described Potomoplankton of the lower Murray River - a work which seems likely to form a base line for any future taxonomic work in the river system.

Sunday saw a further 18 papers presented on a diverse range of topics ranging from the taxonomy and biology of Stoneflies in Victoria, by Cathy Yule, to descriptive studies of the Alligator River Area, site of Uranium mining in the Northern Territory.

In all a successful conference. Abstracts will be produced in due course. Enquiries could be addressed to Barbara Richardson, New South Wales Fisheries Department.

Sandy Kinnear
Adelaide.

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AN ACKNOWLEDGMENT

I wish to thank very sincerely all contributors of eulogies in the last ASBS Newsletter on the occasion of my retirement from the curatorship at the Herbarium Australiense. These tributes and anecdotes were a pleasant surprise and a gratifying assurance that my efforts had been worthwhile. For historically interested botanists and botanical historians the recording of biographical data, together with opinions of contemporaries, are a source of information, and I hope that the Society will continue with similar write-ups on Australian taxonomists (professional and amateur) and collectors, some of whom might otherwise not appear prominent though their contributions were quite significant. When, on request, I compiled my own biographical synopsis, I recalled how much of my career had been shaped by others and by circumstances outside my control. I know that my revered teachers set high hopes in me, and I regret that I must have disappointed them. Not everything in one's life goes as planned. Nevertheless, in retrospect it seems to me that I was quite lucky in achieving the goal I set myself at the age of twelve, namely, to become a botanist. I owe this to a large extent to those who shared their knowledge with me, gave me encouragement, or responded to my interest and enthusiasm. I was fortunate, also, to survive World War II and the immediate post-war ere with all its adversities. In remembering my arrival in South Australia, I see Marlies amd myself standing on deck of the "Oronsay" at Port Adelaide, looking across the City towards the Mt. Lofty Range. We were full of hope and expectation. I am aware of the fact, that I could never have achieved anything in my adopted country without the acceptance by, and continued help of, my friends, colleagues and students. I am forever grateful to them.

24th May 1981

Hansjörg Eichler
Canberra

ANNOUNCEMENT

BICENTENNIAL HISTORY OF AUSTRALIAN SCIENCE

The Australian Government is proposing to celebrate in a variety of ways the bicentenary of the founding of this country in 1788, and to this end has passed the Australian Bicentennial Authority Act 1980. Historians throughout Australia are proposing to contribute towards a major project, "Australia 1788 - 1988: A Bicentennial History".

Discussions with members of the organising committee for this project have revealed that while the aims of the history are very wide-ranging and will encompass both a series of 'slice' histories and reference and biblographical works, the coverage of Australian scientific endeavour and achievement is likely t to be fairly minimal. Accordingly the Academy of Science has set up a Bicentennial History of Science Committee to consider how it might best contribute to the 1988 celebrations by commissioning one or more scholarly works dealing with the history of science and applied science (but not technology) over the 200 years since 1788.

The Committee has recommended to the Academy Council that a narrative history should not be attempted but rather, a collection of invited essays should be published, to appear in 1988.

The Committee is seeking manuscripts on aspects of the history of science in this country, and inviting both scientists and historians to attend a proposed conference over one or two days in August 1982 in a central location such as Melbourne, Sydney or Canberra.

Enquiries and expressions of interest can be addressed to the

Committee Secretary
Mr P. Vallee
Academy of Science
P.O. Box 783
Canberra City
A.C.T. 2601.

XIII IBC - NOMENCLATURE SECTION (SYDNEY, 1981)

Registration for the Section will be in the Congress Registration office in the Carslaw Building at Sydney University on Sunday, 16 August 1981 (08.30-17.30). Registration for the Nomenclature Section is open to all Congress Members (at no extra fee). Those members registering for the Nomenclature Sessions will receive their personal voting cards at the Nomenclature Registration Desk. Personal votes are not transferable. Institutional votes will be issued to delegates upon presentation of a letter from the director of the institution designating the voting representative.

The Sessions of the Section will take place in the Stephen Roberts Theatre (next to the Carslaw Building in which the Congress Registration office and the office of the Bureau of Nomenclature are located). The first session begins on Monday, 17 August at 10.00. The other sessions are scheduled to begin at 09.30 and 14.30 respectively every day until Thursday, 20 August, in the afternoon, or (if necessary) Friday, 21 August, in the morning.

The IAPT General Assembly is scheduled for Thursday, 20 August, 16.30 - 17.30. The Nomenclature Dinner will start on Wednesday, 19 August, from 19.30 - 20.00 in the Holme Building (University of Sydney Union). Tickets will be available at the registration office.

The Bureau of Nomenclature consists of: President of Nomenclature: R.C. Rollins (Harvard University, Cambridge, Massachusetts, U.S.A.); Vice Presidents: Hj. Eichler (CSIRO, Canberra, A.C.T., Australia), H. Hara (University of Tokyo, Tokyo, Japan), I.A. Linczevski (Komarov Botanical Institute, Leningrad, U.S.S.R.) R.D. Meikle (Royal Botanic Gardens, Kew, U.K.); Recorder: A.E. Orchard (Tasmanian Museum, Hobart, Tas., Australia); Rapporteur-général: E.G. Voss (University of Michigan, Ann Arbor, Mich., U.S.A.); Vice-Rapporteur: W. Greuter (Botanischer Garten und Botanisches Museum Berlin-Dahlem, Berlin, Germany.)

Hj. Eichler
(Local (Australian) Organizer
IBC-Section Nomenclature

XIII INTERNATIONAL BOTANICAL CONGRESS
REGISTRATION

Members A$160. Student Members A$40. Accompanying Members 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.

AUSTRALIAN HERBARIUM SPECIMENS IN THE NATIONAL BOTANIC GARDENS, DUBLIN (DBN)

The Herbarium in the National Botanic Gardens, Glasnevin, Dublin was formed by the amalgamation of the herbaria of the National Museum of Ireland (DBN) and the National Botanic Gardens (DUB) in 1970. It contains approximately ½ million specimens, and although its primary research function is the study of the native flora of Ireland, the bulk of the specimens are from places outside the British Isles.

The purpose of this note is to draw attention to collections in DBN which will be of interest to Australian taxonomists. A catalogue of the collectors represented in the foreign section of the herbarium was published by E.C. Nelson (Glasra 4: 31-68, 1980), and catalogues have also been published of the DBN holdings of Robert Brown (see M. Powell and B. Morley, Glasra 1: 12-38, 1976) and C.E.H. Ostenfeld (see E.C. Nelson and M.J.P. Scannell, Glasra 2: 1-24, 1978). Some additional specimens from Brown's collection were found recently, but no catalogue has been published as yet. Australian pteridophytes are well represented in a collection contained in 70 folio volumes which were exhibited at the Colonial Exhibition in 1886; this collection is discussed by D. Murphy and D. Synnott (Glasra 3: 1-8, 1979) and the collectors are listed.

Three of the collectors represented in Dublin are worth mentioning in more detail.

Robert Brown - the specimens were originally contained in the herbarium of William Ramsay McNab; it is not known how he acquired the Brown specimens. The newly discovered specimens do not bear the label "Herb. W.R. McNab" but are undoubtedly from the same source. Almost 1,000 Brown specimens are now known in DBN; type specimens may be found among his collection.

Peter Good - a series of specimens collected by William McNab (1780 - 1848), grandfather of W.R. McNab, when he was a gardener at Kew between 1803 and 1810 includes material of special interest. Some of the herbarium specimens were collected from plants raised from seeds of Australian plants which must have been collected by Good during Flinders's voyage. These were flowering in Kew about 1808 and 1809. Remarkably some of these specimens bear names which were unpublished at the time of collection, but were later published in W. Aiton's Hortus Kewensis (ed.2) and R. Brown's Prodromus. It is probable that these specimens will aid in the typification of species published in those two works. No catalogue of these specimens is available and the number of specimens is small. They would certainly repay study.

J.A.L. Preiss - D. McGillivray (Telopea 1: 1-18, 1975) originally drew attention to the presence of a set of Preiss specimens with anomalous numbers in another Dublin herbarium, that of Trinity College, Dublin (TCD). The numbers do not correspond with those assigned by J.G.C. Lehmann in Plantae Preissianae.

A few specimens of this series are in DBN, probably because in the 1890s "duplicate" specimens from TCD were donated to the National Museum of Ireland - the Museum's specimens are all in Glasnevin now. The TCD donation contained unique specimens, including some of these anomalous Preiss numbers. Only four

specimens have been found to date in DBN - a list can be provided (the genera are *Gompholobium, Kennedia, Platylobium, Gastrolobium)*.

Copies of Glasra (Contrib.Nat.Bot.Gard.,Glasnevin) Nos. 1 to 5 (1976 - 1981) are available in the libraries of the major botanical institutions in Australia, but some offprints of papers may still be available from the authors. Loan requests may be addressed to the Director, National Botanic Gardens, Glasnevin, Dublin 9.

E. Charles Nelson
National Botanic Gardens
Glasnevin
Dublin 9, Ireland.

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IS THERE A NEED FOR A POLLEN FLORA OF AUSTRALIA?

A pollen flora documents the pollen types found in each taxon using descriptions and photos. In existing pollen floras, not every species is included, but the large genera require a comprehensive selection of species from all the subgroups, for frequently a genus contains more than one pollen type. Even closely related species which hybridise may have pollen with different morphologies.

The pollen morphologies are used by taxonomists as another character to define the limits of taxon. In some cases, where other characters do not give clear evidence as to where the boundaries should be drawn, pollen may be the deciding factor. There may be a good general agreement between pollen morphology and macromorphology concerning the phylogenetic level as well as relationships.

Palynology is used extensively in palaeontological studies. Fossil pollen is identified by matching the fossil with reference pollen from a known species. The quality of identification depends largely on a good reference collection. There is a definite limitation to the reference collection that any palynology laboratory can assemble, either through reasons of time, finances or availability or herbarium material. A pollen flora is then a valuable aid to filling in the blanks in the reference collection or indicating which specimens should be acquired. Even if a good match is found, very similar pollen may exist in other, unrelated families, unbeknown to the palynologist. This could be easily checked in a pollen flora. Quaternarists collect a reference set of pollen from the surrounding area, but even so, there is always pollen which cannot be identified. With the older Tertiary material, the changes in vegetation since deposition may have been much greater so that any living analogue may be far distant or may not

exist at all. A pollen flora is thus even more imperative.

A pollen flora would be useful for many other disciplines. Archaeological studies rely on palynology for evidence of the environment and perhaps climatic changes. Food and crop plants and cultural practices may be deduced from the pollen content of the excavations.

In forensic work, soil or indeed any other material may contain pollen and its identification could provide the necessary evidence for or against the suspect.

In studies on hay fever and asthma, the pollen in the air is trapped and identified as to the likely source of the allergy. Again problems always arise with the identification and a pollen flora would be a valuable aid.

With studies on honey, the flowers that the bees visit can be identified by pollen in the honey. The pollen content of honey is used as a quality control measure in Europe, but this method has not yet been developed in Australia. Sometimes problems with diseases in the bees are investigated and their food source is found to be responsible for the disease. Thus a pollen flora of Australia would be useful to apiculture.

PROBLEMS ASSOCIATED WITH THE PRODUCTION OF A POLLEN FLORA

The major problem is - Who will do the work? The production of a pollen flora would be a gigantic task for any one laboratory, but it could be done as a co-operative venture each palynologist working on a family or group, which is published as a paper in one of the existing journals. The pollen flora of Europe is being done in this way. This method would utilise existing collections and expertise as much as possible. Certain minimum standards would be necessary, but there would be no need for uniformity just for its own sake. Such a series would have to be published in the one journal, and this would require an agreement with the publishers.

MINIMUM STANDARDS FOR A POLLEN FLORA

The pollen must come from correctly identified specimens which must be available as herbarium specimens for future reference, should there be a taxonomic revision of the group.

As many species as possible should be included. Frequently, a genus contains more than one pollen morphology. Even closely related species which hybridise may have different pollen morphologies.

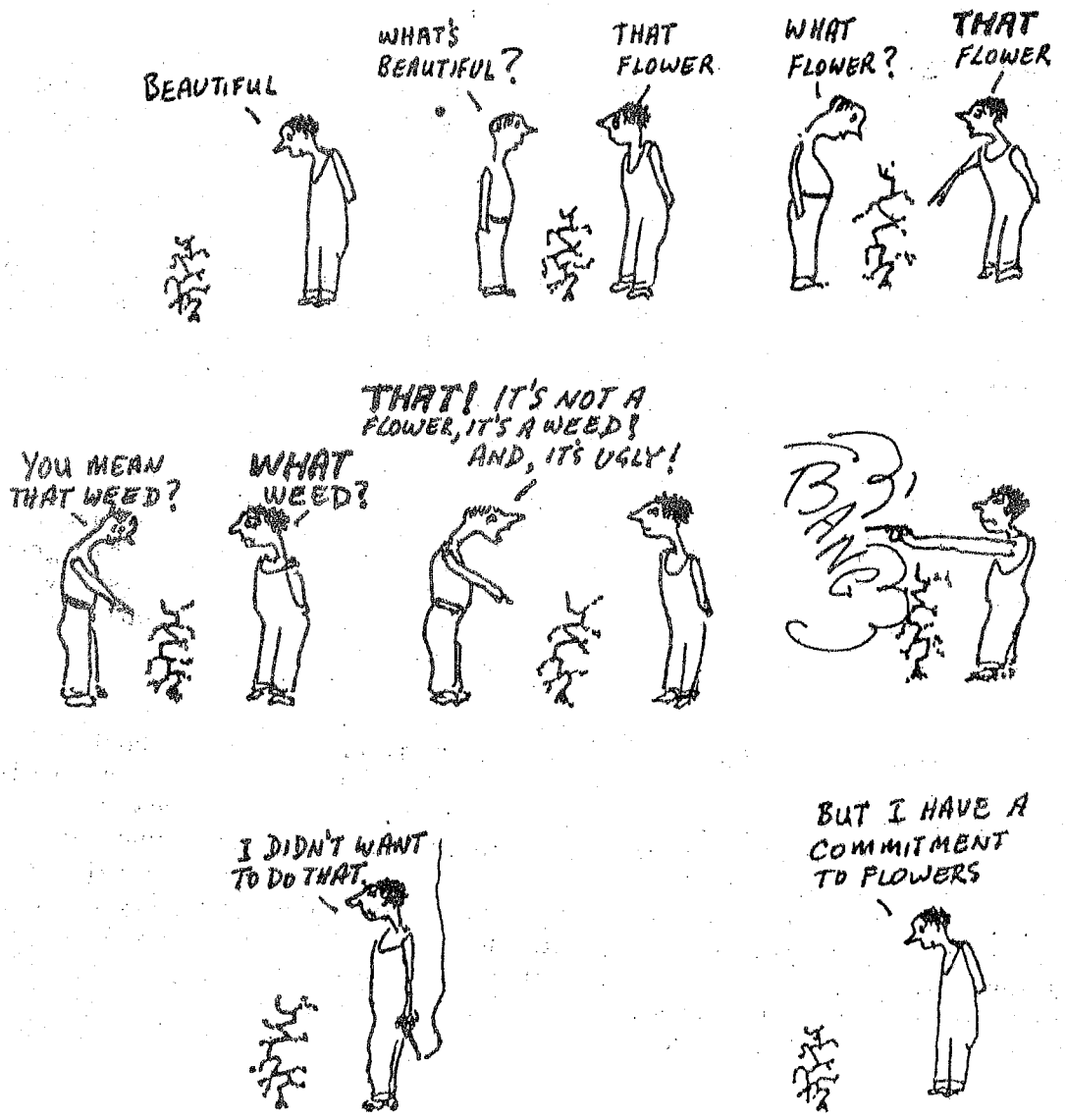
An analysis of exine structure is necessary. Similar morphologies may be found in more than one family, but they may be separated on different exine structures. For this reason, SEM photos alone are not sufficient for they show surface features only.

FEEDBACK REQUIRED

I would be interested in hearing what others think of this. I would be particularly interested in hearing from palynologists who are interested in specific groups and who would be willing to participate. Taxonomists could make a most valuable contribution to a pollen flora.

Direct your comments to :

Helene A. Martin
School of Botany
University of N.S.W.
P.O. Box 1
Kensington NSW 2033.



with apologies to FEIFFER

NEW BOOK RELEASES

HICKEY, M. & C.J. KING, 1981. '100 FAMILIES OF FLOWERING PLANTS', 567 pp. Cambridge University Press.

This book is a student's guide to Flowering plants. It provides family descriptions (largely based on Willis, J.C. (1973), A Dictionary of the Flowering Plants and Ferns, 8th edn, revised by H.K. Airy Shaw, Cambridge Univ. Press) notes on distribution, comments on species of economic importance and/or ornamental uses, and a brief discussion of the classification within the 100 families treated.

The authors have chosen one (rarely, a few) species as typical representatives of each family if they are readily available. Each representative species is well illustrated, has a brief, adequate description, including floral formula, notes on pollination, and notes on possible alternative flowers to study.

The style of this book is very similar to that of Porter, C.L., 1967, "Taxonomy of Flowering Plants", 2nd Edition, Freeman & Co., San Francisco and London, and Davis, P.H. & J. Cullen, 1979, "The Identification of Flowering Plant Families", end edn, Cambridge University Press.

My first reaction to this new book is that it is an excellent reference book for lecturers and students of taxonomy, particularly for those courses which have a strong emphasis on identification. I have not spent sufficient time to offer a detailed review of this book, however, a few minor faults are obvious. There appears to be a strong bias towards European floras in both the examples used and the literature on which the classification notes are based. This bias is unfortunate when the book clearly has world appeal.

In the Scrophulariaceae, they have followed the work of Wettstein (of the 1890's) while ignoring the more recent, monumental works of Pennell and other later specialists (such as Thieret). In the Loganiaceae, it is unfortunate that they chose *Buddleja* (spelt *'Buddleia'*) as the representative. This genus is rather atypical of the family. It has had a very controversial history, some authors place it in the Loganiaceae, others place it in the Scrophulariaceae, while others place it in its own family (Buddleiaceae).

As mentioned above, some of the representative species seem to be inappropriate and even inadequate, especially when one considers that this book is designed for students. I am not convinced that there is any one grass species which adequately represent the 620 genera of grasses. I do not know why the authors chose *Luzula* (with 80, cosmopolitan species) to represent Juncaceae, when *Juncus* has 300 species (also cosmopolitan). Some families are well represented, e.g. Scrophulariaceae (with 220 genera) has 3 representatives. However, it is difficult to understand why the Rosaceae (with 100 genera) requires 4 typical representatives. There is a lot of wasted space, resulting from format, which could have been used to include more illustrated examples. A selection of examples would have been more representative of a family than any one example.

The use of floral formulae is encouraging. However, the authors chose not to use the 'bracket' to show adnation of floral parts and this significantly reduces the information content of the floral formula.

The Longtitudinal Section of flowers are actually half-flower diagrams, which are not always strictly correct. For example, figure 99B1 shows two locules when only one (of the three) would be seen in a true half-flower diagram. Minor inaccuracies, such as these, can cause problems for students.

Another error : the authors regard *Prostanthera* (Labiatae) as having a terminal style, rather than a gynobasic one.

An extensive glossary is also included. For the ease of use by students, the introduction (which is really an expanded, in part, illustrated glossary) and the glossary (at the end of the book) should have been placed together.

This relatively inexpensive book (approximately $12:00, paper-back) is worthy of consideration for education purposes, at least until we have an Australian reference book of similar quality. The authors should be congratulated on tackling a very difficult project with highly commendable results.

Barry Conn
Adelaide

A STUDENTS GUIDE TO THE MONOCOTYLEDONS OF PAPUA NEW GUINEA. PART I.
Ed. R.J. JOHNS AND A. HAY

PAPUA NEW GUINEA FORESTRY COLLEGE TRAINING MANUAL. VOLUME 13 (1981) 90pp.

The families treated in this volume are Stemonaceae (1 genus), Dioscoreaceae (1 genus), Taccaceae (1 genus), Philydraceae (2 genera), Philesiaceae (2 genera), Pontederiaceae (2 genera), Araceae (20 genera) and Hypoxidaceae (2 genera) and all treatments are by A. Hay.

Each genus has a species list, distribution, ecology and notes and, in the case of the smaller genera, a key to species. The notes comment on taxonomic difficulties (sometimes with mention of specific collections), uses and sometimes cultivation. Literature has been kept to a minimum. In the case of 3 families there is none at all, in 4 families only the Flora Malesiana treatment is cited and in Araceae a more extensive list of recent gereric treatments is given. Each genus (with the exception of *Xanthosoma* and *Colocasia*) has been illustrated.

The rest of the monocotyledon families will appear in order of completion, with a key to the important families also to appear later.

Copies available from P.N.G. Forestry College, P.O. Box 92, Bulolo, Papua New Guinea.

Robyn Barker
Adelaide

BEAUGLEHOLE, A.C. 1981. 'THE DISTRIBUTION AND CONSERVATION OF VASCULAR PLANTS IN THE ALPINE AREA, VICTORIA'. Available from Portland Field Naturalists Club, P.O. Box 470, Portland, Victoria 3305 for $6.00 a copy including postage.

This is a publication of 110 pages which includes an up-to-date checklist of the vascular flora of about 1617 species, showing the distribution of each species within the area and including many new records. The conservation status of each species is indicated and detailed distribution data are given for 565 of the rarer species. The 178 native species absent from biological reserves are listed. The location of areas is given in which new reserves would significantly increase the number of plant species which are adequately conserved. A detailed, coloured map showing minor grid squares and the location of various types of Public Land is included.

Similar publications on the Mallee and Corangamite-Otway areas are available from the same address for the same price.

Bob Parsons
LaTrobe University

CUNNINGHAMIA

Cunninghamia is a new ecological journal published by the National Herbarium of New South Wales (NSW). Issues of *Cunninghamia* will deal with the results of ecological research (e.g. vegetation surveys, environmental enquiries, impact studies, and conservation assessments.)

For further details, refer to 'The Editor, *Cunninghamia*, National Herbarium of New South Wales, Royal Botanic Gardens, SYDNEY, N.S.W. 2000'.

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REVIEW

"Our Dying Fauna"
by Athol Douglas

Creative Research Perth 1980. 170 pp. $9.95

An interesting (if somewhat disjointed), depressing but important book by an ex-collector for the Western Australian Museum, dealing with the decline of Western Australia's Fauna (and Flora).

Basically the book is in five sections, each dealing with different aspects of environmental decline.

Section I: Outlines the forces of change, introduced fauna (ferral goats, cats and bees in particular).

Section II: Outlines the vital factors (as the author sees them) in environmental decline; Humus and litter, drainage, fire, Phytophora, termites, and the failure to regenerate native forests after bauxite mining.

Section III: Deals with the invertebrates, their importance and our appalling lack of knowledge of their biology. Some case histories are given - ant colonies, insects and plants (Trichodesma zeylanicum and the bee, Asarapoda dawsoni and the life and death of a blackboy.

Section IV: The Vertebrates. Whatever happened to the Dalgite (Rabbit eared bandicoot), the numbat, marsupial mole, ghost bat, stick nest rat and the night parrot?

Section V: Future Factors. Are scientists (especially taxonomists) a major threat to rare animals? Douglas states catagorically that they are, and that inadequate processing and curation renders much that has been collected useless for further study. A provocative chapter which certainly overstates the case, but certainly as knowledge proceeds, reasons to collect rare species declines, and certainly the largest folders in many herbaria are the most restricted spectacular species.

Throughout this book Douglas deplores our lack of data on rare animals, especially his primary interest jewel beetles (Buprestidae). However, virtually none of his apparent wealth of information has ever appeared in print or been collated and stored in a retrievable manner. Surely one should place one's own house in order before casting such large stones at other biologists.

In general, however, this is an interesting book for any systematic botanist. It is certain to be widely read by our best supporters, the naturalist or wildflower groups, who may form opinions on professional collecting quite different from our own.

G J Keighery
Kings Park and Botanic Garden
West Perth 6005
WESTERN AUSTRALIA.

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY COUNCIL ELECTIONS

Nominations have been received for all Council positions. The positions of President, Vice-President, Secretary and Treasurer have been filled unopposed.

An election is necessary to fill the two (2) Councillor positions on Council.

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INSTRUCTIONS FOR VOTING

Please fill in the ballot paper attached and either :

(i) place it in an unmarked envelope and put that envelope inside another which is addressed to the Returning Officer with the sender's name and address on the back,

or (ii) sign the back of the ballot paper and send it to the Returning Officer along with other signed ballot papers from your institution or chapter.

In either case, write "Ballot paper" on the outside of the envelope and send it to the Returning Officer, Ms J.G. West, Herbarium Australiense, P.O. Box 1600, Canberra City, A.C.T. 2601, by Friday 31st July 1981.

The new Council (including those positions which have been filled unopposed) will be announced at the Annual General Meeting to be held during the International Botanical Congress in Sydney on Monday 24th August.

Brief details on the nominees for the Councillor positions are as follows:

Bill BARKER is a botanist at the State Herbarium of South Australia.

George CHIPPENDALE is a Senior Research Scientist in Division of Forest Research, CSIRO.

Laurie HAEGI is a botanist at the National Herbarium of New South Wales.

Rod HENDERSON is a botanist at the Queensland Herbarium.