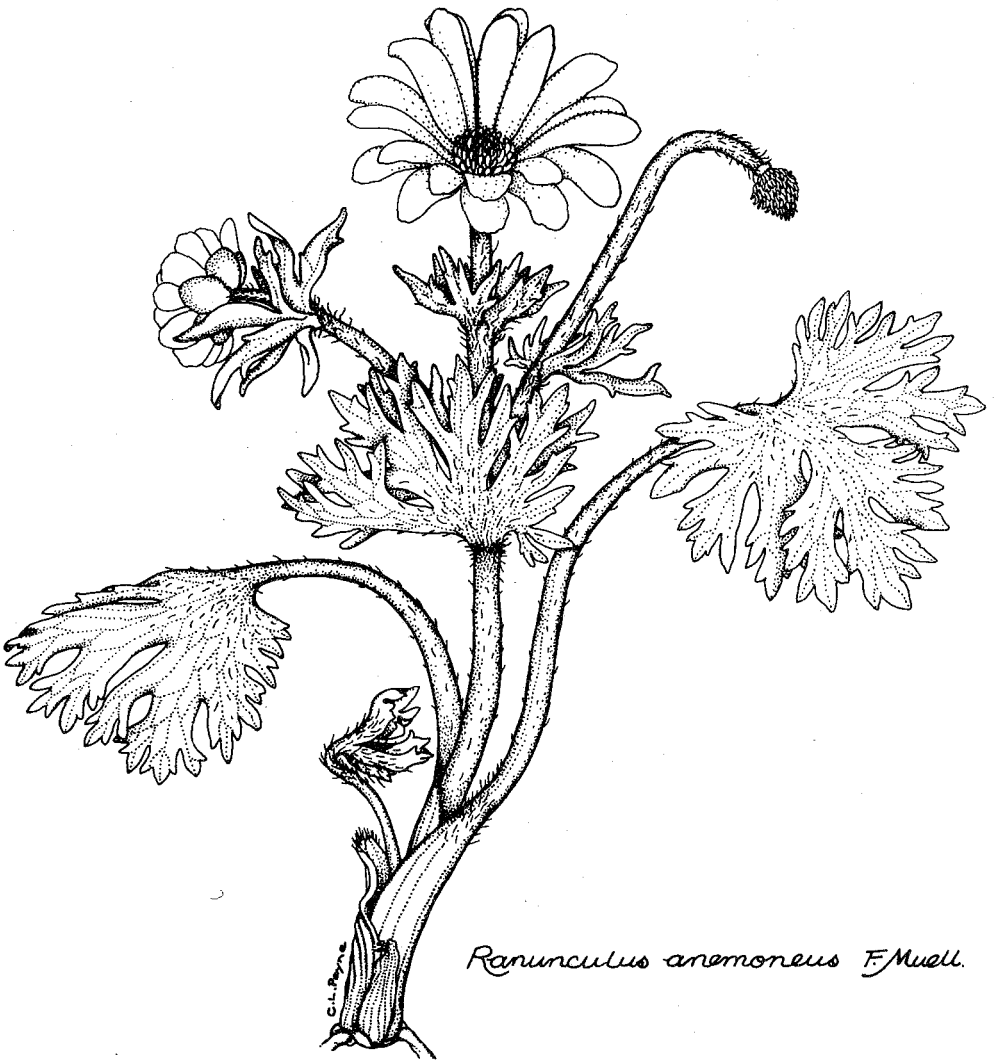
Australian Systematic Botany Society NEWSLETTER

No. 55 JUNE 1988



Ranunculus anemoneus F.Muell.

Price: $3.50

Registered by Australia Post
Publication No. NBH 8068

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

Office Bearers

President

Dr B.G. Briggs
National Herbarium
Mrs Macquaries Road
SYDNEY NSW 2000

Vice President

Dr J.G. West
Australian National
Herbarium, CSIRO
GPO Box 1600
CANBERRA ACT 2601

Secretary

Dr B.J. Conn
National Herbarium
Mrs Macquaries Road
SYDNEY NSW 2000

Treasurer

Dr D.B. Foreman
National Herbarium
Birdwood Avenue
SOUTH YARRA
VIC 3141

Councillors

Dr M.D. Crisp
Australian National
Botanic Gardens
GPO Box 1777
CANBERRA ACT 2601

Dr G.P. Guymer
Queensland Herbarium
Meiers Road
INDOOROOPILLY
QLD 4068

Chapter Conveners

Adelaide:	Mrs Robyn Barker	Hobart:	Dr Tony Orchard
Armidale:	Mr John Williams	Melbourne:	Dr Don Foreman
Brisbane:	Mr Laurie Jessup	Perth:	Dr Terry Macfarlane
Canberra:	Mr Lyn Craven	Sydney:	Prof. Roger Carolin
Darwin:	Mr Clyde Dunlop	Townsville:	Dr Betsy Jackes

Affiliated Society: Papua New Guinea Botanical Society

LIST OF NAMES IN CURRENT USE

Dr R.J. Hnatiuk
Bureau of Flora and Fauna, Canberra

A meeting was held at the Royal Botanic Gardens, Kew in April 1988 to discuss lists of names in current use. It was attended by 23 people who came from Australia, North America and Europe. Drs J.G. West, D.W.L. Ride, and R.J. Hnatiuk attended from Australia. There is a 12 page report of the meeting which, once it is approved as a fair record, I shall send to each Australian Herbarium. If you would like a copy, and by July-August are unable to get access to one, let me know. A summary of the meeting can be found in the draft letter from Dr D.L. Hawksworth below.

The subject is of great importance to taxonomists as it concerns how they may practice their craft as required by the *'International Code of Botanical Nomenclature'*. The preamble to the *'Code'* states that its primary purpose is to achieve stability of names. There are many taxonomists and users of taxonomy who do not believe that this is being achieved to as great an extent as is desirable. It is also important that taxonomists are permitted to spend as much of their research time as possible being taxonomically productive and are not side-tracked into bibliographic and historical study that does not contribute directly to taxonomy.

A Workshop, entitled '**Whose Name? What Specimen?**', is to be held in Canberra on 12-14 October, 1988. It will feature the main ideas noted in Dr Hawksworth's letter. It is directed to both plant and animal taxonomists. If you have not registered and wish to, please contact me. (Dr R.J. Hnatiuk, Workshop Secretary, GPO Box 1383, Canberra, ACT, 2601). Registration fees are expected to be minimal - around $10-20.

INCREASED NOMENCLATURAL STABILITY THROUGH LISTS OF NAMES IN CURRENT USE

Dr D.L. Hawksworth
CAB International Mycological Institute, Ferry Lane, Kew, Surrey TW9 3AF, UK

The pressure, from the users of names of organisms, on taxonomists to produce more stable systems of names is increasing (Erzinclioglu & Unwin 1986; Barnett 1986; Bruce-Chwatt 1987; Rosmoore 1988). Names change for one of two reasons, the strict application of the rule of priority or other nomenclatural caveats of the appropriate *'International Code'*, or new knowledge on the circumscription, rank or position of a taxon. Changes of the latter kind relate to the advancement of scientific knowledge and are of value to users in indicating not only relationships but also physiological and biochemical attributes. Changes for nomenclatural reasons alone, in constrast, benefit no-one.

In perpetuating the present system, taxonomists are failing to satisfy a key requirement of their consumers (Hawksworth & Bisby 1988) and it is therefore not surprising that support for taxonomic research and services is meagre and only grudgingly obtained. The problems of the instability of names have become accentuated by the needs of the information service industry for data retrieval, and the requirements of health, trade, conservation, and quarantine authorities for stable names to use in legislation, regulations, and property rights protection. Action is long overdue and urgently needed not only to satisfy the demands of users of names, but further to restore something of the lost credit of taxonomists in the sight of their consumers.

Bacteriologists overcame this problem in 1980 by the adoption of a new starting date for nomenclature and the publication of an 'Approved List' of names (Anon. 1980; Sneath 1986); only 2500 of 30,000 species names were listed. In the case of groups covered by the *'International Code of Botanical Nomenclature'* (ICBN), there are about 36,500 generic and 400,000 specific names in use, out of about 65,000 generic and 1,700,000 specific names published. It has been suggested that approved lists of names are issued at five-yearly intervals (Barnett 1987), and that a list of currently accepted names of the world's flora be produced which could be accorded some specially protected nomenclatural status (Brummitt 1987).

Proposals to introduce formal procedures for the registration on newly published names (Greuter 1986) were debated during the XIV International Botanical Congress in Berlin in July 1987. A Special Committee on Registration was established which is to report to the next Congress in Tokyo in 1993. However, such a process would not overcome the instability caused by the repeated re-introduction of long-forgotten names. The International Union of Biological Sciences (IUBS), with the support of the International Association for Plant Taxonomy (IAPT), sponsored an international meeting at Kew on 22-23 April 1988 to consider the feasibility of the production of lists of names in current use for all groups of organisms covered by the ICBN; i.e. living and fossil flowering plants, ferns, mosses, hepatics, algae, cyanobacteria, fungi (including lichens), and certain protists. The meeting was attended by 23 specialists, including key personnel responsible for the current cataloguing of names (i.e., the *'Index Algarum'*, *'Index of Fungi'*, *'Index Kewensis'*, *'Index Muscorum'*, *'Index Nominum Genericorum'*), together with representatives of selected user groups. The key conclusions of this meeting, a full report of which will appear in both *'Biology International'* and *'Taxon'*, were:

(1) The preparation of lists of names in current use is in itself a worthwhile objective. It would, if such lists were accorded specially protected nomenclatural status over all names not on the list by a future International Botanical Congress, promote stability in names by almost entirely eliminating name changes due to nomenclatural reasons.

(2) It is now technically feasible, in the light of machine-readable and card files which have already been compiled, to produce lists of the approximately 36,500 generic names in current use for all groups covered by the ICBN, given the necessary international support. The starting point for such a list is the IAPT *'Index Nominum Genericorum'* database held at the Smithsonian Institution, and publication is to be realized in 1991.

(3) The situation with respect to the approximately 400,000 specific names in current use varies markedly from group to group, and such lists will have to be prepared on a group by group basis; pilot studies can now feasibly be carried out (e.g. legumes, mosses, yeasts) provided that the necessary resources are made available.

(4) IUBS, through its Commission on the Nomenclature of Plants, should be encouraged to establish a Special Committee on Names in Current Use charged to make formal and detailed proposals to the next International Botanical Congress with respect to granting special status to the lists of generic names, to authorize mechanisms for updating them, and to define procedures for the preparation and adoption of specific names lists.

(5) The newly appointed Special Committee shall work in collaboration with that on Registration already established, which is considering the question of the registration of newly published names. The work of the two Committees is entirely complementary.

(6) The proposals developed at the Kew meeting need to be widely publicized to promote discussion amongst users of names, not only systematists.

(7) The IUBS should be encouraged to adopt this task as a part of its forthcoming Scientific Programme for 1988-91 and secure international funding to assist in the preparation and publication of the generic and sample specific names lists.

If the necessary resources can be made available, there is now a scenario available which, if accepted by the biological community at large, would materially improve the stability of names of all organisms covered by the *'International Code of Botanical Nomenclature'*. The participants in the Kew meeting wish to encourage a lively in-depth debate on this matter, and invite comments from both users and taxonomists, which will be made available to the proposed Special Committee which will be responsible for both the production of the generic and pilot species lists, and the preparation of detailed proposals for decision at the 1993 International Botanical Congress.

Assistance towards the costs of the meeting received from the International Union of Biological Sciences, the Royal Society of London, and CAB International is gratefully acknowledged.

References

Anon. (1980). *Nature* 283: 511.

Barnett, J.A. (1986). *Nature* 322: 599.

Barnett, J.A. (1987). *Nature* 325: 384.

Bruce-Chwatt, L.J. (1987). *Nature* 325: 114.

Brummitt, R.K. (1987). *Taxon* 36: 78-81.

Erzinclioglu, Y.Z. & Unwin, D.M. (1986). *Nature* 320: 687.

Greuter, W. (1986). *Taxon* 35: 816-819.

Hawksworth, D.L. and Bisby, F.A. (1988). In *'Prospects in Systematics'* (ed. D.L. Hawksworth), pp. 3-30 (Clarendon Press, Oxford).

Rosmoore, H.W. (1988). *Internat. Biodet.* 23: 325-327.

Sneath, P.H.A. (1986). In *'Biological Nomenclature Today'* (ed. W.D.L. Ride and T. Youns), pp. 36-48 (IRL Press, Oxford).

AUSTRALIAN SYSTEMATIC BIOLOGY SOCIETY?

M.D. Crisp
Australian National Botanic Gardens, Canberra

I put the following proposal to the General Meeting in Melbourne on May 25. Some discussion followed but was inconclusive. In any case, I would rather see the idea debated widely by the membership, as it concerns the future direction of our Society.

The proposal is that the Society broaden its base to include biological systematics in general. In a sense, this is happening already, because several zoologists in Canberra have joined up recently. They have done this partly because there is no such thing as an 'Australian Systematic Zoology Society', but also because they like what we are doing. In particular, the recent 'Boden Conference' *'Newsletter'* has stimulated their interest.

Communication between systematic botanists and zoologists in Canberra has been improved by the recent establishment of a discussion group. The group is primarily interested in cladistics, but

discusions tend to range across many aspects of systematics. Members come from several institutions viz. the ANBG, ANU and CSIRO.

In these discussions, I have been struck by the amount of common ground there is between botanical and zoological systematics. Even though the codes of nomenclature differ, the history of the two disciplines is thoroughly intertwined - at least from the time of the ancient Greeks. Problems in the interpretation of homology and definition of characters are essentially the same, even if the beasties themselves look different. This is especially true at the molecular level (the subject of the next ASBS symposium!). Taxonomic concepts, particularly at the species and genus level are essentially similar (or at least the issues are) - hence the interest that zoologists have in the Boden Conference proceedings. When one comes down to the more abstract aspects of systematics, such as understanding the nature of relationships and reconstructing phylogeny, there is no difference at all between botany and zoology. In the study of historical biogeography, it is absolutely essential that data from all branches of systematics be utilised if a coherent picture is to be obtained.

It emerged at the Botanical History Symposium in Melbourne last week that our society has unknowingly embraced a group who do not consider themselves to be botanists at all. Scratch a mycologist (or a lichenologist) and see if he/she considers fungi to be plants. Most likely not (and I would agree!). The main tie between systematic mycology and botany is historical - as formalised in the joint code of nomenclature, although even there the fungi tend to diverge. Not that I am suggesting for a moment that mycologists should be excluded from ASBS. On the contrary, I wish to underline what all biological systematists have in common.

What benefit is to be obtained by expanding the society? I think that the advantages fall into two categories. First, cross-fertilization of ideas (pun intended). Just think of the hybrid vigour resulting from such a marriage. Second, in this time of declining support for science in general and systematics in particular, many of our members are pressing the Society to become more active in promoting us to the public and lobbying government. The stronger we are numerically, the more effective our voice in such matters will be.

It has been previously suggested that ASBS should expand to become a 'Botanical Society of Australia' (Roger Carolin in *'Newsletter'* 28: 25; Trevor Clifford in *'Newsletter'* 31: 3). Byron Lamont responded in support (*'Newsletter'* 32: 13), whereas Andrew Kanis (*'Newsletter'* 33: 8-9) and the Sydney Chapter (*'Newsletter'* 33: 10-11) gave contrary views, after which the idea seems to have lapsed.

I found the article by David Morrison and Joy Everett, reporting the views of the Sydney Chapter, particularly interesting. While rejecting the proposal for a 'Botanical Society', they presented, perhaps unconsciously, strong arguments in favour of a broadly based sytematics society viz.:

"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)."

The emphasis here is upon *systematics*, not *botany*. In the same paragraph, David and Joy drew a comparison with ecological, genetic and biochemical societies, all of which, I believe, ignore the traditional dichotomy between botany and zoology. However, they stopped short of explicitly suggesting that our society transcend the boundaries of botany.

In his article, Andrew Kanis briefly touched upon an earlier proposal for a broadly based 'Systematics Association', but dismissed it with the implied threat that 'zoologists might ultimately outnumber botanists in such a union' (*'Newsletter'* 33: 8). The same view was expressed to me by some people at Melbourne last week. Another common reaction was: 'ASBS is a going concern. I feel comfortable with it the way it is. If we change it, we may destroy its friendly atmosphere'. This again seems to be a fear of being 'swamped'. I am mystified by this view. Are zoologists inherently more aggressive than botanists? In any case, one cannot expect any society to remain static. A society is comprised of people, and evolves with the successive generations of members. Moreover, if people feel

'comfortable', then perhaps the society is failing to provide any challenge. If more and more zoologists join ASBS as time goes on, the society will broaden its base *de facto*. However, I would hope that any change in direction were the result of a conscious choice by the membership, rather than by default.

I hope this proposal will be considered seriously by our members, and will not lapse merely through apathy. An alternative possibility may be for the systematic zoologists to get together and form an equivalent society. Then the two societies could hold regular joint meetings, perhaps under the auspices of an umbrella organization, as canvassed by Andrew Kanis (*'Newsletter'* 33: 8). What do our non-botanical members think?

THE BLOODWOOD BONANZA

Tony Bean
PO Box 397, Nambour, 4560

As a keen student of the genus *Eucalyptus*, I was very pleased to receive a copy of *'Eucalyptus I - New or little known species of the Corymbosae'* by D.J. Carr and S.G.M. Carr in 1985. However, I found it to be a very disappointing publication. The recently published *'Eucalyptus II - The rubber cuticle, and other studies of the Corymbosae'* is even more disappointing.

'Eucalyptus II' contains some very good work on the anatomy and microscopic details of eucalypt leaves, flowers etc., but the taxonomic section of the book I can only describe as useless. My opinions are based on many years study of *Eucalyptus* in the field in many parts of Australia, but especially in Queensland, where I am familiar with virtually every named species of *Eucalyptus*, and several unnamed ones, including species I have personally discovered or brought to light.

The Carrs describe an amazing 25 new species of bloodwood, adding to the 20 new species of *'Eucalyptus I'*. Before the Carrs began 'revising' the group, there were less than 40 described bloodwood species - now there are nearly 85! Even to those not involved with the genus, this must seem scarcely credible.

General Comments

The main basis for their taxonomic work is the study of the leaf cuticle. In their own words (p.20) 'we rely considerably on cuticular features in investigations of the taxonomy of the Corymbosae ...'. I challenge the statement (p.6) saying that 'The general consensus among paleobotanists and taxonomists is that the pattern and shape of leaf epidermal cells and the features of the cuticle are species-specific and differ from one taxon to another.'. Their taxonomic work later in the book shows this statement to be a farce. Carr & Carr have also studied the nectary and stamens in the course of their taxonomic work. On page 8, they say 'the combination of features of cuticular ornamentation of the nectary appear to be as species-specific as those of the leaf cuticle'. This statement is believable; both are probably equally unreliable. Although 'phytoglyphic' features and cuticular ornamentation play such an important role in the taxonomic work of Carr & Carr, they admit (p.23) that 'we ourselves have undertaken no special study of the cuticles of the eucalypts and can only report sporadic observations we have made'.

In their materials and methods section (p.16), they disparage the term 'bloodwood bark', saying it is quite meaningless. On the contrary, the term 'bloodwood bark' is known by, and extremely informative to, every interested layman and specialist. The Carrs' alternative is hardly any better. For example, the bark of *E. clarksoniana* is described (p.209) as, 'dark coloured, grey to reddish brown on the trunk and to the smaller branches, inner bark fibrous, reddish-brown'. This description could apply equally well to the totally unrelated *E. resinifera*. Also on page 16, they refer to the 'stringy bark of *E. abergiana*'. By no stretch of the imagination does *E. abergiana* have stringy bark.

On page 19, in reference to the measurements given in species descriptions, they state, 'readers are urged to place great emphasis on the mean. The extreme measurements represent rarities'. Readers would feel much more inclined to accept this if some idea of variability was given, e.g. standard deviations.

Chapter 3, concerned with fruit development and dehiscence, is interesting and instructive, but who can say that the dehiscence pattern is a species-specific feature? On page 94, a photograph of '*E. ficifolia*' with wingless seeds is shown. This cannot be *E. ficifolia*, as that species has seed with a prominent terminal wing.

Comments on specific areas of the book

1. Eucalyptus nowraensis

Eucalyptus nowraensis was described by Maiden in 1929, but most botanists now agree that it is a hybrid between *E. maculata* and *E. gummifera*. Carr & Carr obviously feel that *E. nowraensis* is a good species, not a hybrid. However, their arguments in this direction are pointless in view of the fact that they have not raised seedlings. I quote from page 97 'It is unfortunate that we were unable to raise a population of seedlings, since this is the ultimate test of the hypothesis of hybridity. Nevertheless, the fact that seeds were set in abundance is against that hypothesis.' Many hybrids do in fact set abundant fertile seed, e.g. *E. tereticornis* x *E. robusta*. To support their claim that *E. nowraensis* is a true species, with affinity to *E. maculata*, they say 'none of the other morphological characteristics of *E. nowraensis* resemble those of *E. gummifera*'. But on the previous page *E. nowraensis* is quoted as having 'generally 7-flowered inflorescences', in common with *E. gummifera*. *Eucalyptus maculata* has 3-flowered inflorescences.

2. The 'New' Species

Chapter Four - The '*foelscheana*' group, contains descriptions of 8 new species. These species are ill-defined, and can only be readily separated by microscopic examination (that is assuming they are valid species). The authors go to great pains to establish *E. foelscheana* and *E. porrecta* as distinct species, whereas *E. latifolia* scarcely rates a mention. None of these 8 new species is clearly differentiated from *E. latifolia*.

In '*Eucalyptus I*', a drawing of a conflorescence is shown (p. 73), based on S.G .M. Carr 23, Derby, W.A. and identified as *E. centralis*, although not cited earlier. However, S.G.M. Carr 23 is cited in '*Eucalyptus II*' (p.170) as *E. durackiana*! Derby, a town in the Kimberleys of W.A., would appear to be the centre of speciation for the bloodwood group. No fewer than eight new bloodwood species are alleged to occur within 40 km of Derby, namely *E. greeniana* (map, p. 124), *E. blackwelliana*, *E. durackiana*, *E. hesperis*, *E. dampieri*, *E. bynoeana* (map, p. 269) and *E. opaca*. The type localities of 4 of these species lie within five kilometres of Derby.

Chapter Five - The '*polycarpa*' group, introduces a further eight new species. The typification of two species is dubious due to conflicting localities.

(a) *E. hylandii* is typified by a specimen '20 km south of Laura (S.G.M. Carr 1798). However, a specimen from 'Quartzite hill 8 km south of Laura' (collected by D. Kleinig) is ascribed to the type locality. The latitude and longitude given for the type collection probably applies to the latter locality.

(b) The type specimen of *E. dolichocarpa* is S.G.M. Carr 1578, which in the type description is listed as 'near Tryphinia', but 1578 is also listed with the other collections, where the locality given is 'Creb road near Umolo', some 30 km further west.

The latitude and longitude of type specimens in '*Eucalyptus II*', when given, cannot be relied upon. For example, the type of *E. ellipsoidea*, according to the latitude and longitude figures, is at Stannary Hills, rather than 'near Campbell Road, NW Atherton'. The type of *E. clarksoniana* is given as 15°55'S 141°44'E. This corresponds to a place in the far west of Cape York, whereas Clarkson 3590 (the type

specimen) was actually collected not far west of the main Cape York road near Laura, over 200 kilometres away!

Some of the Queensland species are of dubious validity. I am not convinced that *E. dolichocarpa* and *E. brachycarpa* differ in any significant way. These two species are compared in Table 1. On page 225, the authors state that 'the seedlings of the two species (*E. dolichocarpa* and *E. brachycarpa*) are almost

Table 1. Comparison of *E.dolichocarpa* and *E.brachycarpa*

	E.dolichocarpa	*E.brachycarpa*
Height (m)	to 21	10-18
Bark	grey or brown, to the smaller branches	dark brown or grey on trunk and main branches
Adult leaves	glossy above, hypostomatous	glossy above, hypostomatous
Terminal adult leaf size (cm)	9.3-17.8 (11.9) x 1.1-2.2 (1.7)	6-16.5 (11.7) x 1-1.9 (1.5)
Petiole length (cm)	0.7-2.0 (1.7)	1-2.0 (1.4)
Flower buds	clavate, scurfy	clavate; some scurfy, some smooth.
Flowering period	Apr-May	Dec-May
Flower bud size (cm)	0.8-1.2 (1.0) x 0.5-0.6	0.9-1.03 x 0.4-0.5
Fruits	scurfy, with short neck	some scurfy, mostly smooth
Fruit size (cm)	1.7-2.9 (2.3) x 1.1-1.7 (1.4)	1.3-1.8 (1.6) x 1.0-1.43 (1.27)
Fruit neck length (cm)	0.2-0.5 (0.3)	0-0.26 (0.13)
Fruit pedicel length (cm)	0.2-0.8 (0.5)	0.35-1.13 (0.59)
Seedling leaves	almost sessile, opposite, hypostomatous	petiolate, opposite, hypostomatous

indistinguishable ...' This is hardly surprising since the seedlots raised were from the same locality (Lochnagar station) and in all probability from trees of the same species.

Chapter 7 describes `New species from Western Australia and the Northern Territory'. On page 253, Carr & Carr say 'There are many aspects in which the species described in this chapter resemble one another, e.g. bark characters. Until more complete specimens are available for study, and more adequate information on their biology is available, they must be regarded as among the taxonomically

most 'difficult' species of eucalypts.' Despite this admission, and the fact that the authors have not seen them in the field (except the Derby area in 1966), they have no hesitation in describing 5 new species!

Chapter 9 gives additional information on the species described in *'Eucalyptus I'*. The criticicism of Mr Kleinig (p.310) is totally unwarranted. I defy anybody, including competent herbarium botanists, to separate or identify *E. centralis* and *E. orientalis*. Are we to send all our bloodwood speciments to Carr & Carr for determination? The Carrs' taxonomic methods, if we assume they are completely valid, are of use only to the fortunate few who have access to sophisticated microscopic equipment. Such microscopically defined 'species' are of no use to the field persons, be they laymen or botanists. Plant taxonomy should be practical, otherwise what is the point? Species which cannot be distinguished in the field or herbarium with modest optical aids are probably not worth recognising.

Table 2. Carr specimens determined as two species

Collection No.	Book	Page	Determined as	Locality Given
SGM Carr 29	*'Euc I'*	66	*E.opaca*	40 km E of Derby on Kimberley Downs road
SGM Carr 29	*'Euc II'*	166	*E.blackwelliana*	40 km E of Derby on Kimberley Downs road
DJ & SGM Carr 1413	*'Euc I'*	35	*E.polycarpa*	coast east of Darwin
SGM Carr 1413	*'Euc II'*	187	*E.erubescens*	track near Shoal Bay Landing, 30 km NE of Darwin
SGM Carr 1416A	*'Euc II'*	155	*E.tokwa*	Shoal Bay Landing, 26 km NE of Darwin
SGM Carr 1416b	*'Euc II'*	134	*E.darwinensis*	Shoal Bay Landing, 26 km NE of Darwin
SGM Carr 1626	*'Euc II'*	200	*E.hylandii*	Granite Creek NW of Atherton
SGM Carr 1626	*'Euc II'*	213	*E.clarksoniana*	Granite Creek N of Atherton
SGM Carr 1634	*'Euc II'*	316	*E.capricornia*	nr Campbell Rd, Walsh R, NW of Atherton
SGM Carr 1634	*'Euc II'*	315	*E.erythrophloia*	Stannary Hills
SGM Carr 1694	*'Euc II'*	295	*E.pocillum*	Newcastle Range
SGM Carr 1694	*'Euc II'*	315	*E.erythrophloia*	Newcastle Range
SGM Carr 1799	*'Euc II'*	200	*E.Hylandii*	quartzite hill 20 km S of Laura
SGM Carr 1799	*'Euc II'*	293	*E.stockeri*	quartzite hill just S of Laura

3. Two for One

The unreliability of phytoglyphs, nectary cuticulation, and stamen ornamentation in the taxonomy of bloodwoods is highlighted by the fact that individual specimens collected by the Carrs themselves have been subsequently determined as two different species; not once, but on seven separate occasions (Table 2)!

Are these simply typographical errors, with a wrongly given collection number? Hardly, since the dates and localities match up so well. On page 200, SGM Carr 1799 is described and photographed as being a shoot from a rhizome of a tree of *E. hylandii*. On page 293, it is described as 'reversion shoots' of *E. stockeri*. Clearly the same specimen is involved here.

In conclusion, I can only echo the comments of Mr Kleinig (*'ASBS Newsletter'* 49, 1986) who suggests that 'submission to the usual system of refereeing would surely have resulted in a more useful and accurate reference book'. Giving the manuscript to a few selected people to read, despite their competence in other fields, is not good enough.

Editor's note

The following article was received from the authors after they had been given a copy of Tony Bean's `The Bloodwood Bonanza'.

'EUCALYPTUS II': ERRATA

D.J. Carr and S.G.M. Carr
5a Arkana Street, Yarralumla, ACT, 2600

'Eucalyptus II: the rubber cuticle and other studies of the Corymbosae', by D.J. Carr and S.G.M. Carr, was published in August 1987. Copies (available from the address above, $20 sb, $30 hb) have been sent out with the more obvious typos corrected, but inevitably, in a book of this size (x + 372 pp.) there appear some errors, especially in the numerous citations of specimens. We are reminded that even for as widely-used a textbook as Hall & Knight's *'Algebra'* it took three editions to comb out all the errors! The first edition of Blakely's *'Key'* has *Eucalyptus lamprocarpa* instead of *E. lamprocalyx*, as well as many other mistakes. Science proceeds by approximation and with the best will in the world errors occur and require correction. At the time *'Eucalyptus I'* was published no intensive study of the bloodwoods of the north-west of Western Australia had been undertaken but some specimens from Derby were wrongly associated with Central Australian species. In particular (as mentioned in *'Eucalyptus II'*, p. 309) Carr 23 (Derby) is not, as in *'Eucalyptus I'*, *E. centralis* but *E. dampieri*; similarly Carr 29 (Derby) is not *E. opaca* (*'Eucalyptus I'* p. 66) but *E. blackwelliana*. In *'Eucalyptus II'* the following errata should be corrected:

p.203 line 14 substitute 'area' for 'locality'

p.213 delete Carr 1626 (= *E. hylandii*, see p. 200).

p.216 line 2 substitute 'Umolo" for 'Tryphinia' (Umolo is closer to the co-ordinates given).

p.293 delete Carr 1799 (reversion shoots) (= *E. hylandii*, see p.200.)

p.295 delete Carr 1694 (= *E. erythrophloia*, see p.315)

p.316 delete Carr 1634 (= *E. erythrophloia*).

We would be happy to receive information concerning other errata in the book. Further studies, adding to the information in the two books, are contained in the 1987 MacLeay Memorial Lecture, awaiting publication in the next issue of *'J. Linn. Soc. NSW'*, and in a paper (in preparation) to be published elsewhere.

HIDING YOUR LIGHT BEHIND A BUSHELL!

Helen Hewson
Bureau of Flora & Fauna, Canberra

I noted when I was Editor of the *'ASBS Newsletter'* that the bulk of our membership is happy to coast along leaving news-provision to Jack. That seems to me to be a pity for two reasons. Firstly, we are failing to record many happenings which really are the history of systematic botany in Australia. Secondly we are doing our colleagues a dis-service because the *'Newsletter'* is the means by which we all keep in touch with what is going on in our discipline.

No doubt newsletter editors are complaining in this way *ad nauseum*. However, I thought it a sad reflection on the effectiveness of our communication when I read the accompanying entry (below) in the *'Association of Pacific Systematists Newsletter'* 5: 5 (1988). The object of the Association of Pacific Systematists is 'to provide for increased communication among systematists in the Pacific region and others who are working with organisms from the Pacific region; and to provide a source of professional expertise for persons, organisations, and agencies seeking systematics information and related services.'

Perhaps our Society should consider reciprocal affiliation so that *'Newsletters'* are automatically exchanged. Then the respective Editors can keep us and our Pacific colleagues informed.

'NEWS ACROSS THE PACIFIC...

'ORGANIZATIONAL AND RESEARCH NEWS

> **'A Botanical History Symposium** will be held at the University of Melbourne, 25-27 May, 1988. It will be held to bring together botanists, historians, and others to discuss when and where explorers and amateur collectors worked during the first 100 years of white settlement, where the collections are housed, publications, and sources of historical information. A call for sponsors and abstracts was issued in the June 1987 issue of the *Newsletter of the Royal Society of New Zealand*.'

ASBS BUSINESS

LETTERS FROM THE SOCIETY

M.D. Crisp
Canberra

At the General Meeting in Melbourne on May 25, members requested that Council raise with Government some issues of concern to ASBS. Subsequently, Barbara Briggs and Barry Conn have been busily writing the following letters:

1. *To Prof. Adrienne Clarke, Chairman, Biological Sciences Interim Committee, Interim Australian Research Council (ARC).* The ARC is the new body replacing ARGC, so it administers Commonwealth research grants and advises on research policy. Universities are the main beneficiaries of grants, but museums and herbaria are also eligible. Barbara's letter expresses strongly the need for quality systematic research in Botany, without which the viability of the *'Flora of Australia'* project will be undermined. She points out that many herbaria and universities have lost systematic positions recently. She urges that ARC continue to recognize the eligibility of museums and herbaria for grants, and requests that more funding be provided for fundamental research, both for systematics specifically (including ABRS) and for biology generally.

Another letter has been sent urging adequate representation of scientists and technologists on the Australian Research Council.

2. *To Mr. Dawkins, Minister for Employment, Education and Training.* Following a request from the Federation of Australian Scientific and Technological Societies (FASTS), Barbara has written to Mr. Dawkins urging that the proposed National Board of Employment, Education and Training should include at least one scientist or technologist. Currently it is proposed that members of the Board will represent trade unions, business, industry, education and training, but neither scientists nor technologists are mentioned as possible board members. The ARC will be one of four 'supporting' councils under the Board, but it will be the Board, rather than the ARC, which will have the the greater influence on the minister in determining national research priorities.

3. *To Senator Richardson, Minister for the Arts, Sport, the Environment, Tourism and Territories.* This letter supports the minority view of the Helsham Enquiry, namely that the whole of the Lemonthyme and Southern Forests should be included within the Tasmanian World Heritage area.

Although these letters will carry the authority of the Society, and should have some influence in the right direction, it is up to you, the individual members to write as well. A desk overflowing with mail would probably influence a minister much more than would a single authoritative letter.

PERSONAL NEWS

Appointments

New Herbarium Curators at CBG and LAE

Jim Croft joined the staff of the Australian National Botanic Gardens as Curator of the Herbarium in February of this year and will be representing CBG at future CHAH meetings.

After graduating from the University of Sydney, Jim took a position as botanist at the Papua New Guinea National Herbarium (LAE) and National Botanic Gardens (a branch of the PNG Department of Forests) in Lae, seeking the meaning on life and a couple of years tropical experience. The futility of the former activity lead to a morbid fascination in the collection and identification of obscure pteridophytes, largely for comic relief. He has spent the last few years as Officer in charge of the Lae Herbarium and Botanic Gardens. After fifteen years in the steaming tropical green of the north coast of New Guinea, the frozen brown aridity of Canberra is proving a shock to his rarified tropical blood.

Karl Kerenga is now acting as Officer in Charge of the Lae Herbarium, supported by botanist Osia Gideon.

REPORTS

ABRS REPORT

Dr R.J. Hnatiuk
Canberra

By the time you are reading this, *'Flora of Australia'* Volume 19 (*Eucalyptus* and *Angophora*) should be published. It is expected to sell for $44.95 (soft cover) and $59.95 (case bound). It is the largest volume to date and should be of interest to many.

The Department of the Arts, Sport, the Environment, Tourism and Territories (yes, it really is all in the one Department!) is being restructured administratively (sound familiar to many of you?) starting at the top down. Changes that affect ABRS most directly have been the promotion of Dr Peter Bridgewater from Director, Bureau of Flora & Fauna to First Assistant Secretary, (Head of the National Estate and Environment Protection Division, which includes the BFF). Peter's old position is being re-vamped such that the person responsible for 'The Bureau' is also responsible for the Australian National Botanic Gardens and the Natural Environment and World Heritage Section. The position had not been permanently filled at the time of writing, but we'll keep you posted when the dust has settled.

MELBOURNE CHAPTER NEWS

Don Foreman
Convener

The Melbourne Chapter continues to remain active with regular monthly meetings which are usually attended by 20-30 members and visitors. The chapter started its program in March with an extremely entertaining talk on Plant/Insect Relationships by John Reid. John impressed everyone with the breadth of his knowledge and his commitment to various conservation issues. In April Helen Lee talked about some of her work on *Hakea* and outlined some of the work yet to be done. The May meeting was treated to some excellent colour transparencies of Sumatra and North Borneo taken on a recent trip by

David Albrecht. We get the occasional postcard and letter from Stephen Forbes who was the Melbourne Chapter Convener for a number of years and who is now studying Amenity Horticulture at Bath (England).

MELBOURNE CHAPTER PROGRAM FOR 1988

Don Foreman
Convener

Meetings are at 6.00 pm on the first Thursday of the month, at the National Herbarium of Victoria, Birdwood Avenue, South Yarra, in the Astronomer's Residence.

Thursday June 2	'Classification and Evolution of Australian Inulae', Philip Short (MEL)
Thursday July 7	'Rare and endangered plants in Victoria', David Cheal (CFL)
Thursday August 4	'Pollination biology of *Thelymitra*', Malcolm Calder (MELU)
Thursday Sept 1	'Aboriginal Uses of Victorian Plants', Beth Gott (MONU)
Thursday Oct 6	'Influence of fire regime on various Victorian plant communities', Andrew McMahon (Ecological Horticulture)
Thursday Nov 3	'*Pomaderris*', Neville Walsh (MEL)
Thursday Dec 1	To be announced.

VISITORS ARE WELCOME

CANBERRA CHAPTER NEWS

Alex George
Convener

Since the last report the following meetings have been held:

3 June 1987	Bernadette Hince, *'The Australian National Dictionary'*, with particular reference to plant names.
14 July 1987	Mary White, *'The Greening of Gondwana'*.
11 August 1987	Andrew Knoll (Harvard University), 'Patterns of composition and diversity of vascular plant communities through geologic time'.
12 November 1987	Roger Carolin, 'Aspects of recent research, especially Goodeniaceae'.
25 February 1988	Roger Hnatiuk, 'An overview of Australian botanical research.'

21 April 1988	'Berlin revisited', Arthur Chapman and Hansjoerg Eichler reviewed the Nomenclature Sessions at the XIV International Botanical Congress in Berlin, August 1987.
18 May 1988	'Berlin revisited, 2.' Hansjoerg Eichler completed the review of the Nomenclature Sessions; Alex George showed slides of the Congress.

SOUTH AUSTRALIAN CHAPTER NEWS

Robyn M. Barker
Convener

The first three chapter meetings for the year were well attended. In February we heard from Mrs Pauline Payne on the life and works of Richard Schomburgk, past director of the Adelaide Botanic Gardens. Pauline is a post-graduate student in the History Department of Adelaide University and a direct descendant of Schomburgk.

In early March, Tony Orchard from Hobart was persuaded to address the local chapter while in Adelaide on holidays. Despite claiming that he had nothing to say he managed to occupy the audience for close on 2 hours on various Tasmanian and Macquarie Island matters and discussion was lively.

April saw Darrel Kraehenbuehl and David Symon presenting previews of their Botanical History Symposium topics, Darrel on Carl Wilhelmi and David on early artists as a source of botanical information in South Australia. Both talks were well received and there was much discussion on the early vegetation about Adelaide as a result of David's presentation.

No May meeting was scheduled as this coincided with the Botanical History Symposium in Melbourne which a number of our members attended. This was a highly successful symposium, notable for its informality and informative talks and posters, and the organisers are to be congratulated.

Dr Charles Nelson of the National Botanic Gardens, Ireland, visited Adelaide after the symposium and presented an address entitled 'Genius in Bondage' to the chapter. This dealt mainly with Surgeon John White of the First Fleet and his links with the early artists of Port Jackson.

Future meetings

June 29	David Paton on 'Flame heath, scarlet bottle brush and the birds and the bees'.
July 27	Duncan McKay, 'How do butterflies find their larval food plants?'
August 24	Peter Copley, 'Six months on sub-Antarctic Heard Island'.

BOOK REVIEWS

Cribb, A.B. & J.W. (1985). **Plant life of the Great Barrier Reef and adjacent shores**, xviii, 294 pp., col. illus. St. Lucia, Qld.: University of Queensland Press.

This book is a welcome addition to the fortunately growing body of good semipopular works on Australian plant life, especially so as it is the first to treat the plants of the shores of Great Barrier Reef islands and, to some extent, the nearby North Queensland mainland. All the many illustrations are colour photographs, taken in the field or as 'still lifes' to show details, further enhancing this pioneer effort.

Alan and Joan Cribb, drawing on extensive experience, have organised their book simply and empirically in six chapters: 1) The coral reef; 2) Seaweeds; 3) The islands; 4) Plants of the shore; 5) Flowering plants in the sea; and 6) Flotsam (but where, by the way, is jetsam?). The brief treatment to coral reefs is followed by what must be one of the few good introductions to the principal seaweeds: green, brown, red and blue-green, grouped according to their pigment-based botanical classification (some might say, however, that the non-nucleate blue-green algae were not plants but bacteria, as the authors note). Moreover, a purist might take issue with their statement that they were 'the most primitive of the major algal groups'. The authors then proceed to Church's subaerial world with, first, as Chapter 3, an account of the coral cays and (briefly) high islands, followed by treatments of individual shore plants in the longest of the book's chapters and concluding with similar coverage of mangroves and sea-grasses (Chapter 5) and 'drift' (Chapter 6). Delimitation of families follows Cronquist (cf. *'Flora of Australia'*, Vol.1, 1981).

The species accounts are from half a page to a page, each illustrated by one or two photographs, and are headed by a scientific name (without authorities) and English common names. The text is informally descriptive, with the high points leading the reader in; uses and properties are emphasized, including poisonous aspects, with intelligence gathered also from beyond Australian shores - thus bringing out, in the absence of formal statements of distribution, the wide range of many species (maps of many of them can be found in the four issues (to date) of *'Pacific Plant Areas'*, currently edited by Max van Balgooy).

Some scientific names used were not correct at the time of going to press. *Hernandia peltata* should become *H. nymphaeifolia*, and *Spinifex hirsutus* is probably properly reduced to *S. littoreus*. Since then, *Premna corymbosa* has become *P. serratifolia*, *Vitex negundo* has been reduced to *V. trifolia*, and Geesink has shown that *Pongamia* has to be united with *Millettia*. Research now under way may clarify the identity of such plants now known in Queensland as *Pipturus argenteus*, *Diospyros ferrea* sensu lato, and *Timonius timon*. In need of further study is *Abutilon albescens*; Malesian literature, following Borssum Waalkes' revision of the family, treats it as *A. indicum* ssp. *guineense* var. *albescens* but to me it seems quite distinctive morphologically and ecologically. Arguable also is the adoption, following Ohashi, of *Dendrolobium* for what was long known as *Desmodium umbellatum*. It is moot whether or not an indication of the existence of differences in taxonomic opinion should be included in books of this kind; I would prefer that such be brought to the reader's attention but that is merely my view. I am pleased to see, however, that the Umbrella Tree - which indeed occurs on some Reef islands - is treated as part of the now pantropical *Schefflera* rather than as a *Brassaia*, although use of the latter persists in some recent works.

The coverage of true mangroves is somewhat selective, with the rarer species not included. The authors have done the best they could with *Avicennia* under the circumstances; the mess bequeathed by Moldenke is urgently in need of a cleanup. The flotsam plants usually have also been covered in the two chapters preceding their treatment. At the end of the book are a glossary (pp.282-285), 'further reading' - essential in any work of this kind - (pp.286-288), and an index to plant names. There are no keys.

The book will do much to stimulate further interest in the diverse, though somewhat small, tropical coastal flora. Indeed, it presents readers with a range of plants not so large as to be overwhelming, usual in the humid tropics. It can usefully be employed in New Guinea and on other more or less nearby Indo-Pacific shores, although its relative selectivity may fail to satisfy users on geologically more diverse and floristically richer mainland shores. The shore flora has often been overlooked: 'beaches are undercollected areas and interesting finds may be expected' (van Steenis and Veldkamp 1987).

Related recent works include W.A. Whistler's *'Coastal flowers of the tropical Pacific'* (Lawai, Kauai: Pacific Tropical Botanical Garden, 1980) and, for those wanting a dichotomous key (which, however, omits mangroves and seagrasses), the reference below. For those who can read what I am told is now relatively old-fashioned Dutch - not to mention finding the journal! - some of the shore species are very fully described and illustrated in C.A. Backer's series, *'Indische Duinplanten'*, published over several volumes of *'De Tropisch Natuur'* from 1917 to 1923. However, good as these are, we still lack an effective successor to A.F.W. Schimper's *'Die indo-malayische Strandflora'* (Jena, 1891), whose plant list was last brought up to date by Booberg in 1933.

Reference

Steenis, C.G.G.J. van, and Veldkamp, J. F (1987) Botanical guide to the sandy sea shores of Malesia. *Flora Malesiana Bulletin* 9(4) (whole no.40): 421-428.

David G. Frodin,
Philadelphia

Womersley, H.B.S. (1987). **The Marine Benthic Flora of Southern Australia**, Part II, 484 pp. South Australian Government Printing Division: Adelaide ISBN 0-7243-6501 X. R.R.P. $38.00

Part II of *'The Marine Benthic Flora of Southern Australia'* covers the Phaeophyta (brown algae), and the genus *Vaucheria* in the Chrysophyta. It follows the same format as Part I (Chlorophyta and Seagrasses), published in 1984. For general comments on collecting and preservation of marine plants, the history of phycology in the region, and aspects of ecology and biogeography the reader is referred to the earlier volume.

The introductory section provides only a brief discussion of the Division Phaeophyta. Matters such as the orders recognised, their delimitation and relationships are subject to continuing debate and the author has adopted a scheme which is essentially that used by Wynne in recent publications.

A taxonomist may be seen to play two vital roles: prosecuting the science of taxonomy with respect to certain groups of organisms; and providing a service to other biologists. This flora shows that these two functions are not necessarily mutually exclusive. Six new genera are described along with 24 new species or combinations. Keys are provided to allow the identification of the 231 species in 104 genera, which constitute the brown algal flora of the region. As with many floras (including, perhaps especially, those dealing with higher plants) usage is simplified when the higher level taxa (families, or in the case of the Phaeophyta, the orders) are known. The key to the orders will present instant problems to the non-specialist but a glossary is provided for those terms peculiar to phycology. Since so few taxa are involved (13 orders) this problem may be more apparent than real, and reference to the descriptions of orders will help in ensuring that a correct determination has been made.

Within each order, keys are given to families, genera and species. Generic and specific descriptions are comprehensive so that taxa can be identified with some certainty. The distribution of each species is given, along with the type locality and location of the type, and a list of selected specimens. The latter is especially useful since many are included in the exsiccatae sets `Marine Algae of southern Australia'

which have been distributed by Professor Womersley to more than 20 herbaria in Australia and elsehwere. All species are illustrated with clear line drawings and photographs of herbarium specimens. There are eight colour plates which depict 22 common species, mostly photographed *in situ*.

While the region covered is the temperate southern coasts of Australia, many of the species involved do not recognise this as a limitation to their biogeography. Fifty-seven percent of the species are endemic to southern Australia, a few are shared with New Zealand and subantarctic islands, and 26% are widespread outside the region, some virtually cosmopolitan. This book is, therefore, absolutely essential to anybody intersted in the algal flora of the southern hemisphere. Its value in Australia is enhanced by the lack of any comparable account for other regions.

Professor Womersley deserves the congratulations of the phycological community, not only for this volume, but for his continuing contributions to Phycology which have made the publication of such a *'Flora'* possible. At the same time, he will receive the heartfelt thanks of marine ecologists and other biologists working on the marine biota of the southern Austrlian region.

The South Australian Government is also to be congratulated, for its long term contribution to Australian science through the publication of the handbook series.

Note: The number of red algal species in southern Australia is estimated at 800, i.e., more than twice the total of the Phaeophyta and Chlorophyta. While monographs exist for many larger genera, no critical survey yet exists, and the task of writing Part III (Rhodophyta) is daunting indeed. Let us hope that the Federal Government, through its various agencies, will continue to support fundamental taxonomic research on the algae not only because it is intrinsically interesting, but also because it is essential for workers in other areas of marine science.

Robert J. King
School of Biological Science
University of New South Wales

RECENT PUBLICATIONS

N.H. Holmgren & G. Angell (1986). **Botanical Illustration: Preparation for Publication.** The New York Botanical Garden. An excellent practical guide. Available from the N.Y. Botanical Garden, Bronx, New York 10458, USA. Cost: $US13.00, including postage.

J. Bonnemains, E. Forsyth & B. Smith (1988). **Baudin in Australian Waters**: The Artwork of the French voyage of Discovery to the Southern Lands, 1800-1804. Oxford University Press, Melbourne. $250.

John Brock (1988). **Top End Native Plants**. A comprehensive guide to the trees and shrubs of the top end of the Northern Territory. Enquiries: Howard Brock, 50 Kalgoorlie Avenue, Port Noarlunga South, SA 5167, Phone (08) 386 1160. $45.00 (Packaging, posting, if applicable, $5.00).

NOTICES

'Flora of the Kimberley Region'

One of the priorities of the Western Australian Herbarium since 1980 has been the production of regional floras for the state. The first flora in the series, dealing with the Perth Region, was published in 1987. The second in the series, entitled *'Flora of the Kimberley Region'*, covers the area defined as the Northern Botanical Province by Beard (1980, WA Herbarium Research Notes No.3). For this second flora the flora-writing team comprises Judy Wheeler, Barbara Rye and Bev Koch. Contributions are also being provided by other staff members of the WA Herbarium as well as a few interstate botanists. The writing of the flora is now well underway: of the 166 families of vascular plants recorded in the Kimberley, 104 families have been completed and at least a further 16 families partly written. It is hoped that the remaining groups will have been completed by mid 1989, with publication of the flora the following year. Any enquiries about the *'Kimberley Flora'* should be addressed to the editor, Judy Wheeler.

International Organisation of Plant Biosystematists (IOPB)

Symposium Announcement, Kyoto, July 10-14 1989

The title of the IOPB-1989 Symposium is *'Biological Approaches and Evolutionary Trends in Plants'*. Subtitles include: 'The Biology and Evolution of Weeds', 'Molecular Approaches in Plant Biosystematics', 'Population Biology and Life History Evolution', Session 1. 'Reproductive Biology of Plants', Session 2. 'Demography and Life History Evolution of Plants'. To obtain a preliminary announcement of the Symposium, or to present a poster, write to the Chairman of the Symposium, Dr. Shoichi Kawano, Department of Biology, Faculty of Science, Kyoto University, Kyoto 606, Japan.

Matters concerning IOPB should be addressed to the President, Dr Krystyna Urbanska, Geobotanische Institut, E.T.H., Zurichbergstrasse 38, CH-8044, Zurich, Switzerland.

Membership in IOPB for the period 1987-1989, is $US20.00 payable to IOPB, and sent to Dr Liv Borgen, Secretary-Treasurer, IOPB, Botanical Garden and Museum, Trandheimsveien 23B, 0562 OSLO 5, Norway.

Items of interest to biosystematists on an international level may be sent for publication in the *'IOPB Newsletter'*. The editor is Dr Krystyna Urbanska at the address above.

First Impressions: The British Discovery of Australia

A Natural History Museum exhibition to celebrate the Australian Bicentenary

Melbourne:	Museum of Victoria, 29 April - 3 July 1988
Brisbane:	Queensland Museum, 20 July - 4 September, 1988
Sydney:	Australian Museum, 22 September - 20 November 1988
Adelaide:	South Australian Museum, 13 December 1988 - 29 January 1989
Perth:	Western Australian Museum, 18 February - 9 April 1989
Hobart:	Tasmanian Museum & Art Gallery, 29 April - 18 June 1989
Darwin:	Northern Territory Museum of Arts & Sciences, 8 July - 13 August 1989

Systematics and Biogeography of the Austral Biota

Ninth Meeting of the Willi Hennig Society

The ninth meeting of the Willi Hennig Society will take place in Canberra, Australia, August 24-27, 1990. The invited and contributed papers will be a mix of theory, methodology and practice with the special theme of the systematics and historical biogeography of the Austral Biota. Sessions planned include:

(1) Molecular biology and systematics (W. Wheeler, J. West).

(2) The use of phylogenetic information in ecological and evolutionary studies (D. Faith).

(3) Austral flora and fauna: systematics and evolution (M. Crisp, R. Raven).

(4) Austral biogeography (P. Ladiges, C. Humphries).

(5) Coevolution of plant and animal groups (R.T. O'Grady).

(6) Phylogenetic computing software (P. Weston).

(7) Poster session (P. Cranston).

Excursions to eastern New South Wales and Queensland are planned. For suggestions, questions and preliminary registration forms for the meeting, please write to Dr Ebbe S. Nielsen, Division of Entomology, CSIRO, GPO Box 1700, Canberra City, ACT 2601, Australia.

Search Subscriptions

Individual members of FASTS Member Societies who subscribe to SEARCH can receive a substantial discount.

SEARCH	appears 6 times a year and will cost you only $25 p.a.
SEARCH	contains the regular column FACTS ON FASTS whereby you can keep abreast of what FASTS is achieving.
SEARCH	contains many other columns and articles on the developing science policy scene in Australia.

TO BE INFORMED:

subscribe to SEARCH now at ONLY $25 for 6 issues. Please make cheques payable to ANZAAS and send to P.O. Box 873, G.P.O., SYDNEY, 2001

Australian Academy of Science Programmes 1989-90

Australian Academies and Royal Society Scientific and Technological Exchange Programme with the UK

Deadline for applications: 1 July 1988

Australian Academy of Science and Japan Society for the Promotion of Science Exchange Programme

Deadline for applications: 1 October 1988

Australian Academy of Science and Chinese Academy of Science (Academia Sinica) Exchange Programme

Deadline for applications: 1 December 1988

Application forms available from: International Exchanges Officer, Australian Academy of Science, GPO Box 783, Canberra ACT, 2601. Telephone enquiries: (062) 47 3966, Mrs Bonnie Bauld.

STOP PRESS

Australian Botanical Liaison Officer visits to European Herbaria

Judy West
Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, England
Fax 01-948 1197 Telex 296694 KEWGAR

I will be visiting Leiden (L) on July 8-11, Geneva (G) on July 19-21, Paris (P) on August 10-12 and Stockholm (S) on August 22-? Anybody wanting specimens or literature examined and/or photographed at any of these institutions please let me know beforehand.

Please include full citation and any other relevant information that will help in locating the material. Enquiries for each taxon should include at least:

1. the name of the taxon and its author
2. the currently accepted name and synonyms
3. the place of publication
4. the type(s) or type citation (including country if not Australian)

The Society

The 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.

Notes

The deadline for contributions is the last day of February, May, August and November.

ASBS Annual Membership is $16 (Aust) if paid by 31 March, $20 thereafter. Students (full-time) $12. Please remit to the Treasurer.

Advertising space is available for products or servcies of interest to ASBS members. Current rate is $30 per full page. Contact the *'Newsletter'* Editor for further information.

All address changes should be sent to the Treasurer or the Editor.

Editors: Mrs B. Barnsley & Dr. M.D. Crisp
Australian National Botanic Gardens
GPO Box 1777
CANBERRA, ACT 2601

Typing: *The Typist*, Griffith, ACT

Illustrator: Christine Payne

Austral. Syst. Bot. Soc. Newsletter 55 (June 1988)

CONTENTS

Printed by CALICO