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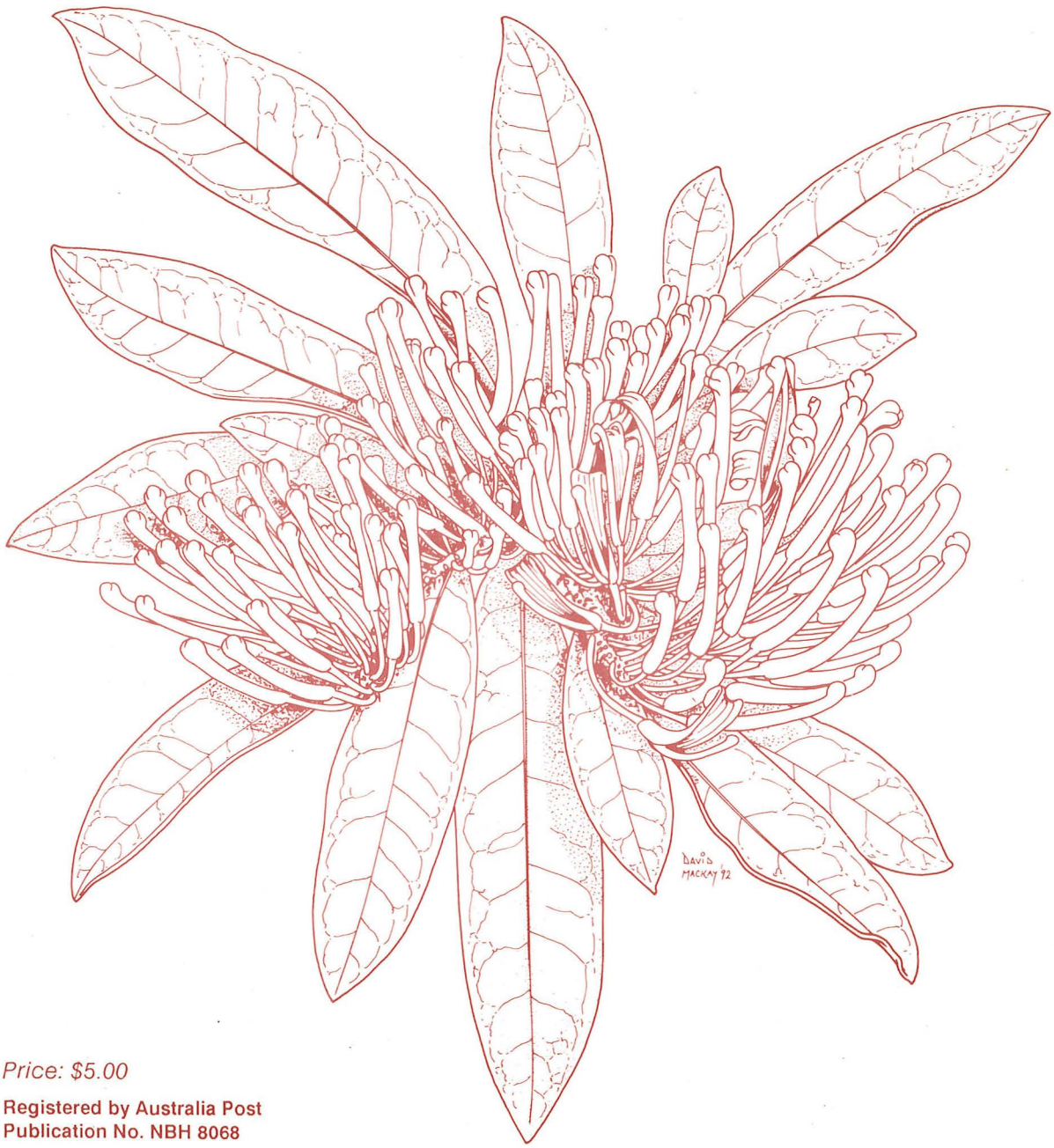

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ARTICLES

Autonyms and author citations — surely there's a better way to combine the two

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Introduction

In my endeavours to keep track of validly published and current botanical names for the Queensland Herbarium (BRI), it has struck me that, when the principle of accepting autonyms as validly published names dating from when they were created was accepted by the international botanical community at the International Botanical Congress at Sydney in 1981, most botanists failed to realize the full significance of that change.

Autonyms

Article 6.8 of the current International Code of Botanical Nomenclature (ICBN) decrees that autonyms are such names as can be established automatically under Article 19 (at ranks between family and genus), Article 22 (at ranks between genus and species), and Article 26 (at ranks below species), whether they were formally "created" (?cited) or not. Article 32.6 decrees that autonyms are to be accepted as validly published names that date from the publication in which they were established. In this discussion, I would like to deal primarily with names at infraspecific rank, but the comments apply equally to names at other ranks where autonyms exist.

Thus, when publishing a name for an infraspecific taxon that does not include the type of the name of the species that the taxon is included in, an author is also validly publishing a different name for another infraspecific taxon that *does* include the type of the name of the species concerned. We therefore then have at least three validly published names related to that species, depending on how many infraspecific taxa are recognised. At least two of those names date from the one publication, but this may be, and usually is, quite different from the date of publication of the species name.

As an example of this, I quote the case of *Atriplex paludosa* from southern Australia. This species was named *Atriplex paludosa* by Robert Brown in 1810. Thus, its name obviously dates from 1810. In 1849, Moquin-Tandon recognised two varieties within this species and formally named them *A. paludosa* var. *obovata* and *A. paludosa* var. *baudinii*. Though he did not mention it, Moquin-Tandon also validly published the name *A. paludosa* var. *paludosa*, which related to that part of *A. paludosa* which excluded *A. paludosa* var. *obovata* and *A. paludosa* var. *baudinii*.

In summary, then, the name *A. paludosa* was published by Brown and dates from 1810. The autonym *A. paludosa* var. *paludosa* was published by Moquin-Tandon and dates from 1849. Added to this is the fact that Aellen validly published the name *A. paludosa* subsp. *paludosa* for the taxon including the type of the species name in 1938, when formally publishing the names *A. paludosa* subsp. *graciliflora* and *A. paludosa* subsp. *tridentata* and the new combination *A. paludosa* subsp. *baudinii* for taxa not including this type. Whether or not these latter names are currently accepted for the taxa Allen recognised is irrelevant to the date of valid publication of the name *A. paludosa* subsp. *paludosa* and who its author is.

This situation seems quite logical and is easy to comprehend. It is only when one comes to formally citing these names do the illogicalities occur. Article 46 of the ICBN states that for the indication of the name of a taxon to be accurate and complete, it is necessary to cite the name of the author who validly published it, but goes on to exclude autonyms from this provision. My question is, why are autonyms excluded from this requirement?

If we accept that the purpose for citing author names after botanical names is to act as an abbreviated reference to when and where a particular name was published, and not personal aggrandisement, then there is no logical reason for not citing the name of the validating author with any autonym. Prior to 1981, when autonyms were taken as not validly published and hence without standing under the ICBN, there were no authors or dates of publication to be accounted for or concerned about.

However, since we now have to be concerned about when an autonym was published and by whom, I suggest that we *should* cite the publishing author's name after an autonym, and not persist with the archaic pre-1981 method currently directed by the ICBN.

Using the *Atriplex paludosa* example above, and remembering that an infraspecific name (autonyms included) consists of four words as defined by Article 24.1 of the ICBN, I believe that the variously mentioned names should be cited as follows:–

Atriplex paludosa R.Br., 1810.
Atriplex paludosa var. *baudinii* Moq., 1849.
Atriplex paludosa var. *obovata* Moq., 1849.
Atriplex paludosa var. *paludosa* (R.Br.) Moq., 1849.
Atriplex paludosa subsp. *baudinii* (Moq.) Aellen, 1938.
Atriplex paludosa subsp. *graciliflora* Aellen, 1938.
Atriplex paludosa subsp. *paludosa* (R.Br.) Aellen, 1938.
Atriplex paludosa subsp. *tridentata* Aellen, 1938.

The author citation given above for the autonyms *Atriplex paludosa* var. *paludosa* and *Atriplex paludosa* subsp. *paludosa* are suggestions based on the premise that Moquin-Tandon effectively recombined Robert Brown's species epithet of 1810 at varietal rank in 1849, and Aellen recombined it at subspecies rank much later, in 1938. To cite them as *A. paludosa* R.Br. var. *paludosa* (1849), and *Atriplex paludosa* R.Br. subsp. *paludosa* (1938), as is currently directed by the ICBN, is illogical and meaningless. Robert Brown, as author of *A. paludosa*, had as much to do with validating Moquin-Tandon's or Aellen's autonyms as Linnaeus, author of the genus name *Atriplex*, did in validating them.

I have formally proposed a change to Article 46 of the ICBN to include autonyms within its provisions, and a change in the method of citing authors of autonyms directed by the Code, and those proposals should appear in a forthcoming issue of *Taxon*. Whether or not the botanical community accepts them must await consideration by the Nomenclature sessions of the 15th International Botanical Congress (IBC) in Tokyo next year.

I note that amongst the proposals for change to the ICBN already published in *Taxon*, is a series by Charles Jeffrey of the Royal Botanic Gardens at Kew (K), who proposes that autonyms should be taken as being published simultaneously at relevant subsidiary ranks by the author validating a family, genus or species name. For example, at family rank, an author describing a family according to the ICBN validates a family name, a subfamily name, a tribe name and a subtribe name, the latter three repeating the stem of the family name with different terminations specific to the rank concerned. An author describing a species validates a species name and simultaneously validates a subspecies name, a variety name, a subvariety name, a forma name, and a subforma name. My recollection is that this subject was canvassed at the IBC in Sydney in 1981, but the principle was not accepted at that time.

Should this principle be accepted in 1993, my proposed method of citation of names of publishing authors should, I believe, still apply, only the author names and the date of valid publication would be different. In this case, the autonym at variety rank in *A. paludosa* should be:–

A. paludosa var. *paludosa* R.Br., 1810,

while that at subspecies rank should be:–

A. paludosa subsp. *paludosa* R.Br., 1810.

For more information on the taxonomy and nomenclature of *Atriplex paludosa*, see Paul Wilson's account of *Atriplex* in *Flora of Australia* **4**: 84-132 (1984). Charles Jeffrey's proposals were published in *Taxon* **41**: 361-362 (1992).

Acacia pravissima
The Ovens wattle doth conspire
To grow each year a little higher,
Please place it on your backyard fire,
Or be enclosed by coiled barbed wire.

Eugenia smithii
While at first it looks so frilly,
Its future evils would fill a billy,
To me it seems downright silly,
For gardens to suffer lilly pilly.

Grevillea robusta
For street trees in far Oodnadatta,
It's far more suited than Parramatta;
Or skis for people who now grow fatter.
Silky oak's size is no small matter.

Graham Calcutt
Who Planted That Damned Thing?

U3A, or botany after retirement

George Chippendale
4 Raoul Place
Lyons, A.C.T. 2606

Introduction

Do you know what U3A is? University of the Third Age! Totally disregarding Shakespeare's seven ages of man (and woman, of course), *active* retirement can be looked at as our third age. I actually regard retirement as my *fourth* age, with my working life in (1) Sydney Herbarium, (2) Alice Springs Herbarium, and (3) Forest Research Herbarium, Canberra going before. However, I'll settle for the Third Age. I know well the first years of retirement, when I was writing for the *Flora of Australia*. Having finished that, I felt that dealing with only one genus was too restrictive — I needed to be involved in a different way with plants.

U3A

U3A began in France in 1973, and became established in Australia in 1984, firstly in Victoria. Now there are 29 U3As in Victoria, 11 in NSW, 8 in Qld, 7 in SA, 10 in WA and one each in the ACT, NT, and Tas. All of them are run by retired people for retired people, with a small annual fee entitling members to enrol in any course/courses they can manage to attend. Venues are widespread, without any central campus, with the ACT having courses in many languages, history, music, art, architecture, current affairs, bird-watching, botany, geology, poetry, and genealogy, to name a few.

A few years ago, Roy Pullen gave a course on botany to the ACT U3A, but then he moved to Port Macquarie. I had been interested in contributing, and accepted when I was asked to lecture early in 1990. I imagined a few talks of an hour or so, but the request was for ten sessions of two hours each — with a "generous morning tea period". Having plenty of time to prepare, I wrote my talks on a word processor, and I have given them each year since during the period August to October. Roy called his course "Botany For Fun", and without any collusion, I called mine "Botany for Knowledge and Enjoyment".

I based my course on my working experience, with the following topics:–

1. Introduction of subject and people. Outline. Fertilization
2. Classification, Nomenclature, Rules of Nomenclature. Seeds and Germination
3. Herbaria. Botanic Gardens. The Plant Cell. Mitosis. Meiosis
4. Identification 1
5. Identification 2
6. Ecology. Conservation
7. Weeds. Naturalized Plants. Poisonous Plants. Edible Plants. Leaves, and Respiration and Transpiration
8. Cultivated Plants. History of Botany and Botanists in Australia
9. ACT Flora
10. *Eucalyptus*
11. Walk and talk on Black Mountain
12. Guided walk in Australian National Botanic Gardens.

Meetings were for two hours weekly. I have made only a few changes to the course over my three years, such as expanding the Identification session from one to two weeks, and adding on the brief segments on fertilization, respiration, mitosis, etc. I also asked (and had good response from) some guest speakers for a 10-minute segment (which sometimes ran to 40 minutes) on a topic of their choosing, with a great response from speakers and classes alike. Included were Alex George, Lindsay Pryor, Bob Story, Helen Hewson, Ian Brooker, and David Young. Ian Telford showed the class through the National Botanic Gardens herbarium.

It was rewarding for me to see the interest from the 20 or so "students" each year — and the warmth of regret from all of us when the course ends. In the first year, the "class" included a professor and several university lecturers! I felt the interest generated from attending the course was shown by some class members later joining the voluntary herbarium workers, and some others joining the volunteer guides in the Gardens.

The University of the Third Age is stimulating and enjoyable to all concerned.

COMMENTARY

Taxonomy, patronyms and immortality

Scientific impact and competency, traditionally evaluated by numbers, quality, and journal reputation of articles published, has more recently been judged by subtler methods, e.g. the number of listings of a particular researcher's papers in a *Citation Index* or other computer-based system. To a pioneer in a new and popular research field, analysis of this type may be beneficial, as it often also is to one who cites all of his/her previous publications in each new paper.

However, most taxonomists suffer greatly under this system. Albeit, the describers of *Homo sapiens*, *Rattus rattus*, and *Musca domestica* could do fine, but the typical bench taxonomist might look miserable from this approach, particularly if he/she is surrounded by *E. coli*–mentality molecular biologists.

Taxonomists might be better evaluated by their number of patronyms; that is, the number of species named after them. Tradition holds that we don't name species after ourselves. With colleagues from graduate school, we often engage in a "taxonomic-tit-for-tat", in which we name species after each other; however, there are usually a limited number of times in which this can be done. Below, I propose a more logical and far more beneficial way of preparing for the possibility of future evaluation from a "Quantified Ratings by Analysis of Patronyms" system (hereafter referred to as the QRAP system).

Chain letters have been long used to make money, trade recipes, extol a political candidates virtues, spread religious ideas, and numerous other activities. Why don't we also use them to create patronyms? For example:–

"I have chosen you to participate in this chain letter because of your prolific taxonomic work. Why settle for a thimble of immortality, a mere handful of species named after you, when participating in this chain letter can bring a thousandfold reward?

Just name a species after the person who appears on the top of the following list. Send five copies of this letter to other taxonomists, asking them to name a species after the second person on the list. Your name will then be added onto the list for these letters.

In time, thousands of patronyms — species named after you, scientific immortality — will appear with your name; and all you had to do was name a species after number 1 on the list and send out 5 copies of this letter!

The list of taxonomists who are to receive latinized species names is as follows:-

1. C. Linnaeus
2. A.B. Vulgaris
3. B.C. Americanus
4. X.S. Albus
5. Your name goes here!

I must warn you of what happened to one taxonomist who did not respond to this letter. Within 12 months after breaking this chain, all of the genera in which he had named species were revised, and every species that he had named ended up in synonymy. In fact, two were secondary homonyms! Three lectotypes had to be replaced by a topotype, paralectotype, and an elitotype.

His green eyeshade melted and his crow-quill pen tip snapped. In fact, the only species that had been named after him, an anal parasite of a wombat, was later sunk! He will be immortalized in synonymy. Don't let this happen to you — don't break the chain — join the QRAP movement today!"

Without such a concerted group effort, we taxonomists may publish and perish. In fact, we all must make a concerted effort that deans, chairpersons, molecular biologists — in fact all biologists — remember our worth, by reminding them of the oft-forgotten scientific dictum:- "You can't tell the players without a scorecard!"

Reproduced from the *Journal of Irreproducible Results* **27(1)**: 29 (1981).

Vincent H. Resh
College of National Resources
University of California
Berkeley, California 94720. USA.

DETERMINAVIT SLIPS

In an earlier issue of the *Newsletter*, it was observed that herbaria are interesting places, not the least because they are populated by human beings. These humans often display interesting psychological phenomena, and the wider world should be introduced to this unique behaviour.

The inhabitants of herbaria are often allowed out into the real world, but it appears that their behaviour does not necessarily improve. The botanists shown in this photograph are reported to be collecting specimens of *Eriocaulon*; however, it is apparent that a *faux pas* can be perpetrated just as easily out-of-doors as inside.

The owner of the photograph wishes to remain anonymous, and it is up to the reader to identify the photographer's models.

I once heard two Australian discussing Banks, the scientist who accompanied Captain Cook on his voyage of exploration.

"Banks was a pooftah."

"Have you got any proof of that?"

"He was a botanist and a pommy — what more proof do you want?"

Reprinted from the *Sydney Morning Herald*, 20 June 1985 Richard West

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A.S.B.S. Inc. BUSINESS

Fifteenth General Meeting

The 15th General Meeting of the Australian Systematic Botany Society Incorporated will be held at 5.30 pm on wednesday 20 January 1993 at the University of Tasmania, Hobart, Tasmania, in conjunction with the "Southern Temperate Ecosystems: Origin and Diversification" conference (18–22 January 1993).

Any member wishing to place an item (or items) on the agenda should notify the Secretary (Dr Barry J. Conn) in writing by 13 January 1993. Fifteenth General Meeting

ASBS Inc. Council meeting

A Council Meeting of the Australian Systematic Botany Society Incorporated will be held at 5.30 pm, tuesday 19 January 1993, at the University of Tasmania, Hobart, Tas.

Nancy T. Burbidge memorial lecture

The Nancy T. Burbidge Memorial Lecture will be held at 12.00 noon on thursday 21 January 1993, at the University of Tasmania, Hobart, Tas. Dr Elizabeth Truswell (Australian Geological Survey, Canberra, ACT) has kindly accepted the Society's invitation to present this Lecture. Elizabeth is a Fellow of the Academy of Science.

Council elections

Nominations for all Council positions have been received. Since there are three nominations for the two positions of Councillor, an election is necessary to fill these positions. The nominees are:–

Dr Jeremy Bruhl (Lecturer, University of New England, Armidale, NSW);

Mr John Clarkson (Principal Botanist, Queensland Herbarium, Mareeba, Department of Environment and Heritage, Qld); and

Dr Tim Entwisle (Botanist, National Herbarium of Victoria, Royal Botanic Gardens, South Yarra, Vic.).

Voting forms are included in this issue of the *Newsletter*. Completed forms must be received by the Returning Officer:

Dr B.J. Conn,
National Herbarium of NSW,
Mrs Macquaries Road,
Sydney, NSW 2000. Australia
Fax (02) 251 4403

by 5.00 pm on friday 15 January 1993.

Only one nomination was received for each of the other Council positions.

Barry Conn
Secretary, ASBS Inc.

South temperate ecosystems conference

18-22 January 1993

This a final reminder that anyone still wishing to register should do so immediately. 171 registrants have been received so far, 50 of whom are from overseas. For further information, contact:–

Bob Hill
Dept of Plant Science, University of Tasmania
Tel (002) 20 2601
Fax (002) 20 2698

Bob Hill
University of Tasmania

The proposed new ASBS Inc. Constitution — corrections

As a result of feed-back from members, we have made some very minor though definite modi-

fications to the draft ASBS Inc. Constitution. Most are corrections of typing mistakes, and one is a modification to clarify procedure.

In the Table of Provisions (pages 1 & 2) to accord with the main text, number 26 has been corrected to "Presiding member"; number 27 has been added to "Adjournment"; number 39 "Public Officer" has been added after number 38.

In Appendix 1 (page 17), the bottom box has the text "nominate the applicant" and "signature of proposer" changed to read "second the nomination of the applicant" and "signature of the seconder" respectively, to accord with what is in the model rules.

To clarify what is intended/required for nomination to membership, the wording "a member" in subrule 3(1)a on page 4 has been changed to read "two (2) members".

B. Conn, M. Crisp, G. Guymer,
R. Henderson
ASBS Constitution Committee

A.S.B.S. Member Profiles

Jeremy Bruhl
A.S.B.S. Councillor

As a new lecturer in the Department of Botany at the University of New England, there is hardly any time to reflect on the past. There are courses to develop, lectures to write, practical classes to design, students to supervise, projects to run, papers to write, and I have to pack for a collecting trip to north Queensland in a few days.

Still, I'm glad that I spent my first ten years in the small N.S.W. country town of Taree, and that my family fostered an interest in plants, animals, experimental biology (cooking), and gardening. Unfortunately, the move to Sydney in the late 60s meant a shift from cold, flavoured, creamy milk to warm, unflavoured, watery milk supplied at primary school.

At high school, my interests lay more with music and ancient history than science. Nevertheless, my general interest in plants and animals was strong, and I contemplated agricultural studies. That hardly seemed appropriate for someone allergic to horses, cows, and chickens — deary me! Ironically, those allergies were over before I finished a Diploma of Horticultural Science at Burnley Horticultural College in Melbourne.

Unlike some of the people at Burnley, I actually enjoyed the science component, especially botany. So, despite having sworn off studying, I started a B.Sc. in botany with zoology at the University of New South Wales, while working in Sydney as a Quarantine Officer. I continued these studies when I moved to the Gardens Advisory Service of the Department of Agriculture.

After three years part-time at UNSW, I moved to full-time study, culminating in an intense and exciting honours year on Asteraceae:Anthemideae supervised by Chris Quinn.

Afterwards, perhaps naively, out of interest and with the aim of not only gaining depth of knowledge but maintaining a broad-based approach to botany, I moved to Canberra to do a Ph.D. on Cyperaceae with Les Watson at RSBS. Here I became convinced of the usefulness of the application of automated taxonomic databasing (using DELTA). Now I can fully appreciate the positive role of Chris and Les as excellent supervisors.

One hears about advertisements prepared for specific people. It was seemingly one such ad that I answered that ultimately led me to a monocot post-doctoral fellowship at Missouri Botanical Garden, with Nancy Morin. The short time there was full and rewarding — MO is certainly a grand-central-station for systematics!

I returned to Australia from the *Flora of North America* to the *Flora of Australia* project. The latter work, dealing with Euphorbiaceae:Phyllantheae is continuing at UNE with the assistance of John Hunter. Daisies, sedges, and spurges — does that translate to masochism? No, just a good stereoscope and computer.

After years of walking between two great institutions — RSBS and the Australian National Herbarium — it's good to be in an institution that combines both:- the Department of Botany and the New England Herbarium (NE). Thanks to Gordon White, the 50,000 specimens have been databased; and thanks to Wal Whalley (Head of Department) and the rest of the staff, whole plant biology (ecology and systematics) is a valued pursuit. Indeed, we run a field- and project-based third year subject "Botany in Perspective". I will also have involvement in mycology, recognizing the need for a better understanding of our fungi.

I hope to foster greater student involvement in ASBS, and I would like to see better links among the university herbaria, and between university herbaria and the CHAH herbaria.

REPORTS

Australian Biological Resources Study

The first volume of the *Flora of Australia* on lichens, *Volume 54*, was launched as planned at the Symposium of the International Association for Lichenologists in Båstad, Sweden, on 4 September. Cheryl Grgurinovic attended the Symposium on behalf of ABRS, and a number of Australian lichenologists were also present. Almost synchronously, a function to celebrate its publication took place at the Australian National Botanic Gardens, Canberra, the main speech being delivered by Dr David Green, Science Adviser to the Minister for the Arts, Sport, the Environment and Territories.

Volume 50 is in the final editorial stages and will go to press early in 1993. All manuscripts are now in for its companion, *Volume 49*, on the floras of Lord Howe and Norfolk Islands, and this should be published in the first half of 1994. *Volume 55* is proceeding steadily, while *2*, *11* and *59* will pick up speed when new staff are appointed in the new year.

The Flora Editorial Committee met in Canberra on 15 and 16 September. It accepted the report of the Algae Workshop held at the National Herbarium of Victoria on 9 and 10 June, and recommended that several items be placed on the Preferred Objectives for ABRS grants in 1994. This marks the culmination of what could be termed the preliminary round of systematic workshops on planning large groups for the *Flora of Australia*. All non-vascular groups have now been brought into the program, although the limited resources necessarily have constrained the amount of research that can be supported.

The Editorial Committee recommended that the *Flora* now use the author citations given in the new work *Authors of Plant Names* by R.K. Brummitt and C.E. Powell, recently published by the Royal Botanic Gardens, Kew.

On 31 December, Barbara Briggs and Paul Wilson will complete their terms on the Flora Editorial Committee. Both were members of the original "Flora Study Group" set up in 1979 and have made significant contributions to the work of the Committee. The *Flora* staff of ABRS acknowledges their input to the *Flora* project and looks forward to their further involvement as contributors to forthcoming volumes.

Staff

In September, Cheryl Grgurinovic attended the Congress of European Mycologists at Kew, and Helen Hewson attended the second Flora Malesiana Symposium in Yogyakarta, Indonesia. Helen Thompson attended an editing workshop at the University of New England in August. In November, Alex George attended meetings of IOPI in Xalapa, México, and spent a few days in St Louis, Missouri, U.S.A., mainly to discuss and compare the procedures being followed for the *Flora of North America* and the *Flora of Australia*. *Volumes 1* and *2* of FNA are currently in press. In November, Jane Mowatt attended the Bryophyte Workshop at Mt Ruapchu, central North Island, New Zealand.

Paul Hattersley has taken up the position of Chief Plant Physiologist with the Department of Primary Industries in Brisbane. His contribution to the progress and development of the *Flora of Australia* project was much appreciated by the staff. A new position of Scientific Editor (Senior Professional Officer Grade C) has been created within the Flora Section. This and Paul's vacated position, together with that of Executive Editor, Flora of Australia, (soon to become vacant with the departure of Alex George) were advertised in the press on 14 November, applications closing on 4 December. A further position to be advertised shortly will be that of Administrative Assistant, Savita Meek being due to leave in the New Year after nearly three years of sound support for the Flora section.

A personal note

After twelve years with the *Flora of Australia* project it is time for me to move on. During this

period ABRS has published 13 volumes of the *Flora of Australia* and 14 botanical numbers of the *Australian Flora and Fauna Series*, totalling 9,788 pages. I express here my appreciation to those, both inside and outside ABRS, who have worked for the *Flora*, while those who have not I urge to consider how you might usefully assist to bring forward the goal of completing this round of research on the Australian flora. The need for basic information on what plants we have and where they occur is ever greater, and the sooner we provide that information the sooner the next stage of systematic and biological research can flourish.

Alex George
Flora of Australia

Australian Botanical Liaison Officer

I officially replaced Philip Short as ABLO on 1 September 1992, although I had arrived in England on 11 July in order to attend the International Legume Conference. So what was Peter Weston up to during July and August? We will get to that, but first to strictly ABLO news.

So far, inquiries from Australia have come in at about half the rate of the comparable period for last year. This has been compensated to some extent by a higher number of British inquiries. Most of the Australian jobs have been straightforward, well-documented requests for photocopies of references and photographs of type specimens from K and BM.

A few, however, have been surprisingly different, such as the request from Maryborough City Council for information on John Bidwill's collecting localities in Queensland. The registers of incoming specimens proved not to be very helpful, and the labels of all of Bidwell's specimens that I could find simply cite "Wide Bay". Interestingly though, the published type citations of one of these species, *Araucaria bidwillii* Hook., offered a far more detailed specification of collecting locality:- "Mount Brisbane Range of hills, 70 miles N.W. of Moreton Bay, Australia". This led me to an examination of Bidwill's letters to William Hooker. Although these turned out to be a source of some botanical information, they proved to be a far richer repository of juicy gossip about the strained relationship between Bidwill and the man who had been sent from Britain to replace him as director of the Sydney Botanic Gardens, Charles Moore.

I have had four Australian visitors, one of whom turned up unannounced and was sent away by the messengers because I was out. He did come back later, and eventually spent several productive days working in the herbarium. I guess that the obvious message is that botanists are welcome here but that it is wise to notify the ABLO in advance. Les Pedley arrived here recently for a long stay, working principally on Australian legumes.

On the personal side, both I and my family are enjoying life in London very much. It took us the usual two weeks to settle in, and we are now renting a house in Teddington, a leafy suburb next to the Thames, about 12 km from Kew. I am able to cycle to work almost entirely along the two-path beside the river, which I find as enjoyable as commuting by ferry on Sydney Harbour. The children are at a pair of small back-to-back infants and primary schools just around the corner from home.

One of the under-rated joys of spending a year in Kew is being able to take advantage of the broad intellectual environment here. Of course, London itself has two large institutes of botanical systematics, and is home to the Linnean Society (which I was surprised and delighted to discover is an active and lively organization) as well as several large university colleges. But it is also central to a cluster of cities that are formidable academic centres in their own right. Intellectual cross-fertilization through frequent visits and meetings is taken for granted here. As well as the legume conference, I have been able to attend four other relevant meetings so far. All of them were interesting, and all warrant a mention.

The most notable feature of the International Legume Conference (13–17 July) for me was the dominance of two factors:- cladistics, and molecular biology. This was the first general conference that I have attended at which cladistic analysis has been treated as a mainstream technique. About time too! Even the ecologists were using cladograms. The rapid production of molecular data partly explains this — explicit methods are indispensable when dealing with characters as unromantic as GATATC..... Molecular systematics is already

revolutionizing the way that legume systematists see the family, and this trend is bound to continue, with several North American labs, principally Jeff Doyle's group at Cornell, voraciously sampling more and more of the most problematic taxa and coming up with convincing solutions to long-standing problems.

Explicit methods are also indispensable when one is trying to synthesize all of the available character data for a family of 12,000 species, as Jenny Chappill ("Cladistic analysis of the Leguminosae") is trying to do by cladistically analyzing the whole family. She certainly is regarded by most leguminologists as courageous for tackling a project of this scale and importance, although I do not think that anyone is expecting the big picture to be clarified in a hurry.

Ecologists are now realizing that phylogenetic analysis is a useful, perhaps essential, component in the study of evolutionary processes. This idea was stressed enthusiastically by Doyle McKey in his talk ("Animal-plant interactions — what is special about legumes") at the legume conference, and it provided the basis for a meeting of the Linnean in London entitled Pattern and Process: Phylogenetic Approaches to Ecological Problems (1–2 September).

This meeting proved to be something of a showdown between two groups approaching the subject from diametrically opposed origins. One, exemplified in Jonathan Coddington in his talk ("Homology and convergence, structure and function in adaptation"), sees adaptations as a class of evolutionary novelties and thus a set of historically unique events. Phylogenetic analysis is obviously a pre-requisite for such an approach.

The "opposition", led by Paul Harvey ("Molecular phylogenies can reveal the cladogenesis and structure in natural communities") and Mark Pagel ("Directional versus cross-sectional tests of comparative hypotheses"), aims to use phylogenies to identify phylogenetic information in comparative data sets and "expunge" it before searching for correlations between morphological or life-history traits and environmental variables. This approach sees natural selection as a universal law and adaptations as particular manifestations of that law.

That "expunging" phylogenetic information from biological data is a difficult job was elegantly demonstrated by Dan Faith and Lee Belbin in an analysis of published eucalypt phylogenies ("Distinguishing phylogenetic effects in multivariate models relating convergent morphology to environment"), It seemed to me that the (sometimes acrimonious) quarrels over "the right approach" will be forgotten once one of the alternatives (if either) proves decisively to be the more empirically fruitful.

The theme of phylogenetic analysis and adaptation also had been run at the Hennig Society Meeting in Paris (25–28 August), in the form of John Wenzel's neat study of cryptic nest architecture in the wasp genus *Leipomeles*.

Of particular interest to botanists, though, was Victor Albert and Mark Chase's presentation ("Phylogenetic analysis of seed plants from rbcL sequence data") of results from a paper (with 38 authors!) that promises to be the *magnum opus* of plant molecular systematics to date. (One must be thankful that they have not implemented any of their novel discoveries in nomenclature in the form of new combinations!) This analysis is fascinating from all sorts of angles. They sampled DNA sequences of a chloroplast gene, rbcL, from 475 species, and attempted to construct parsimonious cladograms from these data. No-one has ever tried seriously to analyze a data set of this size, and the logistical difficulties in doing so were graphically described by Albert — heuristic searches by the computer program PAUP 3.0 often tied up a Sun workstation for weeks on end. The authors cheerfully admitted that their published results are unlikely to be the most parsimonious solutions. Nevertheless, many groupings are clearly stable, and these have interesting implications for plant classification. Many well-entrenched formal taxa such as the angiosperms, the monocots, and most families including Asteraceae, Onagraceae, Magnoliaceae, Pinaceae and Zamiaceae come through the test with flying colours as putatively monophyletic. Others, however, such as the dicots, the gymnosperms, and families such as the Ericaceae and Hamamelidaceae, not surprisingly seem to be paraphyletic. Of greater concern was the suggestion that the conifers are also paraphyletic, the Pinaceae being closer to the angiosperms than to the other conifers.

Another very good botanical paper ("Molecular phylogeny of eucalypts", by Frank Udovicic, Pauline Ladiges and G. McFadden) won Frank a share of the Donn Rosen award for best student presentation. This analysis, based on 5S ribosomal DNA sequences, strongly corroborated the previously controversial idea that the eucalypts split neatly into two basal clades, with bloodwoods and *Angophora* in one group and the rest of the eucalypts in the other. It also strongly supported the monophyly of the bloodwoods and thus the recognition of the genus *Corymbia*.

Shape and Form in Plants and Fungi was another meeting organized by the Linnean Society, and held at the Royal Botanic Gardens Edinburgh (1–2 October). This meeting was dominated by those people interested in morphogenesis, and proved to be another show-down between opposing groups, this time between what could be labelled the epigeneticists and the geneticists. Brian Goodwin ("Why natural selection and gene activity don't explain plant form — and what does") scored the first goal for the epigenetics team by dubbing the concept of the "genetic program for development" as "bad science", a tactic that had the geneticists' centre-forward spluttering with indignation. He then presented a plausible model of morphogenesis in the unicellular alga, *Acetabularia*, based solely on biophysical parameters.

The geneticists struck back through goals by Enrico Coen and a host of others from John Innes Institute, with their exquisite experimental studies of homeotic mutants in *Antirrhinum* and *Arabidopsis*. Coen ("Genes controlling flower development in *Antirrhinum*") presented a convincing genetic model for the developmental identification of different floral whorls, showing that it effectively falsified P.B. Green's biophysical model.

One of the strong impressions that I gained from this meeting was that despite the power and elegance of molecular genetics techniques, the epigeneticists were still right in principle and that a synthesis of genetic and epigenetic theory offers the best way forward. Moreover, there is obviously still a yawning gulf in our understanding of plant development — the physiological connections between molecular genetic and gross morphogenetic processes are still utterly unclear. The other strong impression that I left with was the significance of developmental biology for systematics, and for concepts of homology in particular.

The most recent meeting that I have attended was the Linnean Society's one-day symposium on The Alternation of Generations in Plants, at the Natural History Museum in London. Once again, molecular and cladistic approaches yielded the most decisive solutions to the problems that they tackled. Hugh Dickson ("The molecular basis of alternation of generations in higher plants"), armed with the ability to experimentally divert microspores into embryonic development, gave a tantalizingly incomplete view of the molecular genetic processes associated with the switch to meiosis in angiosperms.

Paul Kenrick ("Alternation of generations in land plants: evidence from the fossil record") and Richard Bateman ("Unisexual gametophytes via heterospory: the most iterative key innovation in the evolutionary history of the plant kingdom") presented what were, to me, convincing demonstrations that (a) the evolution of land plants has involved the relative simplification of the gametophyte and corresponding elaboration of the sporophyte; and (b) "heterospory" is a heterogeneous array of conditions that have evolved independently in many different lineages of plants. However, these demonstrations were clearly unconvincing to those who apparently wanted to "observe" these changes "directly" in a "complete" fossil record.

Peter Weston
ABLO

Australian Biological Resources Study Flora Grants 1993

Australia

Mr L.W.Jessup – Australian Botanical Liaison Officer $39,309

Herbarium Loans – Supplementary funding to herbaria to assist with costs of lending specimens for *Flora of Australia* work. $50,000

Australian Capital Territory

Australian National University

Dr L. Watson – Automated taxonomic revision and keys for Poaceae:Pooideae. $47,742

Dr L. Watson – Poaceae:Arundinoideae: Danthonieae — DELTA treatment and preparation of account. $6,600

CSIRO Division of Plant Industry

Mr L.A. Craven – Systematic studies in *Melaleuca* (Myrtaceae). $58,899

Dr J. West – Generic limits in Australian Rhamnaceae. $48,380

Dr J. West – Taxonomic revisions in Zygophyllaceae and Apiaceae in Australia. $23,867

Unattached

Mr A. George – A revision of the genus *Andersonia* R.Br. Epacridaceae. (to be reassigned) $28,889
Mr C. Puttock – Revision of *Ozothamnus* R.Br. $39,061

New South Wales

Forestry Commission of New South Wales

Mr J.A. Simpson – *Halophytopthora* (Pythiales: Oomycota) in Australia. $3,200

National Herbarium of New South Wales

Dr B.G. Briggs – Treatment of Restionaceae. $39,400
Dr E.A. Brown – Revisionary studies in Australian Lepidoziaceae. $50,490
Dr B.J. Conn – Revisionary studies in the Australian Loganiaceae. $29,580
Dr B.J. Conn – Revisionary studies in the Australian Xyridaceae. $22,524
Dr B.J. Conn – Taxonomic revision of Prostantheroideae. $35,878
Dr C.L. Gross – Flora text preparation of *Chamaecrista* and Molluginaceae. $22,948
Dr J.M. Powell – Epacridaceae treatment. $19,138
Dr H.P. Ramsay – Preparation of manuscripts for the family Bryaceae (Bryopsida). $5,000
Mrs K.L. Wilson – Systematic studies in Australian Cyperaceae. $37,800
Dr P.G. Wilson – Taxonomic revision of the genus *Indigofera*. $16,200

University of New England

Dr J.J. Bruhl – Automated taxonomic revision and keys for Phyllantheae — Euphorbiaceae. $34,655

University of Sydney

Dr M.J. Henwood – Phylogeny and biogeography of *Astrotricha* (Apiaceae/Araliaceae). $17,330

Unattached

Mr J.B. Williams – A revision of *Parsonsia* (Apocynaceae) in Australia plus *Flora* treatment. $25,402

Northern Territory

Conservation Commission of the Northern Territory

Dr G.J. Leach – Revision of Australian Eriocaulaceae. $17,122

Northern Territory University

Mr N. Sammy – A taxonomic revision of the lichen genus *Heterodermia* in Australia. $4,800

Queensland

James Cook University

Associate Professor B.R. Jackes – Revision of the Myrsinaceae. $6,614

Queensland Herbarium

Mr P.I. Forster – Revision of Australian Euphorbiaceae. $41,560
Mr R.J.F. Henderson – Taxonomic revision of Euphorbiaceae. $19,500
Mr L.W. Jessup – *Flora* accounts of families Sapotaceae, Ebenaceae, Symplocaceae. $15,878

South Australia

Unattached

Mrs R.M. Barker – Revisions in *Sida* and *Abutilon* (Malvaceae). $19,500
Dr B.R. Randell – *Flora* treatment of *Halgania*. $20,500

Victoria

Monash University

Associate Professor N.D. Hallam – Taxonomic investigations of Anthoceratales in Australia. $21,397

National Herbarium of Victoria

Dr P.M. McCarthy – Systematic studies on Verrucariales (lichens). $6,604

University of Melbourne

Dr P.Y. Ladiges – Systematic and biogeographic analysis of *Boronia* section *Valvatae*. $22,989

Unattached

Mr T.W. May – Catalogue and census of Australian macrofungi. $36,500

Western Australia

CSIRO Division of Forestry

Dr N.L. Bougher – Taxonomic revision of truffle-like Cortinariaceae. $12,705

Manjimup Research Centre

Dr T.D. Macfarlane – Flora account of *Pultenaea* and related genera. $5,660

University of Western Australia

Drs J.A. Chappill & E.M. Bennett – Taxonomic revision of Sterculiaceae tribe Lasiopetalae. $28,485

Dr J.A. Chappill – A taxonomic revision of *Jacksonia* R.Br. (tribe Mirbelieae, Fabaceae). $36,970

Western Australian Herbarium

Dr J.A. Armstrong – Taxonomy of the Boronieae (Rutaceae). $30,500

Mr N.S. Lander – Revision of *Olearia* (eastern state species). $36,000

Overseas

Unattached

Dr B.M. Murray – Andreaeceae of Australia. $16,362

Alex George
Flora of Australia

Australian Biological Resources Study Flora Grants
Preferred Objectives for 1994

The ABRS Advisory Committee met again on 26 November. Its list of Preferred Objectives for grants in 1994 is given below.

Applications will close, as usual, on 10 April 1993. Current grantees who wish to apply for a renewal in 1994 are reminded that they must do so by the same date.

Vascular Plants
- *Boronia* excluding sect. *Valvatae*
- Caesalpiniaceae *pro parte*
- Mimosaceae (excluding *Acacia*)
- Pittosporaceae
- *Pomaderris* (Rhamnaceae)
- Zygophyllaceae
- *Luzula* (Juncaceae)
- Paniceae and Chloridoideae (Poaceae) — conversion of DELTA treatments to *Flora* format
- Polypodiaceae

Lichens
- Acarosporaceae
- Bacidiaceae (*Bacidia, Lecania*)
- Lecanoraceae (*Lecanora*)
- Physciaceae (*Buellia*)
- Stereocaulaceae
- Umbilicariaceae

Fungi
- Cortinariaceae
- Oomycetes (excluding *Halophytophthora*)
- Phyllacoraceae

Bryophytes
- Dicranaceae
- Hookeriinae

Algae
- Phaeophyta *pro parte* (Dictyotales, Sphacelariales, Cutleriales and Sporochnales)
- Siphonous Chlorophyta (Caulerpales, Siphonocladales and Dasycladales)

Alex George
Flora of Australia

The Second Flora Malesiana Symposium

The Second Flora Malesiana Symposium was held at the Gadjah Mada University, Yogyakarta, Indonesia, on the 7–12 September 1992, three years after the first meeting in Leiden. It was attended by 120 participants from 14 countries (Indonesia 64, Netherlands 15, Japan 10, Britain 8, USA 7, Malaysia 5, Australia 3, Taiwan 2, Switzerland 1, Philippines 1, India 1, Italy 1, Austria 1, Singapore 1), and was organized by the Indonesian Institute of Sciences (LIPI) and the Biology Faculty of the Gadjah Mada University under the auspices of the Flora Malesiana Foundation. Other Australian participants were Bryan Barlow (CSIRO, Canberra) and Helen Hewson (ABRS, Canberra).

The rationale for staging the Symposium was that the first meeting (staged partly to honour Prof. C.G.G.J. van Steenis, the founder of the Flora Malesiana Project) had been a great success, and that a follow-up meeting could monitor progress of the anticipated quicker production of the *Flora Malesiana* agreed to at the Leiden symposium.

The symposium opened with two general lectures on the Malesian flora, one by John Dransfield of Kew, on the diversity of the Malesian flora, and the other by John Burnley of the Arnold Arboretum, on resources for floristic botany in the *Flora Malesiana* region. The essential features of these introductory papers were the enormous floristic richness of the Malesian region, and that the estimate of 25,000 species of flowering plants at the 1989 meeting had increased by 50% to c. 40,000 species, based on claculations provided by Marco Roos of the Rijksherbarium.

Another sobering fact from Burley's paper, and parallelled by a similar trend in Australia, was the declining number of plant taxonomists available to document this rich biodiversity, and the increasing age structure of practising taxonomists. However, an encouraging development announced by Burley was the Indonesian Biodiversity Action Plan, funded by the Global Environment Facility of the World Bank and the United Nations Development Program. With these funds, the management of the collections at Herbarium Bogoriense are to be upgraded and Indonesian systematists are to be trained.

The next three sessions were concerned with progress in the preparation of the *Flora Malesiana*, with papers on many different taxonomic groups. An overall action plan was given by Marco Roos, whereby it was aimed to have the *Flora* completed in 20 years. In addition to the oral presentations, 31 papers were presented in poster form, including one that I had prepared with Mike Lazarides on the biogeography of Indo-Pacific grasses.

On the third day, delegates were taken on a field trip to Batu Retno, a local kitchen garden, to Waganama, a re-afforested site of Gadjah Mada University, and the famous Borobudur Temple, the largest religious shrine in the southern hemisphere.

The final two days of papers of the symposium were grouped under headings of biodiversity (within and beyond Malesia), taxonomic implications of botanical studies on Malesian plants, and the role of botanical institutions in the 21st century. On the friday afternoon, four workshops were held under the headings:–

- fund raising
- recruitment of new authors
- training and exchange programs
- *Flora Malesiana* checklist

A plenary session was held on the saturday morning.

I attended the checklist workshop, whereby it was agreed that the minimum dataset for the project should be grouped under the headings:–

Accepted name — family, genus, specific epithet, infraspecific name, basionym (all with authors)

Bibliographic source — authors, book title or journal volume, year, page, plate (if any). Books abbreviated as in TL2, journals as in BPH2. Bibliographic reference to the latest revision of a genus

Synonyms — same information as for accepted name plus a reference to the accepted name. Includes misapplied names, which are to be flagged

Distribution — will follow the island groups of van Steenis (nine areas) and political units

Status of species — native, introduced, or unknown

Hybrid genus flag

Hybrid species flag

Aggregate/microspecies flag — to account for contrasting delimitations of groups of species

Compiler — name of compiling botanist

Verifier — name of verifying botanist

Notes — free text field for any miscellaneous information

Reliability — A for recently revised; B for partially revised; C for not revised for c. 40 years

Date — date of last entry.

Compilation will be mainly from the literature,

starting from the most recent revisions and publications. The data for families that are most unknown are to be compiled first. The database is to be maintained in BO, L and MO, with information being exchanged between these institutes via an exchange format. Other institutes, particularly those on the Board of the Flora Malesiana, should be involved in the checklist project. Data should be freely available to all biologists, but commericial operations would pay according to charges decided by the Flora Malesiana Foundation.

A very enjoyable and successful banquet was held on the thursday evening, followed by a speech of thanks to the Indonesian organizers of the symposium by Peter Baas, director of the Rijksherbarium. This was followed by an *ad hoc* concert of national songs by individuals and groupings of participants. The evening ended with the presentation of certificates and a length of batik to all participants.

Prior to the Yogyakarta symposium, I had spent two profitable days at the herbarium of the Singapore Botanical Gardens and three days at Herbarium Bogoriense, investigating problems concerned with the taxonomy of the *Sporobolus indicus* complex. I also undertook overall examinations of the grass collections at both herbaria, in relation to a database of Indo-Pacific grasses that I am compiling. I received much valuable information from Jef Veldkamp of the Rijksherbarium, who annotated a preliminary printout of Malesian grasses, from information that he had on his notebook computer. Elizabeth Widjaja of Herbarium Bogoriense provided me with updated information on the taxonomic status of Indonesian bamboos.

Bryan Simon
Queensland Herbarium

International Transfer Format — further news

A computer workshop on "Plant documentation and records in botanic gardens" was held on 23 October 1993, at the Third International Botanic Gardens Conservation Congress, in Rio de Janeiro, Brazil.

Diane Wyse Jackson (Information Systems Officer, Botanic Gardens Conservation International) stated (in a letter to me) that the Workshop turned out to be more of a training and information workshop than a problem solving one.

However, it was decided that variable length fields would be acceptable in ITF as long as the fields were appropriately defined. Note that the same 32 fields in record type 2 would remain unchanged. This could be done by making the first record compulsory, and in position 73 – record type 1 entering the extended ASCII character that was being used to denote the end of a field, and in position 74 – record type 1 the extended ASCII character used to denote the end of a record.

The free text contents would then begin at position 75, and would be 288 characters long only. This record (record type 1) would be the only fixed length record, and even that is not necessary with the right program — only the first 8 fields would have to be the fixed length.

Alternatively, the first character (position 1) would be the Record type (as already defined), followed by the end-of-field character (position 2) and then the end of record character (position 3). I assume that all fields after these could be of variable length. Agreement as to where these two extra characters are to be situated is necessary in the first record.

Record type 2 would obviously not have a fixed number of characters, but one could read in a string of text and denote the end of each record. Those sending data should make sure that record type 2 contains 32 field characters for each record. These fields are to coincide with the original ITF.

This modification to ITF, after agreement, could be formalized by publication of the variable length ITF version as an addendum to the ITF version 01.00, available from the Hunt Institute.

Barry Conn
TDWG Regional Secretary (Australia)

International Organization for Plant Information

A series of meetings of the Organization was held in Xalapa, México, from 2–5 November 1992, immediately preceding the meeting there of the International Working Group on Taxonomic Databases for Plant Sciences (TDWG). All of IOPI's Working Groups as well as the Council and Checklist Committee held meetings there, prior to a Plenary Meeting and the Annual General Meeting. Seven representatives from Australian institutions attended.

Following vigorous debate at Xalapa, IOPI is

well and truly back on course, with an intensive year ahead to design and set up the structure for a World Vascular Plant Checklist, a communication network, and a directory of existing databases. Karen Wilson, Royal Botanic Gardens Sydney, was appointed chairperson of the IOPI Checklist Committee. IOPI will soon be actively seeking sponsorship to support the project, although much can be achieved in the meantime by the many people and institutions who consider the project sufficiently important to commit some of their own resources.

The following are current Australian members of IOPI:–

Participating Centre Members

Australian Biological Resources Study, GPO Box 636, Canberra, A.C.T. 2601
Australian National Botanic Gardens, GPO Box 1777, Canberra, A.C.T. 2601
Bioinformatics Unit, Research School of Biological Sciences, Australian National University, GPO Box 4, Canberra, A.C.T. 2601
Environmental Resources Information Network, GPO Box 636, Canberra, A.C.T. 2601
Taxonomy Laboratory, Research School of Biological Sciences, Australian National University, GPO Box 4, Canberra, A.C.T. 2601
Royal Botanic Gardens Sydney, Mrs Macquarie's Road, Sydney, N.S.W. 2000
School of Computing Sciences, University of Technology Sydney, PO Box 123, Broadway, N.S.W. 2007
Western Australian Herbarium, Dept of Conservation and Land Management, PO Box 104, Como, W.A. 6152
Council of Heads of Australian Herbaria, c/- Western Australian Herbarium, Dept of Conservation and Land Management, PO Box 104, Como, W.A. 6152

Personal Members

Dr Jeremy Bruhl, Dept of Botany, University of New England, Armidale, New South Wales 2350
Mr Alex George (current address below)

Anyone or any institution wanting further information or wishing to apply for membership should contact the Secretary, Alex George,
Australian Biological Resources Study,
GPO Box 636,
Canberra, A.C.T. 2601.
fax (06) 2509448
phone (06) 2509440.

Alex George
Flora of Australia

Nancy Burbidge honoured

On 14 October 1992, in a Special Gazette S181 of the A.C.T. Government, a peak in Namadgi National Park, ACT, was named Mt Burbidge.

This gazettal was after much representation, mainly by the National Parks Association of the ACT. Nancy was the founding president of this Association, and worked strongly for the establishment of this National Park, following having it made Gudgenby Nature Reserve.

It is most pleasing to see Nancy honoured in this way. Mt Burbidge is 1,742 metres high, and can be seen from the Boboyan Forest car park.

George Chippendale
Canberra

Report on FASTS meeting

Competency-based standards for non-regulated professions

Earlier this year, the Federation of Australian Scientific and Technological Societies (FASTS) held a seminar-style meeting in Canberra about accreditation and development of competency-based standards (CBS) for professions. I went along as the ASBS representative.

The purpose of this report is to inform ASBS members of the government push for CBS, some of the associated jargon, and to encourage some thought about the potential consequences.

The Australian Government has set up a National Training Board (NTB) and the National Office of Overseas Skill Recognition (NOOSR). One responsibility of these groups has been to encourage the development of CBS for professions that come under state or federal regulation. They are now looking at non-regulated professions.

The NTB seeks CBS to be the benchmark for national certification and accreditation for training systems, "articulation" between various training systems, recognition of individual competences

regardless of how they were gained (formal or informal, public or private sector), skills linked to career paths, transferability and portability, etc. The NTB deals mainly with the technical levels, while NOOSR deals with the professions.

At the meeting, models of professional societies that have established CBS were provided by the Australian Computer Society (ACS, under the title: "So you want to survive as a professional society?"), the Australian Institute of Agricultural Scientists, and the Australian Psychologists Society. Dr Ivan Johnstone outlined the National Laboratory Science Technician project called Australian Committee for Training and Curriculum (ACTRAC), which aims at CBS appraisal for TAFE staff.

Dr Christa Chritchley saw merit in CBS as a mode of assessing teaching and research standards in universities. Others may claim that peer review and student numbers already serve that role.

ASBS is in a different position to that of many other FASTS members. Anyone with an interest in systematic botany may join ASBS, i.e. it is not strictly a professional society. Many members wear a number of hats, e.g. as educator, scientist, botanist, taxonomist — by which CBS should they be judged?

While there may be merit in CBS and recognizing the value of skill and not simply knowledge (can anyone separate the two?), I do not believe that ASBS is the correct forum for this development for its members — the society is too broadly based. The Australian Institute of Biology (AIB) may well be a more appropriate forum, though their representative at the meeting was singularly unimpressed with the move. [The AIB is moving ahead with the issue of accreditation, nevertheless — Eds.]

NOOSR produces a newsletter, and a copy is sent to Mike Crisp as ASBS President. He will also have a copy of the information from this meeting. So, you could contact him if you wish to follow up on this issue, or you could contact NTB and NOOSR direct.

Jeremy Bruhl
Department of Botany
University of New England

REVIEWS

Flora of New South Wales, Volume 2.

Edited by Gwen Harden. University of NSW Press, Kensington. 1991. 574 pp. ISBN 0-86840-164-1. $80.

This volume continues the excellent start made with *Volume 1* in providing the first state-wide *Flora* in New South Wales since 1893. Like *Volume 1*, it is truly user-friendly, with its descriptions of genera and species each augmented by good line drawings, and its handy and well-illustrated glossary.

The glossary in *Volume 2* is not quite as readily found as in *Volume 1*, where it is printed on green paper; in *Volume 2* only the background of the glossary's title page is green. As in *Volume 1*, following the glossary is the useful index to families of the flowering plants, which lists on its first page under each volume the families covered in it, and on its second page each family alphabetically giving the volume in which it is covered, thus allowing quick cross-referencing between volumes.

Like *Volume 1*, *Volume 2* is an inherently attractive book, with its end-papers decorated with a collage of botanical drawings, its clear map of botanical divisions of the state picked out in shades of green and grey, its excellent layout of table of abbreviations, the very pleasing balance of text and illustrations throughout, and the coloured plates of excellent quality interspersed through its text. For an A-4 book of this quality it is great value.

As its cover suggests, *Volume 2* includes the four families Proteaceae, Myrtaceae, Fabaceae, and Rutaceae, some of whose members, as the introduction states, help to give our continent's landscape much of what is commonly regarded as its Australian character. Incidentally, the genus *Eucalyptus* is retained in its wide and long-standing sense, along with *Angophora*.

The *Flora* will be very widely used. It will be used by working plant taxonomists, but, perhaps more importantly, also by others who need to deal with plants professionally, such as foresters, agronomists, ecologists, and managers of various types of land in N.S.W. It will also be used by those who simply want to know our native flora better. When all four volumes are to hand, it will obviate the need when travelling widely in the state

to carry a series of local and regional *Floras* to identify the vascular plants encountered.

The keys and descriptions that I have used in this volume have all worked well, though I would guess that there will always be improvements in such things that prolonged use will show can be made.

The several authors and artists involved, most but not all of them from the National Herbarium of New South Wales, should be congratulated for their excellent work; but the greatest praise should be reserved for Gwen Harden, for her job in keeping the whole project up to schedule and editing this excellent volume.

As I write, copies of *Volume 3* are just becoming available, and I am joining the rush of my colleagues to get one. If it has maintained the standards of *Volumes 1* and 2, then it will be excellent. Perhaps by this time next year *Volume 4* will be to hand, and the work thus complete. The whole work will raise the level of knowledge and enthusiasm in the community for our state's flora, and, in so doing, will greatly help in conserving it, hopefully in all of its glorious diversity.

Perhaps by the end of the next century, the state's non-vascular plants may be equally well-described, and the invitation to get to know them presented in a similarly attractive way as the vascular plants have been in the last decade of this century.

Peter Myerscough
School of Biological Sciences
University of Sydney

Acacias of Southeast Australia.

By T. Tame. Kangaroo Press, Kenthurst. 1992. 206 pp. ISBN 0-86417-475-6. $45.

This book will be a welcome addition to the libraries of amateur naturalists and professional botanists alike. All currently recognised species of *Acacia* in New South Wales and Victoria are included, 230 species in all.

Descriptions and detailed line drawings are provided for all of the taxa, and colour photographs of 220 of the species are included. The notes on each species include the following information:– vernacular name, typification, flowering time, distribution, habitat and other general notes (e.g cultivation requirements). A botanical key to species and a general pictorial key to groups are provided as an aid to identification.

The introductory chapters are aimed more at the amateur naturalist than the professional botanist. The chapter on the morphological structure and associated terminology used to describe acacias is adequately illustrated. However, an illustrated glossary would have made it easier for users to find the meaning of botanical terms. The chapter on cultivation includes a brief paragraph on propagation, and a list of species according to size and broad climatic preferences. The final introductory chapter, the classification of the genus, is a useful summary of the taxonomic history. This book follows the subgeneric and sectional classification of Pedley (*Austrobaileya* **1**: 77, 1978).

The key to species works well, although it is often hard to find the second lead of a couplet. The pictorial key to major groups is a useful introduction to identification, but it may prove difficult to identify some species (e.g. those of section Botrycephalae), based on the descriptive text and illustrations alone. However, the illustrations are generally excellent and are highly informative.

The layout of the book is very pleasing. The difficulty in keeping the text and illustrations together has sometimes resulted in a lot of open space (e.g. the illustration of *Acacia debilis*). The photographs are presented in their major groups, seven or eight per page. They are generally of a high standard and usefully supplement the text and line drawings.

The author can be justifiably proud of his synthesis and presentation of the taxonomic knowledge of the acacias of south-eastern Australia.

Barry Conn
National Herbarium of NSW
Royal Botanic Gardens Sydney

Recent Publications

Flora of the Kimberley Region.
By J.R. Wheeler (editor), B.L. Rye, B.L. Koch, and A.J.G. Wilson. CALM, Como. 1992. 1,327 pp. ISBN 0-7309-5221-5. $90.

This is the first full description of the area's flora. It covers all of the 2,085 known native and introduced vascular plant species. Nearly 300 of these are endemic, or either inadequately known or poorly collected. There are 356 line drawings, and an index to both scientific and common names. It is available from the Dept CALM, PO Box 104, Como, WA 6152.

NOTICES

Request

Josephine Camus is a specialist in Marattiales, and is preparing text for the *Flora of Australia*. She has emphasized the need for collectors of these ferns to take detailed field notes describing features that cannot be preserved on an herbarium sheet. She has advised us that she needs field observations urgently. Can you help please? Please contact:–

Josephine Camus
Natural History Museum
Cromwell Road
London, SW7 5BD, England.

Josephine has also suggested that it would be valuable to have a joint workshop between Malesian and Australian botanists on non-vascular plants and the ferns. Please give some thought as to how, where and when this would be feasible.

Helen Hewson
Australian Biological Resources Study

ABRS publications — buy now!

The publishing industry is becoming more commercialized, and publishers are attempting to make economies. Storage space for book stocks is expensive, and it represents one of the costs being reviewed. AGPS Press, the publisher of ABRS publications, is no exception in this process. They have reduced their stocks, and they intend to hold stocks for three years only in the future. Hence, print runs will be smaller than in the past. Our advice is to *buy early*; otherwise, you may be haunting the secondhand bookshops to complete your set of the *Flora of Australia*, etc.

Helen Hewson
Australian Biological Resources Study

Journals for sale

The following periodicals are available for purchase for any reasonable offer:–

Taxon, volumes 12–41 (1963–1992)
Australian Journal of Ecology, volumes 1–17 (1976–1992)
Proceedings of the Ecological Society of Australia, volumes 1–16 (1966–1990)
Bulletin of the Ecological Society of Australia, numbers 5(1)–22(3) (1976–1992)
Journal of the Linnean Society of London, issues 58(373)–61(384) (1963–1968)
Proceedings of the Linnean Society of London, volumes 174–179 (1963–1968)
Biological Journal of the Linean Society, volumes 1–9 (1969–1977)
Botanical Journal of the Linnean Society, volumes 62–74 (1969–1977)
Arid Zone Newsletter (1957–1987)
Journal of the Australian Institute of Agricultural Science, volumes 28–37 (1962–1971)

Please contact:–
Mike Lazarides
Tel (06) 246 5126
Fax (06) 246 5249

Mike Lazarides
Australian National Herbarium

Australian Flora Foundation

Research plans for 1993

The Australian Flora Foundation Inc. is dedicated to the promotion of research into the biology and cultivation of Australian plants. It raises money for research grants, thus encouraging plant scientists to study Australian native plants, including garden plants, export industries, bio resources, and conservation.

The Foundation has received proposals from a number of researchers for funding during 1993:–

Vegetative propagation of banksias
Conservation of small populations: *Grevillea barkleyana*
Germination of *Ixodia achillaeoides*
Reproductive success and mechanisms of germination in native populations of *Persoonia*
Wahlenbergia as a landscape plant
Germination of *Actinotus*

Our Scientific Research Committee has approved all of these projects, and the Directors

consider that the Foundation should try to fund them.

If you would like to support this research program, then send a tax-deductible donation to:–

Australian Flora Foundation
GPO Box 205
Sydney, NSW 2001
Tel (02) 805 8155
Fax (02) 805 8245

Malcolm Reed
President

XV International Botanical Congress, 1993

The 15th International Botanical Congress will be held at the Congress Centre of Pacifico, Yokohama, Japan, from 28 August to 3 September 1993. The Nomenclature session will be from 23–27 August 1993.

The Congress is organized under the auspices of the International Association of Botanical and Microbiological Societies in the International Union of Biological Sciences, and is sponsored by 12 major Japanese societies of plant biology, agriculture, and pharmacology, as well as the Science Council of Japan. The scientific program is now being planned to include several plenary and special lectures and over 200 invited symposia.

The Second Circular is now available. It provides details of the registration, congress fees, symposia programs, and excursions. The symposia are organized under the following headings:–

- Systematics and evolution
- Ecology and environmental botany
- Structure and its dynamics
- Phytochemistry and natural products
- Metabolism and bioenergetics
- Growth and development
- Genetics
- Biotechnology and productivity

The last date for advance payment of the registration fee is 10 April 1993, which is also the last date for submission of abstracts.

I have a number of these Circulars available, if anyone needs one. My contact address is inside the front cover of the *Newsletter*.

Mike Crisp
President, ASBS Inc.

Bertrand Russell:- My German engineer, I think, is a fool. He thinks nothing empirical is knowable. I asked him to admit that there was not a rhinoceros in the room, but he wouldn't. I looked under all the desks without finding one, but Wittgenstein remained unconvinced.

Telephone and Fax Numbers for Major Australian Herbaria

International dialling sequence from outside Australia:-
add the Australian country code 61 and omit the leading zero of the area code.

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Fax: (08) 2231809	Fax: (07) 3716655	Fax: (002) 207865	Fax: (070) 923593
CANB	CBG	MEL	NSW
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Fax: (06) 2465249	Fax: (06) 2509599	Fax: (03) 6552350	Fax: (02) 2514403
DNA	FRI	PERTH	QRS
Ph: (089) 894516	Ph: (06) 2818211	Ph: (09) 3670500	Ph: (070) 911755
Fax: (089) 323849	Fax: (06) 2818312	Fax: (09) 3670515	Fax: (070) 913245

This list will be kept up to date, and will be published in each issue.
Please inform David Bedford (NSW) of any changes or additions.

The Society

The Australian Systematic Botany Society is an incorporated 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. Membership entitles the member to attend general meetings 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 January 1 each year.

The Newsletter

The *Newsletter* appears quarterly, 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 published pages in length) will be considered.

Contributions should be sent to one of the editors at the address given below. They should preferably be submitted as:- an unformatted word-processor or ASCII file on an MS-DOS or Macintosh diskette, accompanied by a printed copy; as an unformatted word-processor or ASCII email file, accompanied by a fax message reporting the sending of the file; or as two typed copies with double-spacing.

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

All items incorporated in the *Newsletter* will be duly acknowledged. Authors alone are responsible for the views expressed, and statements made by the authors do not necessarily represent the views of the Australian Systematic Botany Society Inc. *Newsletter* items should not be reproduced without the permission of the author of the material.

Notes

ASBS annual membership is $25 (Aust); full-time students $12. Please make cheques out to ASBS Inc., and remit to the treasurer. All changes of address should be sent directly to the treasurer, as well.

Advertising space is available for products or services of interest to ASBS members. Current rate is $100 per full page, $50 per half-page or less. Contact one of the *Newsletter* editors for further information.

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Cover

David Mackay

Austral. Syst. Bot. Soc. Newsletter 73 (December 1992)

CONTENTS