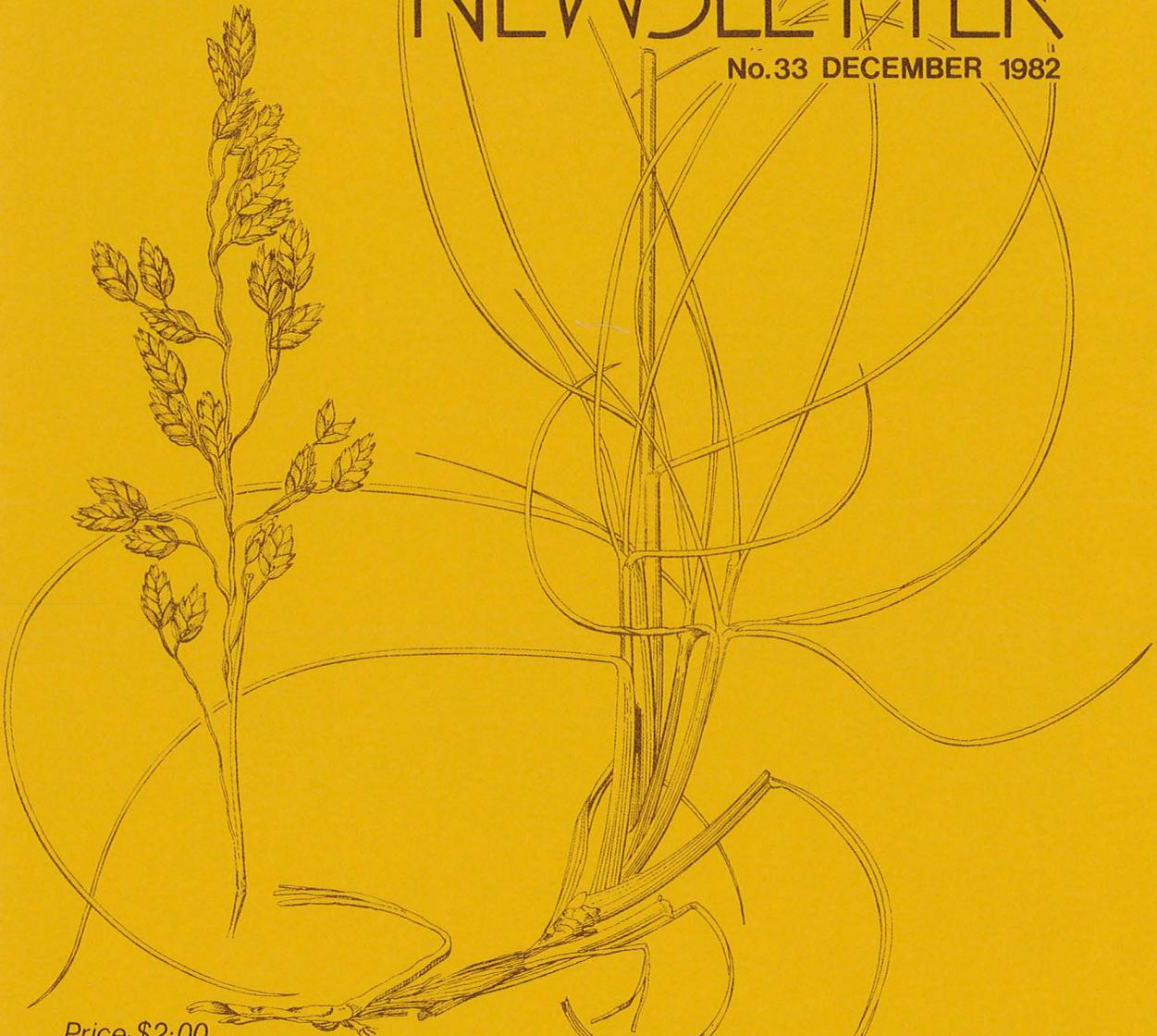




Australian Systematic
Botany Society
NEWSLETTER

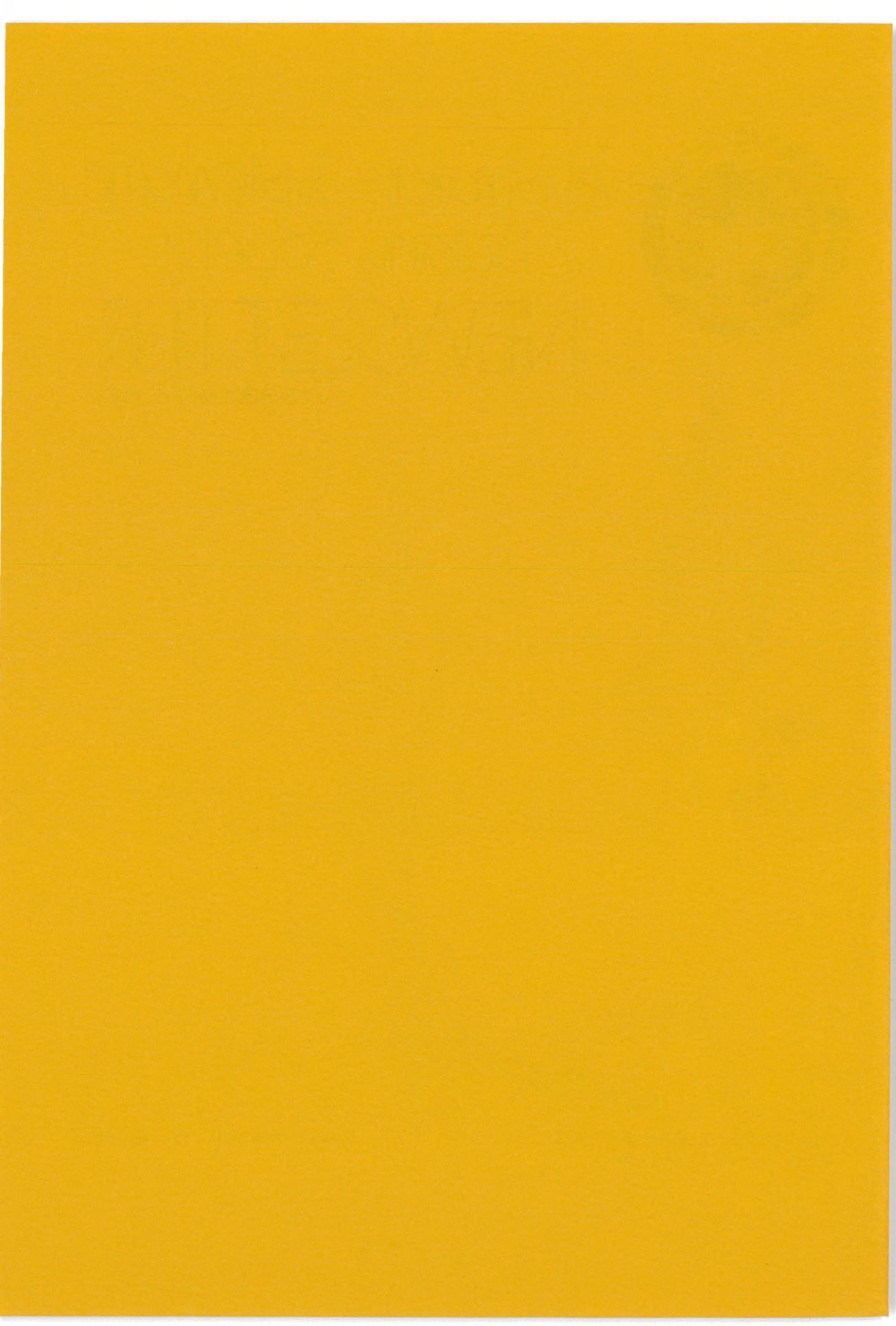
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Australian Systematic Botany Society Newsletter

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Affiliated Society : Papua New Guinea Botanical Society

The Society

The Australian Systematic Botany Society is an association of over 300 people with professional or amateur interest in Botany. The aim of the Society is to promote the study of plant systematics.

Membership

Membership is open to all those interested in plant systematics and entitles the member to attend general and chapter meetings and to receive the Newsletter. Any person may become a member by forwarding the annual subscription to the Treasurer. Subscriptions become due on the 1st January.

The Newsletter

The Newsletter appears quarterly and keeps members informed of Society events and news, and provides a vehicle for debate and discussion. In addition original articles, notes and letters (not exceeding ten pages in length) will be published. Contributions should be sent to the Editor at the address given below, preferably typed in duplicate and double-spaced. All items incorporated in the Newsletter will be duly acknowledged. Authors are alone responsible for the views expressed. The deadline for contributions is the last day of February, May, August and November.

Notes

- (1) The deadline for the next Newsletter is 28th February.
- (2) Membership fees were due on 1st January. If you have not already paid - send a cheque for \$10 to the Treasurer (address given above).
- (3) Advertising space is available for products or services of interest to ASBS members. Current rates are \$30 per full page, \$15 per half page. Contact the Newsletter Editor for further information.

Editor

Dr G.P. Guymer,
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Council of Heads of Australian Herbaria

The tenth annual meeting of CHAH was held in Brisbane on 20-21 October, 1982. Members present were Dr R.W. Johnson (BRI - Chairman), Dr B.A. Barlow (CANB), Dr B.G. Briggs (NSW), Mr G.M. Chippendale (FRI), Mr R.J. Chinnock (AD), Mr A.B. Court (CBG), Mr C.R. Dunlop (DNA - representing NT), Dr J.W. Green (PERTH), Dr A.E. Orchard (HO), Dr J.H. Ross (MEL).

In addition a number of observers were present. These were Dr A. Bartholomai, Qd Museum, Brisbane (CAMD representative), Mr D.J. Boland (FRI), Dr P. Brownsey, New Zealand (WELT), Mr M. Galore, Papua New Guinea (LAE).

On Thursday 21 October Dr P. Bridgewater, Director of the Bureau of Flora and Fauna met with the Council to discuss matters of mutual interest. Among the major topics for discussion were:

1. Australian Botanical Liaison Officer (A.B.L.O.)

Following a suggestion by Dr H. Connor, past Director of Botany Division D.S.I.R., New Zealand it was decided that the A.B.L.O. would attempt to service enquiries from New Zealand botanists. Though no specific limitations were placed on the type of requests which might be serviced, it was felt the A.B.L.O. could answer questions involving literature searches and photographing types. Questions requiring a knowledge of the New Zealand flora lay outside the assistance we were prepared to offer. This service is to be provided on a trial basis for one year.

Both the Bureau of Flora and Fauna and CHAH are committed to ensuring working conditions for the A.B.L.O. are as ideal as possible.

2. Loans for Flora Writers

Directors of all herbaria have been concerned about the increasing demands on staff to service loans for flora writers. It was suggested to the Bureau of Flora and Fauna that flora writers be encouraged to base their treatment on material available locally and supplement the treatment by requesting partial loans from interstate herbaria. Of particular concern is likely damage to specimens in transit and rather than forwarding loans simply to provide distributional information, all herbarium directors were prepared to have staff check distribution maps for flora writers.

3. Statutory Protection of Herbarium Collections

It was agreed that herbaria whose collections had no statutory protection should seek such protection from their respective governments.

4. New Herbarium Building for Victoria

The Council has been concerned about the inadequate facilities existing at the National Herbarium in Melbourne and at the inordinate delays in scheduling the construction of a new building. An approach has been made to the Victorian government asking that consideration be given to the re-establishment of the herbarium building project on the forthcoming works programme.

5. Role of CHAH in the Direction of Australian Plant Taxonomy

A number of projects are planned or are currently being implemented. These include

- (1) Register of Economic Properties of Australian Plants. Mr. J.R. Maconochie has been approached to undertake the compiling of information on the economic properties of Australian plants.

- (2) Card Index to Current Australian Taxonomic Literature. CHAH is instituting a national system of indexing articles in journals. Journal titles are to be allocated to various herbaria for indexing and complete sets of index cards distributed among participating institutions.
- (3) Register of Handwriting Samples. Mr A. Court, CBG, has been co-ordinating a project to provide each herbarium with samples of handwriting of botanists and collectors associated with Australian botany.

6. Taxonomic Botany in the Northern Territory and Tasmania

Reductions in the staff in herbaria in the Northern Territory in recent years has been of concern to the Council as has the low level of staffing being currently provided in Tasmania. Approaches to both governments are being made, requesting that consideration be given to provision of additional support.

7. Rationalisation of Field Trips

The Council has endeavoured to co-ordinate major field collecting activities by suggesting that herbaria give prior notice of field trips so that botanists from other herbaria can participate if it is convenient to both parties. It was suggested by Council that the ASBS Newsletter would be a good medium for advance notices.

8. Non-eligibility for A.R.G.S. Grants

Botanists in State and Commonwealth herbaria are not eligible to compete for grants provided under the Australian Research Grants Scheme. Our colleagues from museums have, however, been granted eligibility by the Minister of Science and Technology. As both herbarium botanists and scientists in museums have similar financial support except for eligibility to receive A.R.G.S. grants and carry out parallel studies on the Australian biota it seems logical that herbarium botanists should also be granted eligibility. CHAH has presented a case to the Australian Research Grants Committee for consideration.

9. Revisions Associated with the Flora of Australia Project

The Council was made aware of the pressure being placed on existing journals for the publication of revisions associated with flora treatments written for the Flora of Australia. In particular the CSIRO journals are having difficulty in providing space for publication of these papers, most of which are required for validation of unvalidated names. Because of pressure for validation, other papers may be forced to suffer longer delays than normal. The Council supported moves to seek increased financial support for the CSIRO journals.

R.W. Johnson
Chairman, CHAH

Notice of General Meeting

The Society's Eighth General Meeting will be held during the evening of 17th May, 1983, in Perth. The venue and time will be advised in the next Newsletter.

Judy West, Secretary

Computer Floras - THE DATA BASE PROBLEM

B.J. Conn, Melbourne

On the 8th August 1982, at the School of Botany, University of Melbourne, Dr Richard Pankhurst (BM) discussed the use of computers in plant identification. He summarised the various computer techniques and programs which have been developed for identification and computer generated descriptions (refer Pankhurst 1975, 1978). He advocated the use of an extensive data base for key construction and description generation. For example, for *Taraxacum* (Compositae) which has c. 200 species in Great Britain, he included 60 characters for each species. He has also produced a data base for the 50 orders which occur in Great Britain. At this stage, he has chosen a single species to represent each order. In this latter study, 300 characters are considered for each of the 50 orders.

The data base can be based on living plants, herbarium specimens, and/ or publications (e.g. floras, monographs). Biosystematic and other experimental data (e.g. breeding systems, chemical, chromosome numbers) could also be obtained from the literature. Dr Pankhurst has repeatedly found it difficult to obtain comparable information, even within the one publication. Such inconsistencies are surely excusable, at least in monographs.

I believe that the creation of this data base represents significant problems. It is obviously very time consuming to produce an extensive data base. Brennan (in Brennan *et al.*, 1975) concludes that a complete recording of the 4-5 million specimens held at Kew is impractical because it "would prove far too demanding in terms of man-power and time for it to be completed in a reasonable period". This would be a very real strain on the limited staff resources of most herbaria. On relatively small projects, Dr Pankhurst successfully overcame this problem by using volunteer labour. However, long term projects (on a State or National level) could not rely solely on volunteers. The memory facilities of the computer make them suitable for key construction and identification, particularly for plant groups which have a large number of taxa, and for floras of large regions (e.g. States). However, the data base would be prohibitively large if one attempted to produce one for a State flora (i.e. in excess of 2500 species).

McNeill (in Pankhurst, 1975) suggests four reasons why material may prove difficult to identify. One major cause, which appears to be particularly relevant in Australia, occurs when the existing classification is unsatisfactory. In this situation the data based upon such a classification would also be unsatisfactory. I fully endorse his conclusion that "if existing classifications are unsatisfactory, more effective results will be achieved by taxonomists revising the taxonomy of the groups concerned than by using more powerful tools on the existing inadequate structures". Therefore, I feel that the creation of an adequate data base has too many problems for the various computer techniques to be of immediate practical use in herbaria.

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Long Distance Taxonomists

George M. Chippendale, Canberra

What is a long distance taxonomist? Could it be a taxonomist who borrows and collects great masses of specimens for a protracted revision? Could it be the taxonomist who works on plants in a country distant from his own? Is it a taxonomist who writes a revision or paper which distances him/her from colleagues ... some don't agree, some don't understand? Is it a term for some administrators with responsibility for taxonomists?

It could be any of the above, but in fact I mean our isolated taxonomists who are in such places as Darwin, Alice Springs, Atherton, Townsville, Hobart, and elsewhere. The problems of most of these are such that those who work in larger institutions may not fully appreciate. These taxonomists are professionally isolated.

One of our earliest long distance taxonomists was Ferdinand Mueller. It was largely Mueller's distance from England that prevented us from having Mueller's *Flora Australiensis*. The combined weight of Bentham and the two Hookers beat Mueller in this matter ... quite apart of the differences between Bentham and Mueller for such a job. Edward Kynaston in his book "Man on Edge" states that "The government attitude to Mueller was malicious, mean and spiteful in the extreme". Another early botanist who suffered the long distance effect was Allan Cunningham who had difficulties in gaining facilities from Governor Macquarie that had been suggested by Sir Joseph Banks, thousands of miles away.

Long distance taxonomists, because of their isolation, are not able to function purely as taxonomists. They are expected to carry out a range of work from collecting, identifying and mounting specimens to environmental reports, pastoral investigations, and attendance on visiting scientists. They may need to align with and work for the local industry, and are often at the mercy of local experts or scientists in other fields who bring in reports of plants growing "where they've never been seen before" or phenomenal occurrences of plants. The individual may feel coerced to travel to check such reports, even though they seem accurate. Failing to react to such reports may be taken as lack of interest or lack of sympathy with local attitudes, whether political or otherwise.

A case history of importance is when a taxonomist took leave without pay to do a job overseas. While away his position was advertised and given to another person. It was made clear that he may be offered a different position at the same salary on return. Irrespective of the final outcome, this seems to be a possible waste of a human resource ... that of experience in a special area.

Perhaps we've all had the experience that when working on one area but yet asking for books of a wider nature, to be told that you already have the local flora ... what more do you need? The lack of a sympathetic administration is a very great problem for isolated taxonomists. I, when at Alice Springs was most fortunate in having very sympathetic treatment from the Director of that time, Colonel Lionel Rose (A.L. Rose) and the Administrative Officer, Tom Hare. Perhaps this attitude is lacking today because of strictures with funds.

Again quoting from a letter by Mueller, also mentioned by Edward Kynaston in his book, "I know from experience how difficult it is to secure and hold always the position which one would like to occupy, but these things are of the ups and downs of life. No doubt had one turned one's energies or one's

talents in other directions we should have made more of them but then we should not have been so happy or contented with ourselves". This tortuous sentiment seems quite relevant to isolated botanists.

There is much protection from some of the matters I have mentioned for a group of taxonomists with a nominal head who can argue about professional matters. Yet, of course, Australian taxonomists even in groups are distanced from one another by working for different States, the Commonwealth and even, within one political entity, in separate departments.

Tony Orchard in the *ASBS Newsletter* 31 (June 1982) mentioned the case for classical taxonomy and the problems of an isolated taxonomist, and perhaps such a position was not appreciated by Barry Conn in the same Newsletter when he compared curation to washing glassware in a laboratory! I've heard it said that if funds are cut much further, only curation could be done. Curation is vital and more than glassware in a laboratory. Without proper curation in the herbarium, where is any research, classical or otherwise? At a recent seminar a "modern" technique was described, but based on work by intuitive taxonomists, and when some results were shown, joy was expressed that this tallied with the views of another intuitive (classical) taxonomist! The results of the newer technique were excellent, but the point here is that it shows the dependence of each of us on one another, irrespective of the type of institution.

Problems of the long distance taxonomist are: 1. Sometimes, lack of sympathetic administration; 2. Little hope of career advancement, because of the need to carry out administrative and technical work; 3. No time for research or field work, for the same reasons in 2.; 4. Need for someone who speaks the same language; 5. Herbarium closes down when the botanist is on leave; 6. Few or no seminars of interest; 7. Lack of ready access to major herbaria or libraries; 8. Dependence on outside journals for publication; 9. Little power to get adequate buildings or safeguards; 10. Bottom of the ladder for fund allocation; 11. Great range of enquiries; 12. Interruption of private life; 13. Expectations of visitors (i.e. look after specimens, pack and post, etc.); 14. "Touring" scientists, not really working on the local plants; 15. Attendance on visitors, meeting them at airport or station; 16. Duplicate distribution, after visitors. Often no duplicates given to home institution.

So, I believe, ways must be found to help our long distance taxonomists. They are our front line in botany. Of course, as I have said before in the Newsletter (No. 23), I believe that National Taxonomy is a way to help not only the isolated taxonomist but all of us. Taxonomy fully united under a National body would lessen the distances.

Another thing which is against taxonomists, and particularly the isolated person, is the lack of status. How do we rate against a physicist, a chemist, a geologist or an administrator? Who ever hears of an excellent revision of a genus? We do ... but do many other people? Are we working in circles for one another rather than for the whole community? Irving Stone, in his recent book "The Origin" attributes the following words to Professor Henslow talking to Charles Darwin, "You never know ... we may convert botany into study almost as important as mathematics, Latin, Greek and classical literature".

If our status is low, what can be done about it? Do we need a flamboyant Leader who hits the headlines often? Do we need a more efficient fundraiser? Or are we more inclined to carry on enjoying the work and not worry about status?

Our ... and I mean Australian, not State or institutional ... long distance taxonomists need help, and perhaps the first step is to make others aware of them and their problems. The political separation and unsympathetic

administration may be the more important problems, and perhaps the second step can be fraternal understanding.

Botanical Society of Australia?

The following articles discuss the proposal of President Trevor Clifford on the establishment of a Botanical Society of Australia (*ASBS Newsletter* 31: 3). The first is a personal comment by [unclear] and the second is a report on the various points [unclear] at Sydney Chapter Meeting.

ERRATA

p. 5, paragraph 2, line 6 should read
 "inconsistencies are surely inexcusable". We "legalize" the function-
 "contract botanical societies" by amending the
 national body accordingly. This idea was supported by Byron
 Lamont (*ibid.* 32: 13, Sept. 1982), who confirmed the alleged situation as far
 as the chapter in Perth is concerned. That such a proposal would be put forward
 by persons involved in the teaching of botany is probably no coincidence,
 as they must feel a greater need to remain up to date with what goes on in
 neighbouring disciplines than other botanists. Perhaps they also wish more
 strongly for an exchange of ideas with relevant colleagues, including those
 in the same department, outside the formal relationships inherent in their
 positions. Without denying the reality of such motives, one should ask one-
 self whether the proposed "metamorphosis" of the ASBS would represent a mean-
 ingful change for a majority of the present members, and whether it would make
 our Society more attractive to an appreciably wider public. I wish to take
 this opportunity to explain why both questions should be answered in the nega-
 tive.

The oldest societies in Australia seeking to further the interests of botany are the Royal Societies of the respective states and the Linnean Society of New South Wales, all of which originated in the 19th Century. In more recent times, researchers in the rapidly developing new disciplines were not attracted so much to these traditional bodies and increasingly they found that the respective associated journals did not reach the desired readership for their publications. As a result, many specialist societies have been established in Australia since the middle of this century. Those most obviously covering parts of the botanical field are the Genetics Society of Australia (1952), the Australian Society of Plant Physiologists (1958) and the Ecological Society of Australia (1960). This trend towards narrower specialization reflects similar developments on the international scene and is probably irreversible, however regrettable this may be from a philosophical point of view. The differences in interests between scientists engaged in molecular or cellular botany/biology on the one hand, and the ones working in the "whole plant" sciences on the other, are such that it is rather impractical to represent all botanists through the one association.

The initiatives towards the establishment of the ASBS in 1973 came from professional plant taxonomists who felt that their interests were not - or no longer - adequately catered for by the traditional societies and the Botany Section of ANZAAS. Some people promoted the idea of a "Systematics Association", but the majority of those involved resisted this, fearing that zoologists might ultimately outnumber botanists in such a union. It was never seriously considered that the new society embrace all botanical disciplines, as it was felt that the long-standing predominance of the "physiologists" in Australian universities had been very harmful to the development of taxonomy. There is

no doubt that plant taxonomists needed to boost their professional standing in Australian society and that this task is by no means completed at the present time.

The only botanists in our country not yet formally represented by a society are the relatively few morphologists and anatomists. However, those interested in the descriptive and comparative aspects of this field usually feel quite at home among taxonomists, whereas the developmentally and experimentally interested ones naturally lean towards physiology. Those who regard themselves as working on the periphery of either sphere still have the option of joining more than one association. As their discipline has lost the dominant central role it had a few generations ago, it does not by itself warrant the belated institution of a comprehensive botanical society. On the other hand, it would be undesirable to reintroduce the term "botanical" in the narrower sense of past centuries, when the science of plants was almost wholly descriptive.

It is clear that the aims set originally by the ASBS membership were deliberately limited in scope as to discipline and geographical area. At the same time it was made easy to join for anyone, professional or amateur, whose interests more or less coincide with these. It is a good thing that the present membership is not restricted to narrowly specialized "alpha-taxonomists". It is also to be applauded that there is a rather wide interest in the developments taking place in related fields, as well as the modern techniques available for taxonomic research. I do not think that this needs legalisation through a change in our constitution. Neither do I think that it is the wish of the majority of our members to widen our aims at this stage, whereas the number of potential joiners waiting for such a change to take place can only be very small. However, if the President's thinking was inspired by the notion that strength in numbers may at times be important, one must agree with him in this respect. The ASBS should maintain efficient lines of communication with societies covering related disciplines so that joint submissions can be made on behalf of the combined memberships. Besides, occasional co-operation can be fruitful through the organisation of symposia on integrated subjects, as was demonstrated by the one on "Evolution of the flora and fauna of arid Australia" (Adelaide, May 1980). In due course this may lead to the formation of an umbrella organisation, perhaps covering all biological disciplines, but such an increase in organisational effort would have to be clearly justified.

Finally, I wish to raise another matter which is closely related. Australian taxonomists working on Algae, Fungi, Lichens and Bryophytes apparently do not always regard themselves as systematic botanists in the usual sense of the term. Although several "cryptogamists" have joined the ASBS, they tend to organise themselves also into smaller, more specialised groups. There is no doubt that they have a special need to stay in close contact, but the numbers of cognoscenti involved hardly warrant formal and independent association. Their solution may be the formation of committees or study groups under the auspices of the ASBS, with the right to publish relevant information in special sections of the Newsletter. There is ample evidence overseas that such bodies can operate successfully, and with a large degree of organisational independence, while benefitting from the common facilities. In this way, the trend towards (super)specialisation need not lead to excessive fragmentation, resulting in a less effective external representation.

Andrew Kanis, Canberra

SYDNEY CHAPTER POINTS OF VIEW

It has been suggested several times in recent years that the members of the Australian Systematic Botany Society should "aspire to become botanists and become the Botanical Society of Australia" (to quote Roger Carolin, *ASBS Newsletter* 28: 25). This call has been raised most recently by Trevor Clifford, the current president of the Society, who has pointed out that many chapters are "de facto Botanical Societies", and has asked for the members to consider whether or not we should "legalize the present situation and ... direct our attention towards the establishment of a Botanical Society of Australia" (*ASBS Newsletter* 31: 3). In response to this call, the members of the Sydney Chapter held a discussion as part of the 2 November meeting, to air the feelings of at least some of the members. Twenty-five people were present, not all of them currently financial members of ASBS. The following report is a condensed survey of the various points of view expressed during the meeting, and no one person should be considered to agree with all of the points covered.

The consensus of opinion was that ASBS was best left under its current constitution, for a number of reasons. To start with, there are other societies catering for groups of biologists who are just as specialised as those making up our Society, e.g. ecologists, physiologists, geneticists, biochemists; and there is no *a priori* reason for not also having a systematics society. There is currently a lot of activity and interest in systematics throughout the world, and a vehicle was seen as necessary to promote and focus discussion amongst interested people in Australia (e.g. the current debate concerning phenetic, cladistic and traditional approaches to systematics). ASBS was formed because of a need to get systematists together, and to keep them in touch with each other; and this was seen as a function which the current Society performs quite well - particularly through the Newsletter. This was considered to be particularly useful for people in the smaller herbaria, who would otherwise be quite isolated. This usefulness would be greatly diminished if a more general society was formed.

As well, the problem was raised as to what type of people would be attracted to a reconstituted Society. It was felt that the people most likely to join such a society would be amateur botanists and horticulturalists, rather than professional biologists (of the Botanical Society of the British Isles - a society catering to more local, amateur interests). This was seen as a danger, as this would reduce the standing of the Society as a professional body (e.g. would reduce any political "clout" which ASBS may have, now or in the future). Furthermore, the prospect of being swamped by people with a wide range of divergent interests did not appeal to those present, as systematists were considered to be in the minority among biologists. If the direction of a reconstituted Society were to diverge too far from the fields of most interest to systematists, then many of the current members are likely to leave the new society. It was not considered necessary to change the name of the Society unless the aims and directions of the Society also change. The current broad interpretation of the constitution by some of the chapters was seen as reflecting only the broad nature of current systematic thinking. Also, if the time was indeed ripe for a broad-based botanical society, then there would be more indication than there currently is of other people wanting to join ASBS. All suggestions for a reconstituted Society have come from within the "core" of ASBS itself.

Lastly, it was pointed out that we couldn't form a broad-based botanical society from only one society - it would need to be formed from a combination of a number of interest groups to be a viable proposition. This leads back to the prospect of being swamped and thereby losing the aims and usefulness of the current Society.

The outcome of the meeting was a series of ideas for furthering the well-being of ASBS as currently constituted. Firstly, one of the most useful

functions of ASBS was seen as the production of the Newsletter. This needs to be kept at its current high standard; and, most especially, needs more contributions from the members (not just the chapter conveners, councillors, etc.). Secondly, regular, interesting seminars should be held by each of the chapters (except, of course, for those which are too small), with a broad interpretation of the word "systematics". These seminars should not compete with seminar series held by other institutions (e.g. universities) or societies, but should complement them, to highlight the systematic slant of any biological work. These seminars should not be restricted to taxonomy *sensu stricto*; and they should aim for quality not quantity. Many of the chapters appear to achieve this aim, but many more do not - and this was seen as a serious fault. Furthermore, the members should be actively encouraging interested people to attend these seminars, as many people are apparently unsure of their welcome by ASBS. Hopefully we are not really such a forbidding society. Thirdly, joint meetings with other societies should be encouraged, as biology is a continuum not an assemblage of discrete entities. Many chapters also encourage this aspect already. Fourthly, the Symposium on the Evolution of the Flora and Fauna of Arid Australia was seen as a highlight of the activities of ASBS, and further excursions into this area are worth encouraging. A symposium such as this once every 2, 3, or 4 years alone would make ASBS a worthwhile society. The same can presumably be said of our venture into publishing in the form of the *Flora of Central Australia*. Finally, membership should not be viewed as being restricted to practising taxonomists. For example, the Sydney Chapter has several ecologists among its members, and attracts many more to the seminar series. Systematists are obviously interested in subjects which many other people will also find of interest.

The discussion closed with a "dire warning" from England. The British Ecological Society is currently in the process of invading Burlington House, partly because it sees its aims as being allied to those of the Linnaean Society (of BES Bulletin XIII(3): 115-6). The outcome of this liaison should be closely monitored.

David Morrison & Joy Everett,
Conveners

AT THE NATIONAL HERBARIUM OF N.S.W. OPENING

George M. Chippendale, Canberra

At the very pleasant function of the official opening of the new National Herbarium of N.S.W. in Sydney on Saturday 6 November, I was delighted to meet Mr. Harry Craig who is a grandson of J.H. Maiden. I talked with Harry in the Library beside the Critical Revision of the Genus *Eucalyptus* (J.H. Maiden, 1909-1933), and he showed me some old family photographs. I promised to send a copy of *The Natural Distribution of the Eucalypts* (G.M. Chippendale & L. Wolf, 1981), and did so. Excerpts from a letter from Harry following receipt of the latter book may be of interest to members:

"I was only 9 or 10 when my grandfather left the gardens but I can remember his method of arranging the information for his publications. Closely related items were placed in paper bags with headings on the outside. Wider groups of bags were placed in shoe boxes also marked, so that there was simple and infinite scope to add, move or generally rearrange till the final sequence emerged.

Though he originally came to Australia partly for health reasons he must have been reasonably active in middle age. My memory of him was of a frail, very bandy, white haired man who walked with difficulty with a stick. My father, a doctor, attributed the weakness of his bones to malnutrition in his youth in London."

It was a personal thrill to me to meet Harry.

I also enjoyed talking with the daughter and grand-daughter of R.H. Anderson who was my first botanical boss and a very understanding man.

There should be more such functions, i.e. the opening of more new herbaria!

Nomenclatural Notes on Bromus catharticus VAHL

B.K. Simon,
Queensland Herbarium, Brisbane

Despite the fact that Prairie Grass or Rescue Grass has been called *Bromus unioloides* Kunth (Soderstrom & Beaman, 1968; Clayton, 1970; Launert, 1971; Wheeler *et al.*, 1982) and *B. willdenowii* Kunth (Raven, 1960; Smith, 1980) in a number of contemporary accounts, it has recently been re-established (Pinto-Escobar 1976, 1980) that the correct name for this grass is *B. catharticus* Vahl. This was the position taken previously by Hitchcock (1934, 1935), but it has been shown (Hubbard, 1956; Parodi, 1956) that he based his concept on the wrong type material, which itself was a mixture of two plants, one of which was a member of the *Iridaceae*. Pinto-Escobar (1976) established, however, that *B. catharticus* is a valid name. He selected the specimen collected by Joseph Dombey in Lima, Peru in the Jussieu Herbarium, Paris (P-JU) as lectotype, with a duplicate in the general herbarium Paris (P) as isolectotype, and placed *B. unioloides* in synonymy with *B. catharticus*.

Raven (1960) showed that the lemma of the type of *B. willdenowii* has uniformly ciliate nerves, a much shorter awn and slightly different dimensions and nerve number than in the lemma of the type of *B. unioloides*. He deduced that the widespread Rescue Grass was this species and that the real *B. unioloides* is restricted to the Andes. He furthermore pointed out that the sterility of F₁ hybrids between these two entities as shown in the studies of Stebbins, 1949 and Hall, 1955 as being additional evidence for attributing them with specific status. However, other botanists (Soderstrom & Beaman 1968; Lanert, 1971) have been unable to locate further specimens similar to the type for the character of uniformly ciliate nerves. Indeed specimens collected in Bolivia (Bowden & Senn, 1962) show a range of variation from specimens with glabrous lemmas through those which are scabrid to those which are pubescent and even those "with nerves long ciliate although not uniformly so". It does not appear unreasonable to assume therefore that the possession of ciliate nerves is not a diagnostic character. Likewise the characters of spikelet size and awn length also seem very variable (Pinto-Escobar, 1980). For these reasons it seems advisable to follow Pinto-Escobar's placing of *B. willdenowii* in synonymy with *B. catharticus*, and using the latter name as the correct botanical name for Prairie Grass or Rescue Grass.

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A Solanum Name Correction

David Symon, Adelaide

Dr P. Garnock-Jones, DSIR, Christchurch, New Zealand, has drawn my attention to the fact that Sprengel validated some of the Forster nomina nuda in Mantissa Prima Florae Halensis 37 (1807). These include *Solanum viride* Forst. f. ex Sprengel which antedates R. Brown, *Prodr.* 445 (1810). Typification of the Forster name is not yet clear to me but will be based on a Tahitian or New Zealand plant and will definitely exclude the species called by that name in Queensland. The latter should now be called *S. viridifolium* Dunal in D.C., *Prodr.* 13: 73 (1852). Those interested are advised to correct both my monograph *J. Adelaide Bot. Gard.* 4: 124 (1981), and *Fl. Australia* 29: 123 (1982).

Chapter News

ADELAIDE CHAPTER

A full programme of meetings was held throughout the year. Attendances were steady at between a dozen and twenty people. A couple of extra talks were arranged at lunch times and included Alex George giving an account of progress of the Flora of Australia.

Dr R. Thorpe (Uni. of California) - "Native bees and pollination syndromes"

Dr E. Conn (Uni. of California) - "The biology of cyanogenesis in plants"

Rick Davies - "Conservation of the major plant associations in South Australia"

Kym Nicolson (Bot. Dept. Uni. of Adelaide) - "Dynamics & dispersal of annuals & ephemerals in the arid areas of South Australia"

Barry Conn, David Symon, Helmut Tölken - "Concepts of the inflorescence"

Ann Prescott (Nat. Parks & Wildlife) - "The problems of defining and protecting rare and endangered plants"

Trevor Clifford (Qld Uni.) - "Liliaceae - a case for inflation"

Joan Gibbs-Clema (Bot. Dept. Uni. of Adelaide) - "Autecology of Samphires : Colonisation strategies"

The final meeting of the year was a successful mixed collection. Dr W. Barker spoke on preliminary results of computer mapping of *Staackhousia*, Prof. Catcheside reported on the ABRS moss workshop and calculations for the proposed volumes on mosses, Dr Chinnock talked on the hazards of collecting in the tropics, Dr Parsons on his revisions of some red algae, Mrs Robertson on the problems of intravaginal squamulae and Mr Scott announced the availability of a bibliography on Lupins.

David Symon, Convener

ARMIDALE CHAPTER

A chapter of ASBS has recently been formed in Armidale and John Williams, Botany Department, Uni. of New England, will be the first convener.

MELBOURNE CHAPTER

At the November meeting of the Chapter Dr S. D. Hopper, Western Australian Wildlife Research Centre, spoke on "Applied plant systematics: case studies in the conservation of rare Western Australian flora".

Barry Conn

SYDNEY CHAPTER

The conveners of the Sydney Chapter have been chastised in the past for a seeming lack of interest in contributing to the Newsletter (cf. ASBS Newsletter 24: 17) - let's hope this does not become a tradition. Despite the lack of reports so far this year, the Chapter has been having an active year. Meetings have been held for the first time in the new building of the National Herbarium of N.S.W., in the George Caley seminar room. This arrangement seems to suit the majority of members, and this will be the usual meeting place for the foreseeable future.

Meetings are (usually) held on the first Tuesday of each month at 5.30 p.m., commencing with the traditional period of chat over drinks. Attendance at the meetings has maintained itself at about 20 people per meeting (not always the same 20, which is always a good sign), these people being mainly from the Herbarium, with a significant contingent from the Universities of Sydney and N.S.W.

The following seminars have been presented during the year:

Lecture and tour of the State Archives

The archives are the home of the early vegetation surveys, as well as the diaries of the early botanical explorers. They are now located in new premises in the Rocks area of Sydney, and the evening was devoted to finding out how to gain access to these valuable records. Unfortunately, we anticipated a roll-up of 15-20 people - over 50 turned up on the day. Although somewhat chaotic as a result, this was one of our most successful meetings.

Mark Westoby, Macquarie University - "Evolution of seed plants and inclusive fitness of plant tissues"

Angiosperms are different from the rest of the plant kingdom in producing seeds which have an endosperm which has a chromosome complement of $3n$ rather than $2n$. The extra set of chromosomes are provided by the maternal parent, and this allows greater control of the distribution of resources to the various offspring by the parent. This idea has wide-ranging implications for hypotheses of the evolution of the plant kingdom. The talk ended in one of the longest discussions we've ever had; and Mark described the audience as the most receptive he'd ever experienced for this particular talk. For those interested in the idea, Mark has recently published it in *Evolution* 36(4): 713-24 (1982).

Roberta Townsend, University of Sydney - "A cladistic analysis of eukaryote evolution"

Roberta began by discussing the two most popular theories of the evolution of the eukaryotes: the serial endosymbiosis theory, and the compartmentalisation theory. She then revealed that the prokaryotes are not a natural group, consisting as they do of two separate lines: the eubacteria, and the archeobacteria. The eukaryote organelles (e.g. plastids, mitochondria) are apparently more closely related to the eubacteria than they are to the eukaryote cytoplasm; and the eukaryote cytoplasm is, in turn, more closely related to the archeobacteria. The eukaryote cell is thus a mosaic; and the serial endosymbiosis theory appears to be a better explanation of these data. The upshot of the meeting was to prove that Jim Armstrong is, indeed, a eukaryote.

Roger Carolin & Tony Martin, University of Sydney - "L'herborisation Nouvelle Calédonienne de l'herbarium John Ray" (Delivered in English)

For two weeks in February this year Roger Carolin led a band of ruffians (Tony Martin, Peter Weston, Peter Clarke, and David Morrison) on a buccaneering escapade through the wilds of New Caledonia, to prove to himself and the world that the colonial French are in fact more like Australians than they are like anyone else. He succeeded. On the way, the group incidentally collected a large number of plant specimens, photos, and pollen samples. This entertaining evening was devoted to a discussion of the geology and flora of New Caledonia, interspersed with the odd jibe at the other tour members.

Evelyn Hickey, National Trust of Australia (N.S.W.) - "The bush regeneration programme: how it works"

Evelyn presented a very effective sales pitch for the bush regeneration techniques developed by Joan Bradley; and revealed the notable success that the Trust has had in developing a viable programme for use in the degraded bushlands of urban Sydney. It seems that many local councils are keen to employ the Trust in this capacity; not the least, it seems, because of the very competitive cost-effectiveness of the Trust's programme.

Peter Weston, University of Sydney - "Systematics and biogeography of the *Persooniinae*"

Peter has spent the last $3\frac{1}{2}$ years as a PhD student under Roger Carolin, investigating the systematics of *Persoonia* and its related genera. This has encompassed a full taxonomic revision of the Western Australian species and a cladistic analysis of the sub-tribe as a whole, with attendant vicariance biogeography of Australasia. The results of this analysis suggest a Jurassic origin of the *Persooniinae*, some tens of millions of years before the first known angiosperm fossils.

Ben Wallace, National Herbarium of N.S.W. - "C.A.M. in Australian epiphytes"

As a postgraduate student at the University of New England, working on orchids, Ben was beset by a string of difficulties too trying to repeat here. He was saved in the end of becoming involved in the search for crassulacean acid metabolism amongst the epiphytes of Australia. This is important, because unlike the rest of the world, this is the group of plants in which it occurs most predominantly in Australia, as Ben demonstrated. The most interesting part of the whole scheme, however, is the strong correlation that exists between the expression of CAM in a plant species and the habitat of the species. This correlation occurs irrespective of the systematic relationships of the species, and suggests that all plant species may be capable of expressing CAM under the appropriate physical conditions.

Doug Yen, Bishop Museum, Honolulu (at present visiting the Research School of Pacific Studies, A.N.U.) - "Studies in *Canarium* and its prehistory in the Western Pacific"

Doug is an ethnobotanist, working on the relationship between the history and use of several species of *Canarium* and the history of the people of the islands of the western Pacific. The evening's talk was an entertaining exposé of the frustrations of attempting to communicate with earlier taxonomists through their written work, and with native peoples who don't really understand why this person is asking such ridiculous questions about the food they're eating. Moral of the story: if you think that working on Pacific Isles sounds like fun, invite Doug round for a chat before you go.

Roberta Townsend, University of Sydney - "The crustose Corallinaceae"

Roberta has spent most of her academic life working on little pieces of rock which she swears are algae. Her talk this evening explained just how hard it is to demonstrate that this group of plants are in fact alive, and how difficult it is to find "nice" taxonomic characters in an organism where every cell looks just like every other cell. Nevertheless, she showed us just how much can be achieved with this group through hard work and determination. Never again will an angiosperm taxonomist be able to complain of having a "difficult group".

Lawrie Johnson, National Herbarium of N.S.W. - "Land of frost and fire - a botanist in Iceland and elsewhere in the subarctic"

Lawrie recently spent a week circumnavigating Iceland, and regaled us for the evening with a travelogue of his experiences; this is always a favourite with botanists. The emphasis of the talk was on just how different Iceland is from other subarctic regions of the world, as Lawrie has had extensive experience in the arctic and subarctic regions of both America and Europe. These differences occur in all facets of the biology of the island: in everything from the composition of the flora, to the height of the "trees" (less than 3-4 m), to the linguistic conservativeness of the natives. This was the most well-attended of our talks this year.

Our final meeting for the year will be on December 7, and will be our annual meeting for the election of office-bearers for the coming year. This will be followed by a talk from Jim Kohen, of Macquarie University, entitled: "Aborigines and plants of the Cumberland Plain".

David Morrison & Joy Everett
Conveners

Personal News

Roger Carolin is currently on sabbatical leave from Sydney University. Roger has departed on a round-the-world search for *Calandrinia*, or so he tells us. He departed on 15 October; and after an overnight stay in Tahiti, he progressed to Easter Island for a week. The reports we have received so far suggest that he enjoyed this week, although botanically it was as bad as he had feared. The island appears to no longer have any native vegetation, and the only remaining trees are *Eucalyptus globulus* and White Cedar. He also seemed somewhat vexed by "hundreds of stone Malcom Frasers looking at me all the time". He is currently in Chile, where he claims to be surprised by the extent of comprehension of his Spanish by the natives, but somewhat worried by the sanitation facilities. He remains in Chile until the end of December, and then it's on to Argentina for a further two months. Roger has fortunately relinquished his British birthright in favour of Australian citizenship, and this sojourn should thus not create a major political confrontation. He will spend March and April in Los Angeles and New York; and Kew will receive a visit during May. Roger intends to return to the fold by the end of May, although he says he may be back a bit earlier if he ever works out when his teaching commitments for the year begin.

NEW APPOINTMENTS

Jim Armstrong, formerly of the National Herbarium of N.S.W., has joined the staff of the National Botanic Gardens in Canberra as Curator in charge of the gardens, taking up his position on 23 August. Reports to date suggest that he is enjoying his new-found power; and his enthusiasm and savoir-faire will be sadly missed by his former colleagues.

Peter Weston is to take up a position at the National Herbarium of N.S.W. as a Botanist, starting on 29 November, 1982. Peter has not yet completed his PhD thesis at the University of Sydney, although he claims to be fairly close.

Barry Conn (formerly of Adelaide University) and Stephen Forbes (formerly holding a temporary position at MEL) recently joined the staff of the Melbourne Herbarium.

IS THERE A SPACE CRISIS AT THE MELBOURNE HERBARIUM?

It may be true that there is a "space" crisis at MEL, but this does not completely explain why so many of the MEL botanists have recently been seen wandering around various parts of Western Australia. Philip Short (14.viii.1982 - 27.ix.1982) visited several areas south of Carnarvon - Laverton region. He was joined by Jim Ross from 29.viii.1982 - 6.ix.1982. They both concentrated on composites, *Labiichea* and *Borya*. Stephen Forbes (1.x.1982 - 25.x.1982) combined holidays with a collecting trip to the south-west area. Margaret Corrick (14.ix.1982 - 18.x.1982) also combined holidays with a collecting trip in the Kalbarri area and southern Darling Range region.

Book Review

Rosemary W. Purdie, Laurie Haegi & David E. Symon. *Flora of Australia - Vol. 29 Solanaceae*. pp. 208, 52 figures including 9 colour plates (28 photographs). Canberra: Australian Government Publishing Service, 1982. Price \$25 (\$22 soft cover).

More than 20 years of hard work, sustained effort and careful planning by a few dedicated botanists (who sometimes almost despaired of government funding) was consummated in 1981 by publication of Volume 1 of a new *Flora of Australia*, in time for appraisal at the XIIIth International Botanical Congress, Sydney. But Volume 1, however excellent, is merely introductory, and one has waited another year for the first taxonomic and descriptive text to appear - the present Volume 29, which treats the order Solanales and single family Solanaceae. A conspectus of all projected volumes (Nos. 1-48) on vascular plants occupies the front end-covers, as in Vol. 1, and these volumes will be published according to the Editorial Committee's program with volumes not appearing in any systematic order. No original descriptions of taxa are made in the text which is wholly based upon previously published material. Every accepted indigenous and naturalised species is described, names of the latter being customarily prefixed by an asterisk (*). Of the 194 species included in this book 117, substantially more than half, belong to the large world-wide genus *Solanum* (about 1500 species).

It is interesting to compare Volume 29 with George Bentham's treatment of the Solanaceae in his still widely used *Flora Australiensis* (Vol. IV, 1869). Bentham had a total of 58 species (50 in *Solanum*) and only a single *Nicotiana* (cf. 17 currently recognised species); he also included five naturalised aliens (cf. 56 species in the present book). Bentham's descriptions of species in Solanaceae average 115 words, but in the new *Flora* a description comprises + 100 words - slightly shorter - and all dimensions are now according to the metric system. Whereas Bentham's distributional data include collections (with only the collector's name after each locality cited), the new book gives up to five representative collections, in a separate paragraph from the information on range, and cites clearly the various herbaria housing such material. In the present citation of collections, those without any collector's number ("s.n.") are provided with a date, but this detail has been omitted from all personally numbered collections. The new work and Bentham's coincide in having numbers to each binomial heading a description, with the species name in bold black type.

Keys throughout are simple, well arranged and easy to follow. The derivation of all generic names is given, and basic synonymy provided under specific names, with a reference to type collections preceding the descriptive details. Descriptions are concise, lucid and adequate, concluding with a vernacular name (where widely adopted) and a reference to any illustrations throughout the text. Wherever known, chromosome numbers are cited for both genera and species.

There are 29 attractive colour plates (chiefly by the authors, but some by M. Fagg, with a magnificent frontispiece from the brush of world famous botanical artist, Margaret Stones), and good line drawings to almost every species by Ms. Betsy J. Osborne. Miniature maps of Australia (15 to a page) show in heavy black the distribution of all species described, and they are carefully cross-referenced with the text. Another helpful feature is the listing of recent revisional literature at the end of each generic description, where also are indicated any significant attributes of the included species - such as economic uses, poisonous properties or nuisance as invasive weeds.

With its strong paper and excellently chosen type, Volume 29 (Solanaceae) is a splendid piece of work, most importantly setting the framework, format and standard procedure for all future parts of this new *Flora of Australia*. High praise must be accorded the Griffin Press (S. Aust.), the Bureau of Flora and Fauna (Canberra) and especially the three contributing authors, Dr Rosemary W. Purdie, Dr Laurie Haegi and Mr David E. Symon.

Meticulous proof-reading has assured that typographical errors are minimal: the only two this reviewer has detected, in a perusal of the whole book, are "Osborn" for Osborne in the last line on page VI, and the omission of an asterisk from the name of an introduced weed, *Solanum hermannii* (page 162). On page 24, under *Cyphanthera albicans* subsp. *albicans*, the collection from Berrima River, 1870, L. Calvert (MEL) should be ascribed to N.S.W., not "Vic.". It is much to be hoped that this *Flora* has better success than a similar continental project, the prestigious *North American Flora*, Series I of which bogged down, struggled valiantly and finally ceased to appear after Vol. 34(4) in June 1927. Resuscitated as Series 2 in 1954, it is still continuing, if slowly and intermittently.

J.H. Willis

ASBS Council Elections

1983-1984 TERM

In accordance with the Constitution of the Society, nominations are called for all positions on the Council for 1983-1984 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 in 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, Dr J.G. West, Herbarium Australiense, CSIRO, P.O. Box 1600 Canberra City ACT 2601 by MONDAY, 31ST JANUARY, 1983.

Ballot papers will be sent out in February and the results of the elections will be announced at the Society's General Meeting in May 1983 in Perth.

DISTRIBUTION OF NEWSLETTERS TO UNFINANCIAL MEMBERS

At this late stage of the year the Society has received only slightly more than half of the subscriptions due. Funds received are in fact c. 30% less than the expected cost of production and distribution of the Newsletter for 1982.

In view of this, Council has made a policy decision that members who are not financial at the end of March in any year will not receive further Newsletters until such time as their memberships are renewed. Once subscriptions are brought up to date members will receive those back issues of the Newsletter that they are entitled to.

Members who have recently been notified by the Treasurer that their subscriptions are in arrears will not receive the February Newsletter (no. 34) unless the arrears are paid before distribution of that Newsletter.

Field Trips

Karen Wilson (NSW) is planning a field trip to northern Australia for about seven weeks in April-May 1983, collecting Cyperaceae, Polygonaceae and water plants in the Gulf country, Arnhem Land, the Ord region and Central Australia. Funds are not yet assured but to assist preliminary planning she would like to hear from anyone interested in accompanying her for part or all of the trip if it does come off. She is looking for one or two companions (a long-wheel-base Toyota will be the vehicle used). Non-botanists will be considered as long as they realise what they are letting themselves in for!

Requests for Material

1. *Sarcostemma* (Asclepiadaceae). Live material suitable for propagation, particularly from coastal localities in northern Australia, although material from anywhere welcomed. Cuttings need to be at least 10 cm in length and must include nodal material. Flowers in spirit (entire inflorescence, preferably not solitary flowers, ideally including some stem material) with notes on flower colour and orientation would be also appreciated, as well as the general mode of growth of the plant.

2. *Microstemma* (Asclepiadaceae). Live material for taxonomic studies, plants are tuberous and regenerate annually from the perennial tuber.

Any material sent before mid-February 1983 should be forwarded to P.I. Forster, "Nora Creina", Didcot, via Biggenden, 4621. Qld., and after mid-February 1983, C/O Department of Botany, University of Queensland, St. Lucia, 4067, Qld. Preferably material should be wrapped in newspaper for dispatch and not placed in plastic bags.

STOP PRESS

Volume 8 of Flora of Australia was published in early December. This volume deals with Lecythidales, Nepenthales, Violales, Salicales, Capparales and Batales. Available from Australian Government Publishing Service Bookshops. Price: \$34 (\$29 soft cover).



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