AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

NEWSLETTER

Newsletter No. 12

September 1977

A.S.B.S. Council

President
Prof. Roger Carolin, School of Biological Sciences, University of Sydney, Sydney, N.S.W. 2006.

Vice-President
Mr Rod Henderson, Queensland Herbarium, Meiers Road, Indooroopilly, Queensland 4068.

Secretary
Mrs Karen Wilson, National Herbarium, Royal Botanic Gardens, Sydney, N.S.W. 2000.

Treasurer
Mr Mike Lazarides, Herbarium Australiense, CSIRO, Box 1600, Canberra City, A.C.T. 2601.

Councillors
Mr Alex George, Western Australian Herbarium, Dept. of Agriculture, George Street, South Perth, Western Australia 6151.

Dr John Jessop, South Australian Herbarium, North Terrace, Adelaide, South Australia 5000.

This publication, the official newsletter of the Society, 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, to the Editor at the address below. Items from any source and of interest to members are acceptable. Items incorporated in the newsletter will be duly acknowledged.

Please Note

- Next deadline is 30th November, 1977.

Are you one of the 58 who’ve forgotten 1977 membership fees ($6)? Please check your records - you may have overlooked this.

Issue of this number is delayed slightly due to timing of the ANZAAS Congress and the General meeting of the Society.

Editor: Mr Rod Henderson
Queensland Herbarium
Meiers Road
Indooroopilly
Queensland 4068
AUSTRALIAN SYSTEMATIC BOTANY SOCIETY

4th General Meeting held at Melbourne University, Botany Department,


The following Council was elected:

President: Assoc. Prof. R.C. Carolin
Vice-President: R. Henderson
Secretary: Karen Wilson
Treasurer: M. Lazarides
A.S. George
J.L. Jessop

A joint symposium with ANZAAS section 12 was held on the Cytogenetic Stimulus to Taxonomy. Details may be found in the reports and abstracts of the ANZAAS Congress. Our thanks are due to Helen Aston for organizing this.

The 4th G.M. was held on Tuesday 30th August, 1977. Abbreviated minutes will be published in the Newsletter later. After the meeting the president delivered an address entitled "The Old Systematics".

PRESIDENT'S REPORT

During the year the following projects have been continued:

1. The Index of Current Taxonomic Research on the Australian Flora.

This is now a joint project with the Heads of Herbaria. Trevor Whiffin is co-ordinating the results of all current taxonomic work on the Australian Flora which will include research in Australia and in foreign institutes. The results will be stored on computer cards at a cost of up to $200 which will enable quick and efficient editing as new projects are initiated and current projects are completed or abandoned. It is intended that lists be published from time to time. The first one in 1979.

2. Committee on Taxonomic Publications.

The report was presented to Council but since the publication "Guide lines for the preparation of Botanical Taxonomic Papers" by Hj. Eichler was drawn up after some consultation with the convener of our Committee, Paul Wilson, it was decided not to proceed any further.
3. **List of Dissertations completed in Australasian Universities on botanical taxonomic subjects.**

During the year Council decided to compile this list. The heads of departments of all Universities in Australia and New Zealand have been circulated asking them to provide this information, particular attention being drawn to Honours or 4th year theses which are not included in Dissertation abstracts or Union Lists of Higher Degree Theses. It is hoped that future Councils will continue these listings in the same way that the Index of Current Taxonomic Research is to be continued. Karen Wilson is in charge of this compilation.

4. **Central Australian Flora.**

During the year Council decided to sponsor the production of a Central Australian Flora. Fuller report has been made in the Newsletter. Commitment has been made by members for most of the work. The response of members to this project has been most gratifying and our thanks are due to John Jessop for initiating it and accepting the bulk of the work towards its production. Two publishers have shown a keen interest in it to date. We are seeking more information from Reeds who appear at this stage to offer the most satisfactory proposal.

5. **ANZAAS Systematic Botany Committee.**

Discussed the effect on the Flora of Australia of the financial allocation to ABRS and the continued lack of a Flora Project leader. The suggestion of an Undirected Flora was canvassed.

6. **Main correspondence.**

(a) Premier of Tasmania urging the appointment of a Government Botanist. This post has now been advertised.

(b) Premier of N.S.W. urging the provision of a new National Herbarium building - no action.

(c) Minister of Science urging the provision of funds for continuation of ABRS projects - some projects were provided with funds for continuation but a period during which federal finance was not available produced some difficulties.

(d) Minister of Science, copies to Sir R. Robertson (ASTEC), Chairman of AAS announcing the sponsoring of the Central Australian Flora and indicating our continued support for a Flora of Australia based upon revisionary studies.
7. **Membership**

We now have 278 members of which 58 are unfinancial. If you are one of these please renew your subscription as soon as possible.

R. Carolin

**Undirected Flora of Australia**

At the 4th General Meeting, the President raised a suggestion made in a letter from Dr Hj. Eichler which proposed an "Undirected" Flora of Australia. After some discussion the meeting reached a general agreement, which does not necessarily follow Dr Eichler's original proposal.

Any Australia-wide revision of a group of plants would qualify for consideration for incorporation in this project. There would be no limitation on publications. Such a revision, upon acceptance for publication by a Journal, could be submitted to a committee for acceptance as part of the project. Upon acceptance it would be entitled to carry the heading 'Contribution towards the Flora of Australia Number ...' or some similar title. A number of reprints could be purchased by ABRS and sold so that they could eventually be bound together or at least filed under the same reference although published in different Journals.

Since these contributions will be published mostly in Australian Journals, it is suggested that the Committee be based on a representation of taxonomists from Australian Herbaria and Universities, possibly a reconstituted Academy Flora Committee working in close consultation with the Director of ABRS.

There are obviously some problems associated with this approach which will need ironing out but it was accepted with some enthusiasm at the General Meeting and the Council was given approval to promote it as Council saw fit. It does not alter our view that a Flora of Australia should be based upon revisionary work directed specifically to that end. In the present financial climate, however, this suggestion does draw together into one series that work which can serve as a basis for the directed flora.

Any comments that members have on this subject would be welcome.

R. Carolin
XIII International Botanical Congress  
Sydney, August 1981  

Programme for Systematic and Evolutionary Botany Section

The Programme for this Section will include symposia as well as sessions of contributed papers and the sectional Programme Committee is seeking suggestions for symposium topics. As the Congress is some years away it is important that particular attention be given to subjects which are coming into increasing prominence and interest, rather than those which have been much discussed in past years.

The members of the Programme Committee for this section are:

B.G. Briggs - Royal Botanic Gardens, Sydney (Chairman)
R.C. Carolin - University of Sydney
Hj. Eichler - Herbarium Australiense
G.A.M. Scott - Monash University
T. Whiffin - La Trobe University

Please send suggestions for this Section to any member of the sectional programme committee. Other Committees of the Congress will be concerned with the other Sections (other branches of Botany), the general organisation of the Congress and with excursions.

B.G. Briggs

WELCOME TO OUR NEW CHAPTER IN  
ROCKHAMPTON, QUEENSLAND

At a meeting held at the Capricornia Institute of Advanced Education on 27th July, thirteen interested persons voted to form the Rockhampton Chapter of ASBS. The Society welcomes formation of this new chapter which should cater for the interests of members in this major Queensland provincial centre. We hope to receive regular communications from these members.

Ludwig Diels and Modern Botanical Research in Western Australia

Ludwig Diels was a German botanist who visited Western Australia from October 1900 until December 1901. He travelled here under the auspices of the Royal Prussian Academy, Berlin, and the Humboldt-Stiftung in order to study the
botanical richness of the south-west of the State. He wrote:

Western Australia promises by means of its vegetation many elucidations of general problems, for it is in the winter rainfall regions of the earth that the vegetation is more closely defined and more regularly graduated than in any other, whilst the country's unequalled richness in plant species will yield a rich harvest to all who strive to gain a knowledge of plant formations. (translation from Dakin, 1920)

In addition to a comprehensive floristic account of his study in Western Australia, he published a record of his findings and interpretations of the vegetation in a volume entitled "Die Pflanzenwelt von West-Australien südlich des Wendekreiss" ("The plantworld of Western Australia south of the tropics"). In these works Diels proposed a subdivision of the southern part of Western Australia into regions he named Botanical Districts. As such, these Districts were an extension of the work begun by Ferdinand von Mueller when he separated the south-west from cremea by a line from Shark Bay to the south coast.

It is worth remembering that the country Diels saw on his travels was but little modified by European land uses compared with what a modern botanist sees. In this respect Diels had an exceptional opportunity to observe the subtle changes that occur in our flora and vegetation. Diels was a systematic botanist and not an "ecologist". Although he had the substantial tradition of great geographers such as von Humboldt, most vegetation study at the beginning of the 20th century was of a general descriptive nature. However, Diels progressed far in his recognition of the intimate relationships between the characteristic regional floras and the prime environmental factors of rainfall and soil types. Using these environmental factors together with plant formations he divided the State south of the tropic into six districts.

Diels' work has had relevance to later studies in so far as it has been copied and modified by Blackall and Grieve (1974), and Speck (1958).

Clarke (1926) took a major step in the process of recognizing subdivisions of the State when he produced a map of Natural Regions of Western Australia based on internally consistent units of vegetation, soils and flora. His regions to some extent verified those of Diels but also modified them in the light of more extensive information. Clarke also treated the whole State and not only the southern half.

Most recently, Diels' concept of botanical districts and its subsequent extensions by other workers have been given a thorough review and application to Western Australia by Beard (1969, and in several vegetation maps of the State). He has defined botanical districts in terms of natural ecological units based on soils, dominant vegetation, and plant distributions.
Thus, after more than seventy years, Diels' original concept of
botanical districts based upon floristic composition, rainfall, and soils still
remains but little changed. The taxonomic community has done little to employ
his ideas and the ecological community scarcely more. The outstanding use of
Diels' concept has been in its extension to cover the whole State and in its
closer usage in connection with vegetation mapping.

But what of the future? There is the need for rigorous testing of Diels'
phytogeographic concepts by way of quantifying the basic underlying factors which
have contributed to the intuitive desire to subdivide the region. It is
necessary for research to show which portion of the flora directly contributes to
the characterization of botanical districts, and which parts and life-form groups
contribute nothing. Further, since Diels' work is a geographical study, what
relation if any do his geographic units bear to studies of speciation which rest
so heavily upon a knowledge of species distributions?

The above is a resume of ideas presented at a meeting of the Australian
Systematic Botany Society (W.A.) held on 16 November, 1976 at the Western
Australian Herbarium. I wish to extend my appreciation to all those who
contributed to the discussions and in particular the three other speakers, Dr
J.S. Beard, Mr S.D. Hopper, and Dr N.G. Marchant.

References

Beard, J.S. 1969. The natural regions of the deserts of Western Australia.
J. Ecol. 57: 677-711.

Blackall, W.E. and Grieve, B.J. 1974. How to Know Western Australian Wildflowers,

Clarke, E. de C. 1926. Natural regions in Western Australia.


Speck, N. 1958. The Vegetation of the Darling-Irwin Botanical Districts and an
investigation of the distribution patterns of the family Proteaceae,

R.J. Hnatiuk
On the almost featureless landscape of the South-West botanical province, any botanical district boundary must be fuzzy with wide areas of overlay. Only two major factors appear to contribute to the boundaries of botanical districts within this province: rainfall, and the northern boundary of the eastern three-quarters of the South Coast (drainage) System (Bettenay and Mulcahy, 1972).

The Warren District includes the Karri forest. Its northern boundary roughly coincides with the 1000 mm isohyet.

The Darling district contains mainly the Jarrah forest. Its inland boundary to the south coast is roughly the 500 mm isohyet.

The Eyre district has its northern boundary slightly north of the watershed of the South Coast System (Bettenay and Mulcahy, 1972). The area east of the Esperance-Norseman road is unknown to me and cannot be commented on. The Stirling and Barren Ranges, while they both have distinctive floras, are areas too small in relation to this study to be set aside as separate botanical districts.

The boundary of the Avon district, in its southern half, is the Darling district on the west and the Eyre district in the south. The eastern boundary with the Coolgardie district roughly coincides with the general transition from tall open-shrubland and open-heath to low open-forest and low woodland (Specht, 1970). (I do not know the area well enough to list dominant species for these plant associations) Diels' (1905) boundary of the south-west section of the Coolgardie district should be moved more to the north-east as there are no definite widespread changes in floristics along its present position. My knowledge is insufficient to attempt to site boundaries in the northern half of the Avon district.

The Stirling district has been given slightly different boundaries (Diels, 1905; Gardner and Bennets, 1956 used in Blackall, 1954) and is of composite origin (Grieve and Blackall, 1975). All these versions of the Stirling district contain areas of distinct botanical districts. The versions are not realistic; the Stirling district should be abandoned and the various areas added to their correct botanical districts.

(Comments are from extensive field studies in the South-West and peripheral areas of the Exemenean botanical province, over a period of about 16 years. Over the last 4 years the Bremer Bay sheet and the lower third of the Newdegate sheet have been intensively studied. Definite patterns of plant distribution have become evident from these studies.

Time was not available to compile lists of characteristic species for the various botanical districts).
REFERENCES:


Ken Newbury
3 November, 1976

CATALOGUE OF AUSTRALIAN BOTANISTS AND OTHERS WHO HAVE CONTRIBUTED TO COLLECTION AND RECORDING OF PLANTS IN AUSTRALIA.

A catalogue of Botanists, Collectors and others who have contributed to Australian Botany is currently being collated in Melbourne. Miss Daphne Pearson, one of the workers on this project, has supplied the following information.

The object of forming an Australian Catalogue is to provide information about the contributors individually, or as a member of a team, which leads to the location of plant collections and bibliography.

As early as 1952 it was considered such a catalogue would save botanists considerable time by reducing interruptions to their work to find out "who and where" in relation to specimens and publications.

Miss Mervyn Davis began the catalogue in 1955 and subsequently much material has been added notably by the botanist, Dr J.H. Willis.
The brief span of Western society in Australia makes it possible to include the voyagers and explorers who brought the type collectors, be they naturalists, surgeons, gardeners or delineators to Terra Australis and who safely transported plants back to Europe. In some cases, the ship's captain physically helped in these excursions. Any artist who has recorded and does record Australian plants with knowledge, is being included.

Regional (State) botanical biographies including bibliographies were considered as a short-cut to early publication. Inevitably this would have involved duplication of work as botanists and others often moved, collected and lived in several states.

It was decided to make the Catalogue Australia-wide as it would then be of more use internationally.

It is envisaged that all material gathered, particularly from contemporary workers, would remain archival and held in Australia. All bibliographical details could not, in some cases, be published but the lists would be available in individual files. Tapes, photographs, locality lists, correspondence, news cuttings including obituaries will form the archives.

An application for funding costs (not labour) has been made on an annual basis but not for publication at this stage, August 1977. Full co-operation has been given by South Australia, Canberra, Queensland and Tasmania. We await replies from the other states. It is realised a great number of botanists and Institutions have not been approached but this is because of a lack of finance.

Co-operation of others is sought for supply of additional Data for this catalogue. Information can be obtained from (or should be sent to)

Miss Daphne Pearson  
Flat 1, 12 Marne Street  
South Yarra, 3141  
Victoria, Australia.

Miss Pearson has drawn up for convenience of contributors, a suitably worded form so data can be presented in uniform format. These are available from her at the above address.

-Ed.
Dr Winifred M. Curtis informs us she is just getting back to work on the monocotyledons for Part 4 of "The Student's Flora of Tasmania". Part 6, the final part of "The Endemic Flora of Tasmania" is now with the printer in Germany and publication is expected in the northern Spring of 1978. Good to see such progress on these well-known series of publications she has written.

Don Blaxell (Orchidaceae), Jim Armstrong (Rutaceae-Zieria) and Jocelyn Powell (Epacridaceae-Leucopogon) of the New South Wales National Herbarium have recently undertaken extensive collecting trips in Queensland.

The next Heads of Herbaria meeting is to be held in Adelaide from 6th to 7th October.

Members contributions are solicited for this and the following sections. Much as I'd like to be able to, I am unable to manufacture too much newsworthy information. Perhaps chapter conveners can act as local co-ordinators.

-Ed.

SOME RECENT PUBLICATIONS OF INTEREST


RANAVALONA duckerae gen. and sp. nov. is described and the new combination Amphiplexia racemosa is made.


A. antarctica and A. griffithii are dealt with and a list of the common epiphytic biota associated with those species is presented.


Another in the extensive series on wild-flowers of South-east Queensland by Mrs Lebler. Volume 1 of Wild-flowers of South-east Queensland containing the first 15 articles in this series will be available before the next newsletter. Details will be given then.
121st Annual Report of the Board of Governors of the Botanic Garden, Adelaide for the year ended 30 June 1976. Gov. Printer, South Australia. Details amongst other statistics, activities of the staff of the Botanic Garden, Adelaide. The State Herbarium is part of the Botanic Garden which is now treated as a Division of the South Australian Department of the Environment.


Flora of New South Wales-No.181 (1977) - Plantaginaceae by B.G. Briggs, R.C. Carolin and J.M. Pulley. This is the most recent contribution to the series formally known as "Contributions from the New South Wales National Herbarium - Flora Series" and covers 20 species of Plantago L. in New South Wales.

Solanaceae Newsletter No 4 - May 1977. Edited by J.G. Hawkes, R.N. Lester and D.C.D. Langley, Dept. of Plant Biology, University of Birmingham, Birmingham, England. Details most recent information relative to research in the family throughout the world.

-Ed.

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LETTER TO THE EDITOR

CONVENTION - SINGAPORE PROFESSIONAL CENTRE

A Letter has been received from the Centre Director of Singapore Professional Centre as follows:-

"We are pleased to inform you that the Singapore Professional Centre (SPC) is organising its third Convention to be held from November 25 to 27, 1977. The objectives of the Convention are:-

(1) To promote the friendship and fellowship amongst the professionals in ASEAN countries.

(2) To provide an opportunity and forum for the meeting of professionals and the interchange of ideas and experience."
(3) To involve the participation of professionals from various disciplines from ASEAN countries to contribute towards the improvement of matters involving interests of the profession and the public at large. To arrive at some constructive conclusions and to come forth with recommendations and directions.

(4) To generate and stimulate greater interest in individual professionals in the participation on multi-disciplinary activities and establish contacts for future co-operation in various areas of professional practices in ASEAN countries.

(5) To create greater awareness of the usefulness and contributions that the professional centre can contribute, as a multi-disciplinary body, to the society.

Highlights of the Convention will be:

+ A grand opening ceremony
+ A 1 day workshop session
+ A ½ day seminar session
+ Adoption of resolutions from workshop discussion
+ Closing Convention Dinner

Speakers are invited from both local and ASEAN countries to present their papers and deliberate on the following themes:

**Workshop Sessions**

1. The need for Professional Centres in ASEAN
2. The future for Professional practices in ASEAN
3. The limitation of professionals in fulfilling the needs of a developing nation.
4. Responsibilities of professionals as leaders and think tanks in the community.

**Seminar Session**

The Professional Elitism - Is there a growing trend?

Although the Convention will deal with problems mostly concerning ASEAN countries, you and your members are cordially invited to participate in the above Convention."

We would be grateful if you would advise your members about the Convention and anyone requiring further details should contact Mrs R.J. Inall at Science Centre, 35-43 Clarence Street, Sydney N.S.W. 2000.
CHAPTER NEWS

ADELAIDE

Programme

29 June  - Mr Dave Blackburn and Dr Dave Christophel from Botany Department, University of Adelaide spoke on the "Maslin Bay fossil flora".

31 July  - A most rewarding, although very wet, visit to two swamp areas in the Mt Lofty Ranges.

24 August - Dr Peter Grubb from Cambridge University spoke on "Some thoughts on regeneration of Australian vegetation".

25 Sept  - A field trip to a private property of bushland in Mt Crawford area of Mt Lofty Ranges.

With the Heads of Herbaria meeting being held in Adelaide in October we are planning an informal evening on October 6th for the Herbarium delegates and local members to meet.

Judy West
Convener

CANBERRA

The programme since April 1977 has been:

28 June  - A showing of Than Speck's slides of the Australian flora - in the nature of a "guessing game" since the slides are not annotated and as far as is known Dr Speck, an ecologist with CSIRO Division of Land Use Research, left no notes. A number of the slides seen were found to have been published as illustrations in "How to Know Western Australian Wild-flowers".

26 July   - Dr Ken Eldridge, of the CSIRO Division of Forest Research (Tree Genetics Group) spoke on "Eucalyptus Breeding Systems".

The general meeting of the Chapter will be held at 8 p.m. on Wednesday, 28 September.

Estelle M. Canning
Secretary


ROCKHAMPTON

Extracts from the minutes of the inaugural meeting of the Rockhampton Chapter of the A.S.B.S. held on Wednesday, 27 July, 1977 in Laboratory No. L29 of the Biology Department, C.I.A.E., at 6.00 p.m.

PRESENT

Miss Dianne Altmann
Mr Ronald Balsys
Dr Gillian Kennedy
Miss Larelle King
Dr Choong Low
Mr Mark Morten
Mrs Barbara O'Brien
Dr Andrew Osborn
Mr Paul Reimers
Mr Paul Sheppard
Miss Fefildi Thorpe
Mr Peter Tierney
Mr Andrew Turner

APOLOGIES

Mr Dow Airen
Mr Lawrie Cook

General Business:

1. Miss Larelle King and Mr Mark Morten were elected conveners.

2. Mrs Barbara O'Brien was elected Secretary.

3. Meetings:

   It was decided that the conveners would not call meetings on a regular basis, but as the need or opportunity arose. As all members to date were easily contactable at C.I.A.E., this should present no problem.

4. Programme:

   The conveners agreed to commence work on ideas for an appropriate programme as soon as possible. This programme would be sent to all members and interested persons when completed.

5. There being no further business, the meeting closed at 6.30 p.m.

   Barbara O'Brien,
   Secretary
BRISBANE

At the meeting held on 9th August, Miss Cheryl Scarlett of the University of Queensland, and Mr Bryan Simon, Queensland Herbarium were elected to the convening committee for 1977-78. At the same meeting Dr R. Johnson, Director of the Queensland Herbarium, gave members and visitors a very interesting talk on his permanent plot of Brigalow (Acacia harpophylla) communities in Central Queensland, the ecological information he has collected from it and his efforts to sort the data using computers.

The next meeting is scheduled for 11 October when Des Boyland, Queensland Herbarium, will speak on "The Flora of Far South-western Queensland."

Meetings are held in the Tea Room (G 38/40) of the Botany Department, University of Queensland, commencing at 7.30 p.m. Visitors are welcome.

C. Scarlett & B. Simon
(Convening Committee)

SYDNEY

12th July - Dr Eric Lassak, Chemist at the Museum of Applied Arts and Sciences spoke on "Chemotaxonomy".

9th August - Dr Paul Hattersley, Tutor at the Botany Department, University of Sydney discussed "Photosynthetic Pathways and Other Things in Relation to Grass Classification".

13th Sept - Miss Jane Mowatt, post graduate student Botany Department, University of Sydney spoke on "Autecological Studies and Taxonomy".

The next seminar, on the 11th October, is entitled "Aerodynamics and Taxonomy" and will be presented by Ass. Prof. Roger Carolin, Botany Department, University of Sydney.

Don Blaxell
and
Chris Betteridge
Conveners
Membership in Australian Systematic Botany Society is open to all those interested in Plant Systematics. This also includes any persons overseas and overseas institutions. Membership can be effected by mailing the attached form or sending relevant information to the Treasurer at the address given on page 1 together with relevant fees for the current year.

I wish to become a member of the Australian Systematic Botany Society. I have enclosed a remittance of $______ being subscription for the current year.

Name: Dr/Mr/Ms/Mrs/Miss: .................................................................
Address: ..........................................................................................
Address for newsletter: ..................................................................

Fees: Australia and Papua/New Guinea A$6 or $4 if paid before 31 March or if new member joining after that date. Elsewhere, US$8 or equivalent.