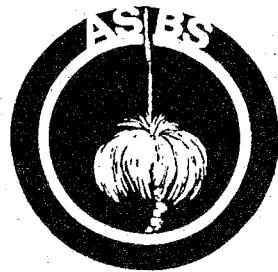


ASBS

*Australian  
Systematic  
Botany  
Society*



# Newsletter

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# AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

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## EDITORIAL

This issue, along with the last one, was produced under some duress, since I have been in the process of changing jobs. After 19 years in Tasmania I have moved back to the place where it started for me, the University of Adelaide. I expected to be moving to my old department, but times have changed, another Botany Department has disappeared from a University, and I am in a new department called Environmental Biology. Having listened to all the advice about moving I was sure I knew how difficult it would be, but I didn't. I am still surrounded by full boxes and I am getting used to a new system after too many years entrenched in a different one. My apologies for the (slight) lateness of this issue and for some errors that crept into the last issue (not many of you picked them, or were too polite to tell me). You should take note of our

forthcoming 100<sup>th</sup> issue of the ASBS newsletter. This seems to be an event worth celebrating and I would like to hear any ideas. If anyone would like to send in reminiscences, or nominate particular highlights that could be reprinted, please do so. We should be proud of making 100 issues, and even prouder of the fact that this is one of the few organisations where the editor doesn't have to beg for contributions. If you need to contact me, my address details (which are repeated later as well) are:

Professor Bob Hill  
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## PRESIDENT'S REPORT

### We need you

I am very much in review mode at the moment. The Plant Sciences Branch of the Royal Botanic Gardens is about to be reviewed by an external review team. At the same time, I am raking through my personal research plans trying to see what would be appropriate in a new State and a new organisation. On behalf of ASBS, I have been contributing to the review of ABRS. In the next few years, there are some important historical anniversaries to celebrate, particularly William Dampier (1699) and Robert Brown (1801-05), which challenges us to review our scientific progress in Australia. And of course the end of a millennium (whenever it may be) brings its own bout of self analysis.

To the sound of long sigh I'm sure, I must hasten to add that I don't think ASBS needs a review. However we are fast approaching the end of another chapter, or maybe just a page or two. At the end of this year, at *Dampier 300: Biodiversity in Australia* in fact, my term as President expires. So too does the term for our current treasurer. So we need some new blood (or perhaps some reconstituted old blood!).

I know this sounds like one of those Martin Gardner puzzles, but the hard facts are these. John Clarkson and I have reached the end of our six-year terms on Council (and I have reached the end of my three-year term as President). Robyn Barker can stay on council, and as secretary if she wants. Peter Weston and Terry Macfarlane are eligible to continue as councillors or to take up one of the other positions. Barry Conn can do almost what he likes, but will be encouraged to stand for president.

If my own experience is typical, many members will feel that they are not qualified or experienced enough to take on a leading role in the Society. Others may feel they are overworked. Yet others may think it is someone else's turn. Whatever the reason you think you can't be involved, your society needs you.

The treasurer's job is usually a hard one to fill. However the financial systems are now humming along and just require some fine tuning every now and then. John Clarkson will soon train you up. If the reshuffling results in councillor positions being vacated this is a great opportunity to see how the council and the society works. We also need a new someone to be but a heart beat away from the

presidency (and meanwhile learn the ropes and take on specific tasks such as coordinating the Eichler Awards).

So much to do, and so many members. Email or phone if you want to talk further about these opportunities, and look out for the nomination forms in this issue of the newsletter. The critical positions are those of treasurer and vice-president.

### **Eichler Awards**

It's time again to start thinking about this year's Hansjörg Eichler Scientific Research Fund

Applications. Due to the generosity of members, including another major contribution from Mrs Marlies Eichler, we will once again make available more money this year than last. Through sound financial management, and a healthy principal, the Fund is firmly established and doing exactly what it set out to do. And in case you missed it in the last newsletter, contributions are now tax deductible.

*Tim Entwisle*

## **ASBS INC BUSINESS**

### **Annual General Meeting**

The Annual General Meeting of the Australian Systematic Botany Society Incorporated will be held in association with the Dampier 300

conference to be held in Perth from 6th to 10th December, 1999.

### **Council Elections**

In accordance with the Society's Constitution, nominations are hereby called for all positions on the Council for the 1999-2000 term of office: President, Vice President, Secretary, Treasurer and two councillors. The current President, Tim Entwisle, and Treasurer, John Clarkson, are not eligible for re-election, but all other office-bearers are eligible for re-election.

Each nomination must be proposed by two financial members, and the nominee's acceptance of the nomination must accompany the nomination form. Nominations must be made on the form included in this Newsletter or a facsimile of it. All nominations must be in the hands of the returning officer (Robyn Barker) by Friday 25th June, 1999.

### Nomination Form

Note: A separate nomination paper or facsimile of the same is required for each candidate.

We, the undersigned members of the Society, wish to nominate

-----  
for : President, Vice President, Secretary, Councillor.  
(Please delete the offices that do not apply to your nomination)

First Nominator

Second Nominator

Name: .....

Name: .....

Signature: .....

Signature: .....

I hereby consent to my nomination for the position of

.....

Signature: .....

Date:.....

Nominations must be in the hands of the Secretary by Friday, 25th June 1999.

Secretary: Mrs R.M.Barker,  
C/- State Herbarium of South Australia,  
Botanic Gardens,  
North Terrace, Adelaide, SA 5000.

Phone: (08) 8228 2348 Fax: (08) 8215 0078

### Hansjörg Eichler Scientific Research Fund Applications

Applications to the Hansjörg Eichler Scientific Research Fund will close on August 31st 1999.

Applications are welcomed from all current financial members of the Australian Systematic Botany Society. The project must contribute to Australian systematic botany, must be carried out within Australia and the applicant must be attached to an Australian research institute.

The maximum grant awarded will be \$1000. Large capital items will not be considered.

Students, recent graduates and postgraduates will be given preference. Applications will be assessed on the quality of the applicant and the proposed project. The project should be clearly defined in scope and preferably result in a publication.

The Grant Application Form is available from the ASBS Web site  
<http://155.187.10.12/asbs/eichler/eichler.html>  
from where it can be saved as an electronic file, or from the Secretary of ASBS. Further information on the Awards will also be posted on the Web page.

## ABRS REPORT

### Staff

Cheryl Grgurinovic returned to ABRS in mid-February after her period on secondment to the Australian Quarantine and Inspection Service. Cheryl will be assisting Annette Wilson, in the first instance, in editing the *Acacia* volumes.

Don Foreman has been appointed an Assistant Scientific Editor on a term basis, until December, backfilling Katy Mallett's substantive position while she is managing the editing of the grass volumes of *Flora of Australia*. Don will be assisting with the grass volumes.

Anna Monro will be contracted for another short period in March-May to provide additional support for the grasses project.

### Reorganisation of ABRS

As part of the reorganisation within Environment Australia, ABRS is now part of the Natural Heritage Trust and Biodiversity Policy Branch. This Branch has an Acting Branch Head, Mr Con Boekel, pending the appointment of a number of permanent SES officers. In this position he is of course also, *ex officio*, Director, ABRS.

Internally, ABRS has now been restructured. There are two Sections, Publication Section, headed by Tony Orchard, and Strategies & Research Section, headed by Dr Jean Just. All publication activities, plant, animal, fungi, paper-based, Web-based and electronic, come within the ABRS Publication Section, while strategic planning, overall budgeting, grants, international activities, and everything else, comes under ABRS Strategies & Research Section.

Within Publication Section, the Flora Unit is headed by Patrick McCarthy, who will be acting as Executive Editor until the end of May. From June until November 1999 this position will be filled by Annette Wilson. Enquiries regarding the *Flora of Australia* and related matters should be referred to these two officers (email: patrick.mccarthy@ea.gov.au (phone 02 6250 9447) or, from June, annette.wilson@ea.gov.au (phone 02 6250 9417)).

### Publications

*Flora of Australia Volume 1 Introduction (2nd edn)* was published on 2 March 1999, and is available from CSIRO Publishing for \$79.95. It consists of

xxiv + 670 pages and is completely rewritten from the first edition, with many new chapters. It is intended to be a source book of information on the taxonomy and related matters for the Australian flora. Feedback so far has been most complimentary.

*The Families of Flowering Plants of Australia. An interactive Identification Guide*, edited by Kevin Thiele & Laurie Adams, is expected to be released in April 1999. This will be the first venture of ABRS into CD publication, and will comprise a LucID key to the families of Australian flowering plant families, native and naturalised. It will include a comprehensive illustrated glossary, text fields with detailed family descriptions, others providing field characters and lists of genera, and a total of over 1500 colour illustrations of representative taxa from each family. The CD will be available from CSIRO Publishing for \$69.95. CSIRO Publishing will also be offering a discount for those purchasing both *Flora* vol. I and the CD - \$120 for the pair. See the CSIRO Publishing Website (<http://www.publish.csiro.au/>) for details on ordering.

*Species Plantarum*. ABRS has been given the task of editing and publishing this major new series, an ambitious plan to produce, cooperatively with botanists from many countries, a World Flora. *Species Plantarum* is one of the initiatives of IOPI, the International Organisation for Plant Information. *Species Plantarum* will have two aspects, a hardcopy traditional *Flora*, based heavily on *Flora of Australia* format, and an electronic face, coordinated through the IOPI Checklist group. In January 1999 the first parts of the hardcopy work appeared: Introduction, a 91-page booklet containing a description of the project, a guide for contributors, a glossary, and a geographical scheme for describing distribution; and Part 1, *Irvingiaceae* by D.J. Harris, the first descriptive fascicle, describing in 25 pages a family of 3 genera and 10 species from Africa and Asia. Copies of these two booklets will be deposited in the main herbarium libraries in Australia, and will be distributed gratis to those volunteering to write future parts. They are also available for purchase - A\$20 for the pair, from ABRS (cheque, postal order, Visa, Mastercard or Bankcard only).

*Flora of Australia Volume 17B. Hakea to Dryandra* was delivered to CSIRO Publishing in early March, and should be available in May 1999.

### Other Activities

The ABRS Website at

<http://www.anbg.gov.au/abrs> continues to have new information added. For some time now several Glossaries from the Flora series (general glossary, lichens, ferns & gymnosperms) have been available on this site. We are now in the process of adding many more illustrations to the main glossary, adapted from the *Families of Flowering Plants of Australia* CD. It is our intention to add, over the next few months, some of the general chapters from *Flora of Australia* vol. 1 to this site as well. By mid-year we also hope to begin adding interactive identification and information tools of various sorts. Environment Australia is in the process of redesigning all of their Websites, and once the parameters of this are settled, the ABRS site will be restructured in line with the corporate image.

Other new information on the ARRS Website includes a major revamp of the Australian Botanical Liaison Officer pages which should be of interest to those contemplating applying for this position.

The results of the ABRS Client Survey are now in, and are being evaluated. Already work has begun on designing a marketing strategy, which is intended to promote taxonomy as a core process in biodiversity management, ABRS as a key institution in taxonomic research at a national level, and the products produced by ABRS in collaboration with the wider taxonomic community.

### Editing in Progress

The following volumes are well-advanced in the editing process, and most should go to press during 1999, roughly in the order listed:

*Flora of Australia* Volume 17A, Proteaceae 2-  
*Grevillea*

*Flora of Australia* Volumes 11A & 11B, Acacia 1 & 2  
*Fungi of Australia* Volume 15A, Hyphopodiata  
*Asterinaceae*

*Flora of Australia* Volume 43A, Poaceae 1

*Flora of Australia* Volume 44, Poaceae 3

Work is underway on an additional group of publications, which will go to press in late 1999 or early 2000:

*Flora of Australia* Volume 43B, Poaceae 2

*Flora of Australia* Volume 39, Alismatales to Arales

*Flora of Australia* Volume 51, Mosses 1

*Flora of Australia* Volume 2, Magnoliales to  
*Papaverales*

*Nature's Investigator: The Diary of Robert Brown in  
Australia 1801-7805*

*Fungi of Australia* Volume 2B, Catalogue and  
*Bibliography of Australian Macrofungi* 2

ABRS will also be publishing a number of works over the next year or so, in collaboration with other organisations. The following will be the first of these, to be published early in 1999 jointly with the University of Tasmania, Forestry Tasmania and the CRC for Sustainable Production Forestry:

*Flora of Australia Supplementary Series No. 8:  
Vegetation of Tasmania.*

Jointly with Forestry Tasmania, the Tasmanian Museum & Art Gallery, the National Rainforest Conservation Program, AMRAD, and the Chemistry Department of the Australian National University we will also be publishing the following in the first half of 1999:

*Flora of Australia Supplementary Series No. 9:  
Lichens of Rainforest in Tasmania and South-Eastern  
Australia.*

Tony Orchard  
Director, ABRS Publication Section

## ABLO REPORT

### Winter

As I write the winter report I can look out over Kew Green to see the daffodils in full bloom along Birdcage Walk; only three weeks ago this area, like the rest of Kew, had been covered with a light fall of snow. There are no cars parked anywhere along the road and workmen are busy completing two air raid shelters and a gun emplacement forming part of the set for Graham Greene's wartime novel *'The End of the Affair'*, being filmed here over the next week. It is rumoured to star Ralph Fiennes and I have heard more than one Kew staff member talk about their chances of getting a walk-on part.

### Kew Buildings

Work continues slowly towards the opening of the new entrance to the herbarium, on the east side of the complex between Wings C and D. The current issue has been how the stewards can monitor the front gates at such a remove, and to this end a CCTV was installed below my window last week, however, I am not aware of a firm date for the final closing of the current entrance.

### New Director

As I'm sure many readers will already know, it was announced in January that "Professor Peter Crane has been appointed to succeed Professor Sir Ghilleen Prance as Director of the Royal Botanic Gardens, Kew, when Sir Ghilleen retires in July of this year.

Professor Crane is currently the Director of Field Museum of Chicago and Vice-President of Academic Affairs. He is also a professor in the Department of the Geophysical Sciences at the University of Chicago and a Fellow of the Royal Society in Britain. British by birth and a botanist by training he has worked for the last eighteen years in the United States, seventeen of these at the Field. He is 44 years old and is married with two children."

The full press release from the 12th January 1999 includes further biographical information on both men and can be read at [www.rbgekew.org.uk/PRESS/newdir.htm](http://www.rbgekew.org.uk/PRESS/newdir.htm).

### Meetings

On the 16th December many Kew scientific staff attended a 'Tropical Botany Day' hosted by the Department of Botany at the BM. Over 100 people

from both institutions attended to hear a range of presentations focussing on the work of the two agencies in tropical regions. Around fifteen posters were also available to view in the foyer. This event was planned to be the first in an ongoing series encouraging closer ties between the two institutions and an appreciation of the work undertaken by each of them. The next is to be held at Kew during summer.

I gave a lecture on the 27th January at the Natural History Museum, as part of the BM's botany seminar series, on Western Australian Flora Information Systems, which was well attended. Dr Charles Hussey has been seconded to analyse the BM's IS requirements and so comments on the experience of specimen databasing in Australia were keenly sought.

The following day I sat in on a meeting where members of the IAPT at Kew ratified a joint statement from three British institutions (BM, E, K) regarding their dissatisfaction with the nominations in the forthcoming IAPT elections. It was my understanding that if the three institutions did not get a positive response from the current IAPT executive that they would call for the existing ballot paper to be considered invalid and for a new ballot with an amended list of candidates.

The joint statement can be found at: [mason.gmu.edu/~ckelloff/vfunk/britinst.html](http://mason.gmu.edu/~ckelloff/vfunk/britinst.html). This page also contains links to the Alternative IAPT web site which should be consulted if you wish to find out about the most recent suggestions on the ballot procedure. Clearly the IBC later this year in St Louis is going to be interesting!

On the 23rd February I participated in one of three tours led by archivist Lesley Price of the Kew Archives, including the Kewensia room, the main correspondence archives, public and private records and the semi-catalogued remainder deep in the herbarium basements. This was a much more thorough introduction to the scope of the Kew Archives than the library tour at the beginning of my term and I would recommend it to future ABLO's if it is available to them.



### Book Launch

On the 30th January Leonie and I were invited by William Stearn to the launch of his latest book '*John Lindley 1799-1865 Gardener - Botanist and Pioneer Orchidologist*'. This bi-centenary celebration volume starts with a comprehensive biography by Stearn, two lectures by Lindley himself as well as contributions from Phillip Cribb, Christopher Brickell, William Chaloner, Brent Elliott, Kathryn Bridge, William Tjaden and J. Marguerite Allford. A full review of the book can be found elsewhere in this newsletter.

The launch was held at Professor Stearn's house in Kew and catered for by his daughters, which is worthy of note especially for the tarts made in the shape of giant water-lily leaves and with a doll atop, mimicking the illustration in the new book (figure 8) of Sir Joseph Paxton's seven year old daughter standing on a floating leaf of *Victoria amazonica* (*V. regia* Lindley). A photo opportunity not to be missed!



Professor W.T. Stearn

### Visits and Visitors

It has been a quiet time over winter for visitors. With the exception of my two children who came for the Christmas break, I have only received visits from Susan Dopson (Biodiversity Recovery Unit, Department of Conservation, NZ) on 11th January, and on the 2nd February from Dean Lewis, a horticulturalist from Melbourne.

On the 16th February I visited Wakehurst Place to talk with John Dickie and Roger Smith about the Millennium Seed Bank and their plans for how the Australian flora might be represented there. The new building still looks most like a hole in the ground and it was explained that construction is behind schedule due to unexpected problems with the bedrock composition, however, it is currently due to be opened mid-2000.

I have now pretty much worked out the herbaria which I can hope to visit over the next six months. They are: TCD (March); MANCH, E (April); CBE, LE (May); Z, FI (June); P, L (July) and MO (August).

On the 25th February I obtained a readers ticket for the UK's Public Record Office, which is also in Kew (but on the other side of the tracks) and spent the best part of a day digging around in their enormous archives for any records of the HMS *Nymphe*'s voyage to the Lacipede Islands (WA) in 1877, as part of an inquiry. I was extremely impressed by how efficient and well-organised this resource was, helped no doubt by a very new building and the use of computerised document ordering and notification. Nevertheless, the nature of this type of work and the size of the material to wade through makes this institution one to be visited warily by the ABLO, at the risk of losing time for the many other enquiries.

And finally, I can announce that the daffodils I was admiring at the beginning of the report have just been methodically harvested by the film crew, apparently because they conflict with the season required by the script! I understand they are to be given to local nursing homes, so at least they are not going to waste.

Alex Chapman  
ABLO  
March 1999

## LETTERS TO THE EDITOR

Dear Sir

The recording of common names in Floras is understandably a minor concern for taxonomists, but since my chosen field involves the use of plants by the Aborigines of southeastern Australia, I am interested those Aboriginal names which have come into use as common names.

There is an anomaly in the use of two Aboriginal names for *Solanum simile* F. Muell. and *Solanum esuriale* Lindl. In Ewart, 1930-1, Flora of Victoria: 1004, *S. simile* is called Oondoroo, and *S. esuriale* is Quena, and these names have been given ever since that time in all State floras and the Flora of Australia vol. 29: 113, 137. Yet Palmer, 1884, when recording names from Queensland, gave *S. esuriale* as Oondoroo, and this was followed by Maiden 1889; also *S. simile* does not occur in Queensland (Flora Aust. 29: 117). In 1882, Annie F. Richards, in a vocabulary probably from Fowler's Bay, in South Australia, gave the name Quena to *S. simile*, and this was also followed by Maiden.

The original confusion seems to have been Ewart's, and this is a nice example of how a mistake can be spread in space and time once it gets into print. Perhaps undoing it is now too late, but I would just like to put this mis-attribution of Aboriginal names on record.

### References

- Maiden, J.H. 1889. Useful Native Plants: 58, 59.  
Palmer, E. 1883. Journal & Proceedings of the Royal Society of NSW 17: 104.  
Richards, A.F. 1882. Proceedings of the Royal Society of South Australia 4: 136.

Dr Beth Gott  
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Dear Prof. Hill

The following are questions to which I've been seeking answers for some years now without success. With recent advancements in DNA studies perhaps the answers are now possible.

Why are some taxa more variable than others?

It seems that none has yet identified or isolated the factor or factors which give rise to (or which inhibit or fail to give rise to) variation within taxa. Such variations may well be ultimately responsible, in advancing stages over long periods of time, for the branching into various orders, families, genera and species, subspecies etc.

In other words, is the capacity for variability a key factor in producing evolutionary change (beyond what may be caused by "chance mutations")? Are there genes for variability? Or could there be a factor allowing genes to vary in some taxa and not others? Or could there be certain environmental triggers or catalysts to which some plants are more genetically responsive than others?

Should the capacity for variability be seen as a taxonomic character in itself? Or at least accorded greater significance by taxonomists?

Yours sincerely

M. Wilson

[If anyone is prepared to provide answers to the questions posed in this letter I will be very pleased to print them in the next edition of the newsletter - ed.]

## ARTICLES

### The rediscovery of *Trioncinia retroflexa* (Asteraceae) in central Queensland

R.J. Fensham

Queensland Herbarium

Mt Coot-tha Road, Toowong Qld 4066

#### Description

*Trioncinia retroflexa* is a distinctive Australian endemic perennial species in the daisy family (Asteraceae) first described by Ferdinand von Mueller in 1858 (Veldkamp 1992). It is the only member of the genus *Trioncinia* that is related to other herbaceous daisy genera such as *Bidens* and *Glossocardia* commonly referred to as cobbler's pegs (Veldkamp 1992). It has dissected leaves very similar in appearance to *Glossocardia bidens*. However, the achenes are unmistakable with warty transverse ribs and reflexed hooks that are restricted to one half of the rim.

#### History of collection and recent survey

*Trioncinia retroflexa* was first collected by Ferdinand von Mueller at 'Peak Downs' (Clermont region), central Queensland in 1856. This was prior to European settlement when Mueller, a member of the Gregory expedition, was nearing completion of an arduous trek from Victoria River in the Northern Territory to Brisbane. The visit was extremely brief and despite the exceptional capacities of Mueller as a field botanist its discovery suggests that the species must have been at least locally common. The species was not formally recorded again until 1935 when Stan Blake collected it at Blair Athol on "black soil". *Trioncinia* has been overlooked in published national and state lists of threatened plants. However, it was listed as Presumed extinct by the Queensland Herbarium rare plant database up until 1996 when it was relocated on a roadside near Clermont (Clermont population) presumably in close proximity to the 1935 collection.

The grasslands of the Central Highlands have been extensively surveyed at 209 sites between 1995-1997, including roadsides and grazed paddocks (Fensham 1999). The Clermont population of *Trioncinia* was the only site for this species located during this regional survey. A detailed survey of this population revealed that it spans about 900 m.

of road reserve both sides of the road and at the time of initial survey in 1997 consisted of 892 plants.

Further intensive searching within the vicinity of the Clermont population was conducted in February 1997. At the Clermont site *Trioncinia* was clearly absent from adjoining grazed paddocks. Thus further searching for other populations was concentrated in the road reserves that are generally lightly grazed by stock. 112 km of road reserve were traversed by at least a single pass. As a result of this search one extra population of *Trioncinia* was located on a road reserve at "Glengowrie" approximately 14 km to the north of the Clermont population. This small population consists of about 50 plants and virtually all of these plants were within the road reserve.

A third population of *Trioncinia* was discovered on a roadside just to the north of Theodore in January 1998 and consisted of less than 50 plants. This site is about 350 km to the south-east of the Clermont population, and thus substantially increased the known geographic range of *Trioncinia*. The habitat of all current and historical populations of *Trioncinia* is grassland downs on basalt soil. There is little of this habitat north of the Central Highlands study area. Potentially suitable habitat is available for *Trioncinia* in the Darling Downs to the south of Theodore. However, Fensham (1998) has extensively surveyed the fragmented remaining Darling Downs grasslands and failed to locate the taxon. There is very little intact suitable habitat between the Central Highlands and the Darling Downs, and it is thus unlikely that the apparent rarity of *Trioncinia* is a result of limited survey.

The roadside habitat of the known populations of *Trioncinia* suggests sensitivity to the continuous grazing regimes of paddocks. However, the roadsides occupied by *Trioncinia* are particularly vulnerable to disturbance resulting from roadworks and herbicide.

After the application of IUCN criteria it is proposed that *Trioncinia retroflexa* be listed as Endangered (criteria B, C).

### Acknowledgements

Melinda Cox, Russell Fairfax and James Holman assisted with the survey work. Pacific Coal Pty Ltd. have funded ongoing research that provided the results for this preliminary report and Col Hughes is particularly thanked for his administrative support.

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- Fensham, R.J. (1999) Native grasslands of the Central Highlands, Queensland, Australia. Floristics, regional context and conservation. *Rangeland Journal* (inpress).
- Veldkamp, J.F. (1992) Notes on Australian Coreopsidinae (Compositae) *Austrobaileya* 3: 741-744

## Notes on *Hemisteptia lyrata* (Asteraceae) and its Australian occurrence

A.R. Bean

Queensland Herbarium

Brisbane Botanic Gardens, Mt Coot-tha road, Toowong, Qld, 4066.

*Hemisteptia* is a monotypic genus in the Tribe Cardueae, Subtribe Carduinae (Bremer 1994). It has been included in the large genus *Saussurea* DC. by some authors (e.g. Walker 1976). *Hemisteptia lyrata* is an erect unarmed daisy growing to 1 metre high. The leaves are alternate, deeply pinnatifid, green above and white tomentose underneath, while the terminal flower-heads are purple and without rays. In the discussion below, no attempt has been made to examine the taxonomy of the species. It has been assumed that Australian and Asian plants are conspecific.

### Nomenclatural History

The nomenclature and authorship of *Hemisteptia lyrata* is not straightforward. The Russian botanist A.A. Bunge (1803-1890) listed the name *Cirsium lyratum*, in an Enumeration of Northern Chinese Plants, in March 1833. However this name was not validly published, as it lacked a description or diagnosis. In December 1833, Bunge used the generic name *Hemistepta* (in *Dorpater Jahrb. Litt.*) and *Hemistepta lyrata* for this plant, but these were *nomina nuda*.

Fischer and Meyer took up Bunge's generic name, but spelled it *Hemisteptia*. This was the first valid publication of the genus and of *Hemisteptia lyrata* (in 1835). The authorship is therefore Bunge ex Fisch. & C.A.Mey., or in the abridged version, merely Fisch. & C.A.Mey.

This taxon was named *Serratula carthamoides* by Roxburgh in 1814, but without description. A description was provided in 1832, but the name is illegitimate, as it had already been used by Poiret in 1804 for another species of *Serratula*. The illegitimacy of this name was apparently not realised at the time. Bentham transferred *Serratula carthamoides* to the genus *Saussurea* in 1861, and that name (*Saussurea carthamoides* (Roxb.) Benth.) was used subsequently by all Australian botanists until the 1980's.

The name *Saussurea affinis* DC. has been used for many years in India. This apparently dates back to Hooker (1882), who took up the name *Saussurea affinis* (from DeCandolle's *Prodromus*, page 540) and listed *Hemisteptia lyrata* as a synonym. But *S. affinis* was referred to by DeCandolle only as a synonym of *Aplotaxis carthamoides*, and the descriptive phrases following the listing of "*Sauss. affinis* Spreng." refer back to *A. carthamoides*. DeCandolle's intentions are further clarified on page 538, where he states that "*S.[Saussurea] affinis* Spreng. = *Aplotaxis carthamoides*". One other synonym is relevant to Australia. Mueller named *Aplotaxis australasica* (as '*Haplotaxis*') from a specimen collected in central Queensland, but this taxon was soon relegated to synonymy under *Saussurea carthamoides* by Bentham.

The nomenclature may be summarised as follows:

*Hemisteptia lyrata* Fisch. & C.A.Mey., Ind. Sem. Hort. Petrop. 2: 38 (1835); *Aplotaxis bungei* DC., Prodr. 6: 539 (1838), *nom. illeg.*; *Saussurea lyrata* (Fisch. & C.A.Mey.) Franch., Mem. Soc. Sci. Nat. Cherbourg 24: 229 (1884).  
*Cirsium lyratum* Bunge, Enum. Pl. Chin. Bor. 2: 110 (1833), *nom. nud.*  
*Hemisteptia lyrata* Bunge, Dorpater Jahrb. Litt. 1: 221 (1833), *nom. nud.*  
Type: from China

*Serratula carthamoides* Roxb., Hort. Bengal. 60 (1814), *nom. nud.*; Fl. Ind. ed. 2, 3: 407 (1832), *nom. illeg.*, non Poiret (1804); *Aplotaxis carthamoides* (Roxb.) DC., Prodr. 6: 540 (1838), *nom. illeg.*; *Saussurea carthamoides* (Roxb.) Benth., Fl. Hong Kong 168 (1861), *nom. illeg.*; *Hemisteptia carthamoides* (Roxb.) Kuntze, Rev. Gen. Pl. 1: 344 (1891), *nom. illeg.*  
Type: from Nepal, cultivated at Calcutta Botanic Garden

*Saussurea affinis* Spreng. ex DC., Prodr. 6: 540 (1838), *nom. nud.*

*Aplotaxis australasica* F.Muell. (as '*Haplotaxis*'), Fragm. 1: 36 (1858). Type: [Queensland] Dawson and Burnett Rivers

### Distribution

*Hemisteptia lyrata* is recorded from Japan [Honshu, Kyushu] (Ohwi 1965), Korea (Ohwi 1965), China [Guangdong, Jiangsu, Yunnan, Sichuan, Shandong, Shanxi, Hebei and Henan provinces] (Hu 1966), Taiwan (Hui-Lin 1978), Okinawa (Walker 1976), Nepal (Roxburgh 1832), India (Hooker 1882), Bangladesh (Hooker 1882), Burma (Hooker 1882), Thailand (Koyama 1981), Vietnam (specimen at BRI), and Australia. Asian occurrences are between latitudes 16°N and c. 44°N. It is apparently confined to low altitudes; Koyama (1981) records it between 100-200 metres.

It is reported (Hu 1966) to be a common weed in fields of northern China. Ohwi (1965) states that in Japan it grows on waste grounds, roadsides and cultivated fields.

### Collections in Australia

*Hemisteptia lyrata* was first recorded for Australia by Robert Brown, who collected it in the Newcastle area of New South Wales in 1804. Other early records include the Dawson and Burnett Rivers by Mueller in 1856, Keppel Bay (near Rockhampton) by Thozet in the 1860's, and Clarence River by Beckler in about 1860. Localities and collection

dates for specimens held in the Queensland Herbarium and in the National Herbarium of New South Wales are: Brookfield, Brisbane (1888); head of Hastings River (c. 1890); Murwillumbah (1892); Enoggera Creek, Brisbane (c. 1900); Coraki (1903); Nambour (c. 1905-1920); Wallangbar [Wallangra?] (1916); near Proserpine (c. 1930); Nambour (1951); Mundubbera (1952); Monto (1952); Taree (1954) and Blackall (1959).

In October 1998, I found a small population of *Hemisteptia lyrata* west of Rolleston. It was growing on an alluvial plain with *Muehlenbeckia florulenta* Meisn., *Leptochloa digitata* (R.Br.) Domin, *Eleocharis pallens* S.T.Blake and *Eleocharis plana* S.T.Blake. There is no tree cover at the site, with the trees having been removed many years ago. Nearby remnants indicate that the site would have carried a woodland of *Eucalyptus coolabah* Blakely & Jacobs.

### Conservation status in Australia

*Hemisteptia lyrata* is not currently listed as a Rare or Threatened plant in Queensland. It was listed by Thomas & McDonald (1989) with a '3K' category, which translates to "distribution > 100 km, poorly known". Subsequently it was removed from the list. *H. lyrata* was listed in Briggs and Leigh (1996) also with the category '3K'. This category has no legal status under the Endangered Species Protection Act. A cursory examination of the distribution of *H. lyrata* as given, for example, in Henderson (1997), would suggest that it is quite a common and/or widespread species. However, all the existing records are old, with no collections since 1959. It is likely that the lack of collections over the last 40 years reflects a drastic decline in the total population and distribution of the species in Australia. The observed habitat is alluvial flats with fertile soil. Throughout the former range of *H. lyrata*, many alluvial flats have been either cleared for urbanisation or pasture (near the coast), cleared for cropping or subject to intense grazing pressure by cattle.

The other factor that needs to be discussed is whether *H. lyrata* is native or naturalised. The highly disjunct distribution, mainly in south-east Asia and then in subtropical eastern Australia, would suggest that its occurrence in Australia is the result of assisted introduction by humans, but other evidence points to it being indigenous to Australia. Firstly, the species was collected (by Brown) very soon after European colonisation, and subsequent collections by Mueller and Thozet were made before or just after the European settlement of the

areas concerned. Secondly, some other species which are considered to be Australian natives (e.g. *Rubus parvifolius*, *Youngia japonica*, *Carpesium cernuum*) have similarly disjunct distributions. Thirdly, in south-east Asia, where *Hemisteptia* is indisputably indigenous, it is referred to as "a weed of cultivated fields and waste places" (Walker 1976). Hence it is clear that "weediness" is a poor measure of "nativeness". My own limited field experience with *H. lyrata* indicates that it occurs on somewhat disturbed sites, but the low frequency observed does not in any way suggest weediness. It occurred only away from the immediate roadside where other definite weeds e.g. *Urochloa panicoides* were growing.

I suggest that *H. lyrata* be regarded as an Australian native species, even though there may be some small degree of doubt that this is the case. Furthermore, in a general context, where such doubt exists, it seems logical that a conservative approach be taken, with protection provided for rare taxa, until such time as their native/naturalised status becomes clear. In some cases (and indeed in this case), it may be found that the Australian material is taxonomically distinct from the overseas material.

*H. lyrata* is currently known from only one population, with less than 20 individuals. I have searched for this species around Brisbane, Monto and especially in the Nambour area, but without success. There is a projected decline in both the area and quality of habitat, due to continued clearing, cattle grazing and the spread of aggressive weeds such as *Parthenium hysterophorus* L.

Applying the IUCN Red List criteria, *Hemisteptia lyrata* must be considered "Critically Endangered" in Australia (criteria B, D).

### Acknowledgements

I am grateful to Les Pedley for discussions and assistance with the nomenclature, and Peter Jobson for his prompt response to my query.

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### Serendipity

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Another plant taxonomist appears unexpectedly in a recent book—Stan Blake, in 'A Lifetime in the Bush: The biography of Len Beadell' by Mark Shephard (Corkwood Press, 1998). Wearing just shorts and shoes (no socks), but hair smoothed down, Stan is standing with others of the CSIRO party who surveyed the region between the Daly and East Alligator Rivers, Northern Territory, from June to October, 1946. Unfortunately there are no

details of Stan's involvement, though he was given the intriguing nickname 'Basher'. Further on in the book is what must be a very rare citation of a herbarium sheet in a non-systematic paper. In 1989, Len Beadell was asked to collect material of *Gyrostemon ramulosus* for chemical analysis. This he did, and the voucher, from the Great Victoria Desert, is MEL 694274!

## Hunting the elusive *Dillwynia*

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The week before the Australia Day weekend, Peter Weston and I set off to the western portion of the Kosciusko National Park and adjoining Bago State Forest to collect an unusual, unnamed species of *Dillwynia*.

It was first collected in 1962 with the vague locality of Bago State Forest, "In treeless plain adjoining *Eucalyptus pauciflora* and *E. stellulata* woodland". Not much to go on. Since then it had been collected three times - in the early 1960's "Near Brindabella, on southern plateau" and in the early 80's at Little Peppercorn Plain, near Kiandra and on the Bogong Range near Talbingo.

We opted for Little Peppercorn Plain first as it was the most definite locality. This plain is about 30 km north of Yarrangobilly Caves. Seeing Peter jumping up and down with excitement is not a sight commonly observed here at the NSW Herbarium, but it did happen about 20 m off the road when we came across our first plant. In fact, it was extremely common in the area, both on the herbfield on a small rise and along the edge of the nearly boggy creek. It's rather an attractive thing with delicate "egg and bacon" pea flowers nestled amongst the grasses and sedges.

After this first sighting, we felt we had a search image for its preferred habitat, and so made our way to Tumbarumba, ready for our foray into Bago State Forest the next day. The first swamp we visited had heavily wooded margins with tea tree scrub and it looked like an unlikely sort of place. I had given up finding it here, but Peter decided to keep looking a

bit longer. His perseverance paid off and he found a very healthy population in an area of the swamp that shared associated species with Little Peppercorn Plain. We also encountered our first brumby pack in the area. It was a scene straight out of *The Man From Snowy River*, with the horses galloping down the dirt road, hooves thumping and manes flying - all very cinematographic.

The Fates were kind to us that day and we were able to find the new species growing in almost every spot we had predicted. We also encountered a number of brumbies and herds of cattle. On our way to one of the swamps, the cattle thought we were stalking them and had quickly scattered into the nearby forest. At other sites, the cattle had disapproved of our presence, but we hadn't worried too much as they were all steers or calves. At one of the last spots, however, we saw our first bull and we noted the only decent escape route would be to climb one of the stanchions of the nearby high voltage lines, if the cattle had decided to take a dislike to us. The last swamp we visited appeared to have been drained by the local farmers and was full of stock and heavily grazed. It had been a *Baeckea* - *Sphagnum* swamp but was quite disturbed now and was the only potential spot from which the new *Dillwynia* was missing.

It had been a long day and we celebrated with a particularly good cold beer (or was it more than one - I can't remember) in Adaminaby, confident we had a new species in hand.

## ASBS first summer series picnic

Peter Jobson  
National Herbarium of NSW

On a perfect summer day, in mid January, a group of just over 30 people braved the Sunday drivers and made their way to Nielsen Park in Vaucluse to have the first of a series of summer picnics for the Sydney Chapter of ASBS. For the uninitiated, Vaucluse is an eastern harbourside suburb full of people with real incomes (not the sort awarded to Systematic Botanists) and attitude. It is also a popular Sunday picnic spot. Most of us, therefore, had to lug our picnic gear for a good half kilometre and most of us had a parking story to tell. Peter Weston's was the best.

As they were slowly driving along the street looking for a vacant spot, they noticed some people getting into a car, and after the usual pleasantries were exchanged they sat waiting for the car to leave. On noticing this car vacating, another car about 50 m further up the street came reversing down. The driver, a rather suave man in designer clothes and sunglasses, left his expensive car and sauntered over to the Westons and said, "Hey Guys! I was here first." Of course, they felt he had missed his opportunity and as they had might on their side (their car being bigger) they promptly occupied the space. He then hovered around them, while they unpacked, with what looked like evil intent (they were expecting to have their tyres slashed) even when it looked like they definitely wouldn't be relinquishing their spot for such an important person as himself. It's good to see Road Rage in all its forms is still alive and well in Sydney. He sat glowering at the Weston's for about 5 minutes until, much to everyone's surprise, the car

parked next to him vacated its spot and he got his own space.

The Conns were late and so had to park in some distant suburb. They therefore decided to leave their fire BBQ in the car in the hope of finding gas BBQs in the park. Of course these had been vandalised and removed years ago. It's a sorry sight, I can tell you, to see Barry on bended knee begging to use the neighbouring picnicker's BBQ. I can't believe they fell for the "feeding the starving children" story.

Tim Entwisle brought a sizable contingent, so we were able to commandeer a reasonable portion of the swimming enclosure. We climbed onto the net under the sign prohibiting us from doing so, we destroyed the local ecosystem by pulling up the kelp from the sea bed and overall managed to drive the other swimmers away with our skylarking – the usual things associated with a responsible society such as ours. Peter Weston, while snorkelling, found a marketable crab, but it was wise to him and managed to escape.

Most of the afternoon was spent sleeping, eating, playing *boules* (a type of lawn bowls) or just enjoying languid conversation. The diehards such as myself, Elizabeth Brown and the Conn contingent finished off the day by invading a swank Double Bay café to enjoy an end-of-the-day coffee.



# REVIEWS

## 1997 IUCN Red List of Threatened Plants

Edited by K.S.Walter and H.J.Gillett

IUCN – The World Conservation Union, Gland and Cambridge (1998). lxiv +862 pp.  
ISBN 2-8317-0328-X. Price not known

This massive A4 tome supersedes the long-out-of-date edition of 1978 and lists 33 798 species of vascular plants (of an estimated global flora of 270 000) as threatened, i.e. rare, vulnerable, endangered or extinct. The categories approximate to those developed for ROTAP but lack the supplementary binary code that indicate geographical range, population size and occurrence in conservation reserves. The cutoff date for entry of taxa for the published version was 22 May 1997.

Introductory chapters explain the history (originating with Peter Scott in 1963) and purpose of the list, data sources, and organisation, including the difficulties of combining lists from disparate sources. Only the data from North America, Australia, South Africa and Europe are described as 'reasonably robust.' Where a taxon is listed for more than one region, its status is listed for each and a global assessment given. For each taxon, one or two references are given for further information. Tables summarise such aspects as breakdown by country and family. The 'top ten' most threatened areas are islands such as the Seychelles, Pitcairn

and Réunion. World-wide, 380 species are believed to be extinct and 6522 endangered.

Overall, a very useful summary of the global situation as it stood in May 1997. The data are managed in a relational database at the World Conservation Monitoring Centre, Cambridge, England, currently averaging 100 changes and additions a day. Further information can be found at <http://www.rbge.org.uk/bgbase> It is notable that the non-vascular flora was excluded because the 'amount and quality of data . . . are not yet adequate to give a reasonable global overview.' In Australia we have made a start in this direction (G.A.M.Scott *et al.*, 'A Conservation Overview of Australian Non-marine Lichens, Bryophytes, Algae and Fungi', Wildlife Australia 1997), but this is clearly where far greater effort must be made.

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## John Lindley 1799 - 1865, Gardener - Botanist and Pioneer Orchidologist, Bicentenary Celebration Volume

Edited by William T. Stearn

Published by the Antique Collector's Club in association with the Royal Horticultural Society.  
ISBN 1 85149 296 8. 231 pages, frontispiece and 42 colour plates, 29 figures.  
Hardcover 25 pounds (UK), \$US48.65 from amazon.com.

This book is a joint work under the editorship of Professor Stearn and to which he contributes the general biography of Lindley. Also included are two lectures by Lindley himself as well as self-contained contributions from Phillip Cribb,

Christopher Brickell, William Chaloner, Brent Elliott, Kathryn Bridge, William Tjaden and J. Marguerite Allford touching on specific aspects of Lindley's interests. Notes on the ten parts comprising this volume are given below.

William Stearn served for twenty years as Librarian of the Lindley Library, Royal Horticultural Society (interrupted, however, by six years serving in the Royal Air Force during of the second world war) and so is ideally placed to compile and edit this volume commemorating Lindley's works on the bicentenary of his birth. As outlined by Stearn in his preface, perhaps the major advantage that this work has over previous biographies of Lindley was access to a recently uncovered "treasure trove" of Lindley family documentation from the Archives of British Columbia in Victoria, Canada.

One of the fascinations with botanical biographies such as this are the personal details and interactions gleaned about historical figures whose scientific achievements we consider regularly in our own work.

For example, I was surprised to learn that Lindley lost the sight of one eye as a child, although it clearly didn't impede his power of detailed character observation or his ability to produce accurate and visually pleasing botanical illustrations, a number of which are presented throughout this book.

I also enjoyed piecing together some of Lindley's relationship with Robert Brown throughout the volume. From their meeting in Sir Joseph Bank's library and herbarium when Lindley first came to London at the age of twenty, to Brown's sponsorship of Lindley as a Fellow of the Royal Society and his presence at Lindley's inaugural lecture as Professor of Botany at the University of London, it is apparent that Brown played the role of mentor to Lindley.

On Lindley's side it is clear, especially from comments made during his 1829 lecture, that his own belief in natural systems of classification were strongly influenced by Brown, as one of the first Englishmen to utilise such a system, for his *Prodromus* in 1810.

However, as Cribb describes in Part IV, they were to fall out in 1830 over some apparently innocuous remarks published by Lindley to which Brown took offence but for which Lindley would not publicly apologise. Their relationship never recovered. A more detailed account of this episode and subsequent enmity, from Brown's perspective, can be found in Mabberley (1985).

**Part I. The Life, Times and Achievements of John Lindley, 1799-1865 - William T. Stearn. (45 pages)**

Contains an account of Lindley's childhood, botanical career and his wide range of horticultural, administrative, academic and advisory roles. Sections are devoted to each of his major publications, the various artists who illustrated these works, and his roles with the Horticultural Society, Chelsea Physic Garden and the Royal Botanic Gardens Kew.

One and a half pages deal directly with Lindley's contribution to Australian botany. In it is briefly covered Lindley's identifications for Mitchell's expeditions into the interiors of eastern Australia (*Three Expeditions ...*, 1838, 9) and tropical Australia (*Journal of an Expedition ...*, 1848), as well as his *Sketch of the Vegetation of the Swan River Colony* (1839-40). It is interesting to consider Stearn's comment that after 1848 Lindley "never again tackled such general floristic research". The part ends with a consideration of his contribution to orchid taxonomy, the number of generic (3) and specific (136) names commemorating Lindley and the fate of his library and collections after he died in 1865.

**Part II. An introductory lecture delivered in the University of London, April 30, 1829 - John Lindley. (16 pages)**

Lindley had been appointed as foundation Professor of Botany in the previous year but this was his inaugural lecture, attended not only by students, but it seems, notaries and friends such as Robert Brown.

The lecture provided a comprehensive overview of the science of botany as it was understood then, starting with a consideration of its history, both ancient and recent. Given at a time when natural systems had gained precedence over earlier artificial systems of classification, it contains a critique of the Linnean system as "a positive and serious evil" while feting de Jussieu's approach in *Genera Plantarum* as "the second great step ... towards the establishment of Botany upon sound philosophical principles". The first, of course, was Linnaeus! Later he refines his feelings for the Linnean system - "I do not object to it because it is artificial ... but because it is superficial".

Other remarks of interest include his definition of systematists and why their 'race' arose, his criteria for a 'perfect' system of Natural History, and his concluding remark that botany "is a kind of

knowledge which no person who wishes to receive a finished education can dispense with".

**Part III. Botany and Medicine. Address delivered at the commencement of the Medical Session 1834-5, University of London on 1 October, 1834 - John Lindley. (17 pages)**

This lecture, given to medical students, outlined the role of botany in medicine and gave Lindley the chance to present many examples illustrating the practical importance of the study of botany.

**Part IV. Lindley's life-long love affair with orchids - Phillip Cribb. (15 pages)**

Lindley's interest in the Orchidaceae is documented here as beginning in 1821. His 7000-strong herbarium, amassed through a global network of collectors, and now held at Kew, helped him to "corner the market" on orchid expertise and information. Cribb summarises Lindley's work on the description, classification, illustration and cultivation of orchids which saw him come to dominate the horticulture and systematics of the group for over forty years.

**Part V. Lindley as a horticulturalist - Christopher D. Brickell. (17 pages)**

John Lindley came from a family of Norwich nurserymen, on leaving school he spent time in Belgium collecting plants and seed, and by the age of 23 he had begun his life-long association with the Royal Horticultural Society. So horticulture was a constant thread in Lindley's life, culminating in the publication of his *Theory and Practice of Horticulture* in 1855. Brickell goes on to document Lindley's role in education and the influential report which helped see the Royal Gardens at Kew become a public institution with a renewed focus on science based around a herbarium, library and an actively expanding living collection.

**Part VI. Lindley and Hutton's 'Fossil Flora of Great Britain' - William G. Chaloner. (15 pages)**

In 1829 Lindley devoted around one tenth of his introductory lecture (see Part II) to the key role palaeobotany (then very much a fledgling science) could play in the field of geology. "And what a glorious field for inquiry! What an object for scientific ambition to strike at!" he somewhat breathlessly exclaimed.

In the same year he embarked on writing *The Fossil Flora of Great Britain* with William Hutton, a

geologist working in the Newcastle (UK) coal fields, a work which appeared in three volumes over the next eight years. It consisted primarily of drawings of fossil plants from the Carboniferous and Middle Jurassic, with Lindley preparing the new names, descriptions and notes on affinity.

Due perhaps to his many other commitments it appears Lindley struggled to complete the third volume and, according to Chaloner, was so disenchanted with the subject that within a month of completing the work he had "sent away" all related documents and was selling off his books on the subject!

Chaloner makes it clear that these volumes were a great contribution to the field for which the authors pioneered new techniques in the examination of compression fossils, regretting however, that they were not taken up by others for "nearly a century".

**Part VII. The Lindley Library and John Lindley's Library - Brent Elliott. (16 pages)**

The current Librarian of the RHS' Lindley Library documents in some detail the loss of the original Lindley Library during the Societies financial difficulties in the 1850's, as well as the cataloguing, contents and subjects of Lindley's personal library.

**Part VIII. Lindley documents in the British Columbia Archives - Kathryn Bridge. (2 pages)**

This brief section outlines the nature of the family documentation kept by Lindley's eldest daughter Sarah and eventually deposited in the Archives of British Columbia in Victoria, Canada, to be unearthed in 1994. The archivist there and author of this part, Ms Bridge has also written the biography of Sarah Crease (nee Lindley).

**Part IX. The Lindley Medal of the Royal Horticultural Society - William L. Tjaden. (4 pages)**

A short account of the striking of a medal in memory of Lindley's forty years of service to the Society and awarded by the RHS for exhibitions of special scientific or horticultural interest.

**Part X. List of the Published Works of John Lindley - J.M. Allford. (23 pages)**

A comprehensive annotated list of Lindley's publications, originally compiled by Miss Allford in 1953 but amended by Stearn to include certain publication dates unknown at the time. Listed

publications span the years 1819 - 1877, include 238 items organised by publication year, and run to 23 pages including a separate index.

As for the rest of the work, the colour plates are largely of orchids, and most are colour lithographs by Miss S.A. Drake, a small number are by Lindley himself, and one or two each by various artists including W.J. Hooker. Two of the plates are portraits of Lindley at ages 35 and 63 by C. Fox and E.U. Eddis, respectively.

Perhaps most intriguing is plate 20, an example of type sheets from the Lindley herbarium at Kew where the specimen is mounted directly onto one of these remarkable illustrations. Finally, the endpapers are taken from four of the colour plates within, making the volume attractive for those with an eye for orchids or excellence in botanical illustration.

This biography of John Lindley is well-conceived and researched and summarises in a reasonable length the major threads of a full life spent in the

pursuit of the precise and scientific synthesis of botanical taxonomy, horticulture and education. A worthy addition to any botanical library and a rewarding and informative read, it will sit well next to the biographies of his peers from this near-legendary period in the history of botany.

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### Adventrop Doc - Les adventices d'Afrique soudano-sahélienne

*Adventrop Doc* is a multimedia interactive identification aid to the major introduced weedy plants of cotton, maize, peanuts, and sorghum plantations of the soudano-sahélienne region of tropical West Africa. The soudano-sahélienne climatic region has an annual rainfall of 900-1200 mm and a dry season of 6 months. This is a CD-Rom version of Bourgeois and Merlier's book (1995), of the same name, and provides information for 142 species.

Installation of the *Adventrop Doc* software is extremely simple and rapid, guided by clear instructions with the CD-Rom. There are several installation options available. This software was developed by P. Grard using Visual Basic 3.0 and Visual C/C++ 1.0.

This is an interesting example of the use of the CD-Rom medium as an identification aid. *Adventrop Doc* is extremely graphical. It uses readily identifiable icons throughout and the key is navigated using only illustrations. *Characters* are selected by 'clicking' on a stylised diagram of a plant and its parts. Selected character-states are also presented graphically and chosen by using the left mouse

button. Re-clicking on a feature enables it to be removed from the identification process. The number of *Taxa* matching the character-states selected is listed. The key is extremely simple to use, without the need for botanical terminology (and the French language). The use of hyperlinked words throughout *Adventrop Doc* provides access to a pictorial or textual dictionary. This is an excellent feature.

The information provided for all taxa include: relevant references, synonymy, a good description (covering habit of both seedlings and adults, stem, leaves, flowers, fruits and seeds), diagnostic features, biology, ecology, distribution, germination and development cycle. Each taxon is illustrated with photographs and line drawings of adults and juveniles, and generalised distribution maps. There are 400 colour images (some of which are not of the best quality). These images can be printed out. The resolution of the line drawings is often best appreciated when printed out. Unfortunately, the textual information needs to be copied into *Word* before it can be printed.

Although the taxa presented are of limited relevance to Australian users this is an excellent example of

an interactive key that is elegantly presented in a user-friendly manner. Anyone seeking to construct a key that is easy to use by a wide range of people should look at this product. The authors are to be congratulated on their contribution to identification aids; although it appears to be designed with farmers and managers in mind, it has a simplicity and logical approach to identification that appeals to at least 2 professional botanists.

#### Technical Requirements:

IBM or compatible 486 DX or better  
SVGA monitor – at least 640 x 480 pixel screen resolution  
256 colour screen display or better  
At least 5 MB of free hard-disk space  
4 MB Ram (Windows 3.1) 8 MB Ram (Windows 95)

'Adventrop Doc - Les adventices d'Afrique soudano-sahélienne', by P. Grard, T. Le Bourgeois, and H. Merlier, CIRAD, Montpellier (1996). Price: Book 350 FF; Book and CD 2000 FF. Postal Address: CIRAD-CA, Service des publications, de l'information et de la documentation, 2477 avenue du Val de Montferrand, BP 5035, 34032 Montpellier Cedex 1, FRANCE.

A demonstration version is available at the website of *Centre de coopération internationale en recherche agronomique pour le développement* (CIRAD): [http://www.cirad.fr/publications/cdrom/adv\\_int.htm](http://www.cirad.fr/publications/cdrom/adv_int.htm)

Elizabeth A. Brown & Barry J. Conn

### EUCLID – Eucalypts of south-eastern Australia

M.I.H. Brooker, J.R. Connors, A.V. Slee

CSIRO Publishing, Collingwood.  
Price AUS\$120, plus AUS\$8 for postage and handling.  
Email: [sales@publish.csiro.au](mailto:sales@publish.csiro.au)

Identification of large genera, such as *Eucalyptus*, has never been easy except for those with extensive field and systematic knowledge of the group. Brooker, Connors and Slee have produced a multiple-entry computer key for 310 species of eucalypts that are native to south-eastern Australia (New South Wales, Victoria, Tasmania and the south-eastern part of South Australia). The identification package consists of a CD-Rom and a brief user guide by Thiele.

Installation of the LucID software is extremely simple and rapid, guided by clear instructions with the CD-Rom. The image and text files remain on the CD-Rom and are required during any session of EUCLID. All other files are loaded to the PC's hard drive.

EUCLID is very graphical with the extensive use of readily identifiable icons throughout. The key is presented as four windows. These four windows display: the *Characters Available* to describe the plant specimen; the *Character States Chosen* to describe the material; *Taxa Remaining* lists the names of the eucalypts that agree with your

selection of descriptive characters; and *Taxa Discarded* lists all those that do not agree with the descriptive characters selected by the user. Most of the characters in the *Characters Available* list consist of more than one character state. The key follows the standard LucID format. A character can be selected by the left-mouse 'click' either on the name (to display its states as text) or on the 'T' icon (to display an image of the state). The character state can be selected from either the text list or the graphical one. The progressive selection of characters discards taxa that do not agree with the description built-up by this character selection. Since precise, albeit simple, instructions are provided on how to use the identification key, further comment is not provided here. The brief introduction to important features of eucalypts is excellent. The EUCLID tutorial would help anyone not sure of how the key works.

All taxa have protologue information, synonymy, a brief description and notes. Each taxon is beautifully illustrated with images of the habit, leaves and leaf venation, often juvenile leaves, buds,

fruits, and distribution map. EUCLID has more than 2000 colour images.

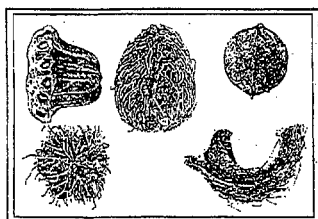
Although I have only tested the key on a small number of plants, I found it effortless to reduce the number of possible taxa to less than ten. Occasional miscoding leads to errors in identifications that will need to be rectified in future editions. Whether or not CSIRO Publishing's aggressive commercialisation of this product (at AUS\$120) is in the best interest of educating the broader community in the diversity of this important Australian genus is questionable. However, this is an excellent example of an interactive key that is elegantly presented in a user-friendly manner. I congratulate the authors for their significant

contribution to identification aids for professional botanists, natural resource managers and the interested public.

#### Technical Requirements:

IBM or compatible 486 DX or better  
SVGA monitor – at least 640 x 480 pixel screen resolution  
256 colour screen display or better  
At least 5 MB of free hard-disk space  
8 MB Ram  
Windows 3.1 or better (Windows 95)

Barry J. Conn



## Announcing: AUSTRALIAN DRIFTSEEDS A COMPENDIUM OF SEEDS AND FRUITS COMMONLY FOUND ON AUSTRALIAN BEACHES

Written by Jeremy Smith, and illustrated by Jill Kinnear

to be published by The School of Human and Environmental Studies,  
University of New England, January 1999: ISBN: 1 86389 537X



*This is the first full account of driftseeds found on Australian beaches, bringing together available information from the whole country. All the more common and conspicuous driftseeds likely to be encountered on our beaches are described and illustrated.*

*Driftseeds are seeds, fruits, fragments of fruits or other plant disseminules which are buoyant in seawater, and which therefore are able to drift in ocean currents sometimes for months, to reach beaches often remote from their point of origin. In the past an elaborate folklore arose concerning them, and they have also been used to make jewellery, snuffboxes etc. Today their interest is largely scientific, as they represent the best available example that the natural world has to offer of frequent, observable dispersal of seeds over long distances. They also have considerable hobby interest.*



*The book comprises two Parts. In the first, general aspects of the topic are pursued from an Australian perspective, including: driftseed folklore and science; sources of driftseeds; evolution of driftseeds; mechanisms of ocean drift; and winds, currents and driftseeds around Australia.*

*In the second Part, seventy-four different driftseeds found on Australian beaches are illustrated and described. Notes are provided on the types of plants producing them, and their distributions and uses. Maps are included showing where each type has been collected around the Australian coastline.*



*References are given to previous work relevant to the subject. A Glossary defines some technical terms, and a comprehensive Index permits easy navigation through the book.*

*It has been written to aid identification and provide information about Australian driftseeds, and so to foster both scientific and general involvement in a topic of broad interest to ecologists and biogeographers, beachcombers of all persuasions, and everybody who visits Australian beaches with an enquiring mind.*

To obtain your copy(ies), complete the following details, and send this sheet with a cheque or money order for \$Aus 15.00 (or \$Aus 20.00 for overseas airmail) per book, to:

The Map Librarian, School of Human and Environmental Studies  
University of New England, Armidale, NSW 2351, Australia

Name: \_\_\_\_\_

Postal Address \_\_\_\_\_

I enclose \$ \_\_\_\_\_ as payment for \_\_\_\_\_ copy(ies) of 'AUSTRALIAN DRIFTSEEDS'

# CONFERENCES/WORKSHOPS

## INTERNATIONAL SYMPOSIUM ETHNOBOTANY

Medicinal Plants: Folk Traditions, History, Pharmacology  
14-18 September, 1999. San José (Costa Rica)

Organised by:  
Geodata Center, Costa Rica, Sciences et Lettres, Belgium,  
under the auspices of:  
Universidad para la Paz, Costa Rica

From 14 to 18 September 1999, the 1st International Symposium on the History and Folk tradition of Medicinal Plants will be organised in Costa Rica, the largest biodiversity center of the World. The main topics will be the history of medicinal plants from antiquity to present times, folk traditions (past and present), scientific knowledge, integration of folk tradition into medicine, ethnobotany and pharmacology, with a special emphasis in temperate and neo-tropical floras. Comparative, transperiod and interdisciplinary studies are welcome, as well as works and projects dealing with the use of multimedia means in the field.

The scientific programme of the unique event of this kind, which will include plenary lectures, papers, posters, round tables and free discussions, aims to encourage the study of a patrimony of Humanity exposed to disappearance, and to contribute to the preservation of flora worldwide, among others by the recuperation of historical tradition and plant lore. Its proceedings are expected to constitute an indispensable tool and a work of reference on this subject.

The Symposium is a non profit event devoted to promote study, scientific research and divulgation in the field. Held in the heart of the Tropical Forest, it is designed to be an international forum open to physicians, pharmacists, chemists, botanists, historians, philologists, ethnolinguists, ethnobotanists, anthropologists and everybody wishing to hear communications of major world specialists in the field, to contribute personally with the presentation of original works, and to participate in focused discussions on the current state of research in medicinal plants, their meaning for man, culture and science through World History.

*For participation and further information please contact the organisers:*

SIMPOSIO P.O.BOX 6131, 1000 San José  
Prof. Ronald Chaves  
Fax : + (506) 283 02 63 Costa Rica  
e-mail [simposio@nexos.co.cr](mailto:simposio@nexos.co.cr)

Visit us at:  
<http://www.costarica.com/wg/simposio>

### Scientific Programme: Preliminary Version Draft for Discussion

- I. Mankind. Society and Medicinal Plants: Future challenges
  - 1.1 Addresses from North America, Europe, Mesoamerica, South America, Africa, China, Australia and India. Open to other geographical areas or regions.
- II. Medicinal Plants and Technology
  - 2.1 Arts and Horticulture of Medicinal Plants
  - 2.2 Satellite Imagery and vegetation cartography
  - 2.3 Global Positioning Systems and Vegetation Maps
  - 2.4 Bioclimatic Mapping of Medicinal Plants
  - 2.5 Physiology of Medicinal Plants

- 2.6 Pharmacognosy of Medicinal Plants
- 2.7 Iterative Data Banks
- 2.8 Germplasm Data Banks
- 2.9 Cellular Biology
- 2.10 Genetic Biology
- 2.11 Medicinal Plants as tracers of Environments

**III. The Legacy of Ancient Cultures**

- 3.1. China, India, Australasia (Specialists are encouraged to say hello!)
- 3.2. Mesopotamia, Greece, Bizance, Rome
- 3.3. Arab World
- 3.4. Africa
- 3.5. The Preservation of Traditions in the Middle Age: Registers, Papirs, Pergamon: The Pre-Systematic of Medicinal Plants
- 3.6. The Production of Ancient Texts. The First essays of Pharmacopeas

**IV. The Medicinal Plants of the World: Folk Traditions, History, Pharmacology, Biogeography**

- 4.1 North America
- 4.2 Mesoamerica
- 4.3 Amazonia
- 4.4 Andean Region
- 4.5 Pampean Region
- 4.6 Caribbean Region
- 4.7 Finno-Scandia
- 4.8 Mitteleuropa
- 4.9 Eurasia
- 4.10 Mediterranea
- 4.11 Africa

(Papers and Communications from other regions are welcome).

**V. The Contribution of Ethnobotanics for Understanding Cultures. A Common Legacy: Ethology and Medicinal Plants.**

**VI. Working Groups**

- 6.1 New Technologies
- 6.2 Biotechnology
- 6.3 Ethnomedicine
- 6.4 Herboristery
- 6.5 Pharmacology
- 6.6 Pharmacognosy
- 6.7 Ethnobotany
- 6.8 Recovery of Ancient Texts

**VII. SYMPOSIUM**

Preliminary Conclusions



**A REMINDER!!**

**DAMPIER 300**

Perth, 6–10 December 1999

**Biodiversity in Australia 1699–1999 and beyond**

The first circular for this conference was distributed with the previous newsletter. Early expressions of interest indicate a top program of papers to go with the excursions and other activities being planned. But to assist the planning committee, please advise as soon as possible your intention to attend, or at least if you wish to receive the second circular. Registration costs will depend on our estimate of numbers coming but will

probably be about \$A170 if paid by 31 August and \$A200 thereafter.

*Alex George*

'Four Gables', 18 Barclay Road, Kardinya, Western Australia 6163

☎ (08) 9337 1655

Fax: (08) 9337 9404

email alextris@inet.net.au

**2000: NEW ZEALAND**

As a millennial project for New Zealand there will be a major biodiversity symposium in Wellington, New Zealand, 1-5 February 2000. This will be held at the new Museum of New Zealand building Te Papa Tongarewa.

The theme and title of the symposium take their name from the well-known global biodiversity programme Species 2000, coordinated by Dr Frank Bisby of Reading University. Dr Bisby will open the symposium as a keynote speaker.

The symposium will review the entire New Zealand biota, bacteria to vertebrates, living and fossil, native and adventive. Verbal presentations at the symposium will review what is known about each major taxon, providing actual numbers of species to the extent this is determinable, and focusing on special features. Our biodiversity is scientifically engaging and the goal is to tell the story as interestingly as possible. Publicity accompanying the symposium will seek to promote national appreciation of our biodiversity at the public and political level.

By providing checklists of every species, taxon by taxon, the symposium will also result in a baseline inventory of the biota with which to begin the "Century of the Environment" (E.O. Wilson) and the millennium. The symposium volumes, to be published by Canterbury University Press, Christchurch, will comprise chapters largely (though not exclusively) based on the verbal presentations. Species checklists will accompany reviews of each major taxon (or geological time period) as end-chapter appendices. It is intended that the latter be also made available on the internet.

To receive a promotional flyer and explanatory material please contact Dennis Gordon by e-mail (d.gordon@niwa.cri.nz) or at the address below.  
Dr Dennis P. Gordon  
National Institute of Water & Atmospheric Research  
P.O. Box 14-901  
Kilbirnie  
Wellington, New Zealand

Phone: 64 4 386 0388

Fax: 64 4 386 2153

E-mail: d.gordon@niwa.cri.nz

**UNE ASIA CENTRE  
INTERNATIONAL CONFERENCE**

**Where Worlds Collide:  
Faunal and floral migrations and evolution in SE Asia-Australasia**

to be held at  
The University of New England,  
Armidale, Australia  
29 November-1 December, 1999

**FIRST CIRCULAR AND CALL FOR PAPERS**

**INVITATION:**

The Organizing Committee cordially invites you to join your colleagues at the international conference *Where Worlds Collide: Faunal and floral migrations and evolution in SE Asia-Australasia*, to be held at The University of New England from 29 November - 1 December, 1999. The conference will form a contribution to IGCP Projects 411 and 421.

**OBJECTIVES:**

SE Asia is in many respects a unique natural laboratory for studying the effects of geological and tectonic processes, and in particular continental terrane movements, orogenesis and continental collisions, on migration and evolution of a wide variety of animal, plant and insect groups. Waxing and waning physical (geological) and biological (biogeographical) interactions between SE Asia and Australasia go back more than 500 million years and one of the main aims of this conference is to improve our understanding of these relationships both temporally and spatially. Some tantalising questions remaining to be answered include:

- Why is Wallace's Line so well defined and what dictated its position?
- Cretaceous placental mammals in Australasia: ancestors of some northern hemisphere groups?
- What role(s) did the continental "Arks" of India and Australia play in determining distribution and evolution of organisms in the SE Asian region?
- How have tectonics and terrane movements influenced migrations and evolution in SE Asia-Australasia and the present-day biogeographic patterns of the region?
- What do we know about human dispersals, culture contacts and cultural change in the region ?

This conference is designed to provide a forum for answering such questions and to discuss the interaction between physical (geological and tectonic) processes, sea level fluctuations, climate changes, and patterns of migration and evolution in the SE Asian-Australasian region.

**THEMES:**

The conference will be structured into themes. Some preliminary suggested themes are:

- Palaeozoic/Mesozoic geology and biogeography.
- Cenozoic geology and biogeography.
- Primate evolution and biogeography.
- Hominoid migration and dispersal.
- Plant evolution and dispersal in the region.
- Wallace's Line.
- Human dispersals, cultural contacts and change.

**PAPERS AND POSTERS:**

The organizing Committee now calls for titles, abstracts and papers from intending participants. Abstracts may be up to three A4 pages in length (illustrations and references included) and will be required on disc or by e-mail plus hard copy by 1 July, 1999. These will be published in an abstracts volume with an ISBN number. Posters are also welcomed.

**FIELD EXCURSION:**

A one day excursion will be organised for 1 December to examine local New England geology, fauna and flora. Details will be provided in the Second Circular.

**PUBLICATIONS:**

Selected refereed and accepted papers will be published as a book; negotiations are proceeding with potential publishers. All other papers, following peer review and acceptance, will be published in electronic form as a collection of UNEAC Papers on the Internet via the UNEAC Web Page and on a CD ROM.

**REGISTRATION & ACCOMMODATION:**

Registration fee for the Conference (including abstracts volume, and morning and afternoon teas) will be A\$200 (A\$150 if by 1 August, 1999) and A\$75 for students. Accommodation will be in student colleges (approximate cost for single room, shared bathroom will be A\$40) and in Motels in Armidale (approximate cost for a single room with continental breakfast will be A\$80). Details will be provided in the Second Circular.

**ORGANIZING COMMITTEE:**

Covenor and Chairman:

A/Prof. Ian Metcalfe, Asia Centre, UNE

Other Members:

Prof. Kevin Hewison, Director, Asia Centre, UNE

Prof. Iain Davidson, Head, School of Human and Environmental Studies, UNE

Dr Mike Morwood, Archaeology & Palaeoanthropology, UNE

A/Prof. N. Prakash, Botany, UNE

**KEYNOTE SPEAKERS:**

Prof. Robert Hall, Royal Holloway, London University will present a keynote paper on Cenozoic plate tectonics and distribution of land and sea in SE Asia.

Ms Penny van Oosterzee, author of the Eureka prize winning book "Where Worlds Collide: The Wallace Line" will present an evening public lecture.

**DATES TO REMEMBER:**

December, 1998: Release of First Circular

15th February, 1999: Deadline for receipt of pre-registration

1st April, 1999: Release of 2nd Circular and Registration Form

1st July, 1999: Deadline for submission of abstracts

1st August, 1999: Deadline for registration

29th November, 1999: Deadline for receipt of full papers

Pre-Registration for:

International Conference Where Worlds Collide: Faunal and floral migrations and evolution in SE Asia-Australasia

Please e-mail to: [imetcalf@metz.une.edu.au](mailto:imetcalf@metz.une.edu.au)

Name:

Address:

Telephone:

Fax:

Email:

My attendance at the Conference is

Definite  
Probable  
Possible

I am interested in attending the excursion:

Yes  
No

I plan to present a paper/poster entitled:

I wish to suggest additional themes or organise a session on a related topic:

Please send all correspondence to:

A/Prof Ian Metcalfe  
Convenor, Where Worlds Collide Conference  
Asia Centre  
University of New England  
Armidale NSW 2351  
AUSTRALIA

Tel & Fax: 61-2-67733934  
Email: [imetcalf@metz.une.edu.au](mailto:imetcalf@metz.une.edu.au)

## HERBARIUM NEWS

### Darwin Herbarium

Darwin herbarium is located in a leased building in the satellite city of Palmerston, 20km south of central Darwin. It is staffed by 3 botanists (Clyde Dunlop, Ian Cowie and Phil Short), and 3 technicians (Paul Munns, Chris Mangion and Bob Harwood).

The herbarium is part of the Parks and Wildlife Commission of the Northern Territory (PWCNT), and various PWCNT research projects require the help of a botanist, thus giving staff the opportunity to investigate more of the NT flora than would otherwise be possible. Two other departments that also provide opportunities for field work are Quarantine and the Department of Lands, Planning and Environment, although the recent arrival of Andrew Mitchell from WA to fill the position of Quarantine botanist means they won't be needing our help anymore.

Back at the herbarium, one major project is to produce a flood plain flora of the NT. Clyde, Ian and Phil share the responsibility for this, and each have their own projects as well. Clyde is revising

some NT Asteraceae genera, Ian is revising NT and WA *Tephrosia* (Fabaceae) for Flora of Australia, and Phil works on various Asteraceae genera, including *Brachyscome*. Although the work day officially finishes at 4:30pm, all 3 are always still working till well after 5pm.

Paul is the senior technician, and looks after loans to and from DNA, as well as many other things. Chris and Bob are more expendable, and fight over who will go on any field trips that may come up.

Two other people closely affiliated with the herbarium are Glenn Wightman and Monica Osterkamp Madsen. Glenn runs an ethnobotany program which involves him spending time at various Aboriginal communities documenting the local language names and uses for the plants of the area, and producing bilingual books of these facts. Monika has the life we all dream of, spending the Northern hemisphere winter in Darwin, and returning to her home in Sweden for the summer. She will be back in Darwin in April, and will complete the illustrations for the above-mentioned floodplain flora.

## NEWS FROM FASTS

### FASTS "Ten Top" for 1999

Australia's peak council for scientists and technologists has released its "Ten Top" issues for 1999.

Professor Peter Cullen, President of the Federation of Australian Scientific and Technological Societies (FASTS), said the list this year was dominated by two issues: funding university science, and commercialising the best ideas of Australian scientists and technologists.

"I want to propose a New Year's Resolution to the Government: that they resolve to sort out the mess in our universities before it is too late," he said.

"The universities are slowly being squeezed to death, and the quality of Australian science is being affected by increasing workloads and a failure to renew equipment and laboratories."

Professor Cullen said that Australians needed to view public support for R&D as an investment rather than a drain on the public purse, and pointed to massive boosts to research budgets by the Governments of the USA and Britain.

"These Governments have taken a hard-headed look at the benefits - new industries, new well-paid jobs, a better quality of life through technological advances. They have done their sums and can see that the investment pays off," he said.

He said he would write to the Minister for Industry, Science and Resources early in the New Year, asking him to bring together all the cost-benefit analyses of R&D in Australia.

"There are a number of studies showing how in investment in R&D pays off, but they all use a different approach. If we can establish a common methodology we can assemble a cast-iron case showing that the high-technology, high-salary path is possible for Australia," he said.

Professor Cullen said the Wills Report on Health and Medical Research earlier this month picked up a number of these issues.

"We support the recommendations Wills makes, in particular his support for a peer-reviewed competitive system as a means of selecting which research projects will be funded," he said.

"Wills also emphasises the need to commercialise Australian science and technology, and his report is part of a growing groundswell of support for commercialisation."

"Industry, Government and science groups increasingly recognise they have a common interest in translating our clever science into commercial reality. The mindset has to be right, and so do the taxation and policy settings."

Professor Cullen said industry and research groups were still learning to work with each other on commercialising S&T, and that there was a degree of "culture shock" on both sides which was steadily being overcome as the Australian experience matured.

## **FASTS TEN TOP POLICIES for 1999**

### **1. UNIVERSITIES AT THE CROSSROADS**

FASTS urges the Government to restore stability in the higher education sector through realistic annual salary indexation to help meet negotiated salary increases, and through realistic annual indexation of infrastructure costs that recognises the impact of the exchange rate on library acquisitions, information technology and purchases of major equipment.

### **2. PEER-REVIEW FUNDING: THE BEST WAY TO GO**

Australia must retain a nation-wide competitive, peer-reviewed process as part of a plurality of research funding mechanisms. The ARC should be independent like the NH&MRC, and its budget increased to allow more top-ranked science projects to be funded.

### **3. INCENTIVES FOR SCIENCE AND MATHS**

**TEACHERS** The shortage in qualified teachers of

science and mathematics will worsen unless good quality graduates are attracted to the profession by incentive schemes such as delayed or reduced HECS repayments. Universities need incentives to provide extra teacher-training positions.

### **4. SCIENCE IN THE BUSH**

S&T can help create new jobs in regional Australia in industries such as aquaculture, wine-making and biotechnology as well as coping with salinity and other environmental issues. These matters need an "all-of-government" approach, with the active participation of regional governments.

### **5. AUSTRALIA: AN ATTRACTIVE PLACE TO INVEST - FASTS**

urges the Government to introduce internationally competitive R&D tax concessions and capital gains taxes. These would support our highly skilled work-force and the relatively low cost of research to make Australia a very attractive place in which to invest in science and technology.

### **6. KEEPING UP WITH THE JONESES**

Government support for R&D should be viewed as an investment rather than a drain on the public purse. Both Britain and America have sharply increased their spending on research, and Australia should follow this lead by investing in our future prosperity through increased funding for R&D.

### **7. INVESTING IN AUSTRALIA'S HEALTH FASTS**

applauds the major recommendations of the Wills Review into Health and Medical Research, and urges government, research and industry to work together to implement its recommendations to improve the delivery of health and medical research in Australia.

### **8. SCIENTISTS THINKING COMMERCIALLY**

Universities and research agencies should offer real incentives and encouragement to scientists to commercialise their work. Commercial activities should be recognised as a valid professional activity in promotion and appointments, and existing training and assistance programs improved.

### **9. THE BENEFITS OF BEING INTERNATIONAL**

The Government is urged to build Australia's international science links by investing in reciprocal projects such as the Global Biodiversity Information Facility, and capturing potential flow-on benefits in emerging technologies such as biotechnology and information sciences.

### **10. LANDMARK PROJECTS TO MARK 2001**

FASTS invites the Government to capture the imagination of all Australians with landmark S&T-based projects to mark the Year 2001. These projects should create high-quality employment opportunities, and could include national research investment in Australia's Ocean Territory.

## **FASTS circular for December**

**1. PRIME MINISTER'S SCIENCE COUNCIL** Under John Howard, the PM's Science Council (PMSEIC) has developed into a major force in discussing the S&T questions of the day.

The meeting on December 4 brought together senior scientists and half of Cabinet, and the group discussed a whole range of issues over dinner and more formal talks the following day.

Issues for discussion included:

- funding of medical research
- the future of the ARC
- training and encouraging entrepreneurial scientists and technologists
- the supply of qualified science and mathematics teachers
- measures to counter increased salinity

It is a major priority of FASTS to make constructive contributions to these discussions, and I try to take full advantage to ensure the voice of 50,000 working scientists and technologists is heard!

The meeting gave me an opportunity to meet Minister Nick Minchin, with his portfolio responsibility for Industry, Science and Resources; and to discuss the ARC issue with Education Minister David Kemp.

As joint Chair of the PMSEIC sub-committee on dryland salinity, I presented our report on salinity. I was able to consult widely within the scientific community before writing the report, and included actions on remedial programs Australia needs to put in place.

The presentation generated a lot of discussion, which reflects the care the Minister and Chief Scientist John Stocker take in selecting topics of relevance and interest to the Ministers in attendance.

**2. WILLS REPORT ON FUNDING MEDICAL RESEARCH** Peter Wills' report to PMSEIC report makes a strong argument for increased investment in R&D for the medical sector and shows the returns in terms of both innovations and cheaper health costs.

It makes a cogent case for only funding excellent research through peer review processes. The full report was released on December 4, and is available on the Web (HYPERLINK <http://www.hmrsr.com>)

**3. ARC AT PMSEIC** The Wills' recommendations on the selection of scientific projects through peer review made an interesting contrast with rumours about the content of the draft green paper on the ARC at the PMSEIC discussions.

Minister Kemp told me he had received the letter from FASTS on ARC, and said that there were strongly divergent views on the matter.

The draft Green Paper may be delayed, but I indicated FASTS was keen to see the discussion paper address the real issues and would not object to a delay if it means more appropriate consultation.

**4. TEACHERS** The issue of the supply of qualified science and mathematics teachers was also discussed at PMSEIC. It is clear that this matter is beginning to bite with our politicians, and there is an increased awareness that relatively low pay levels make teaching an unattractive career.

These issues are to be raised further with Minister Kemp and will be discussed at a subsequent PMSEIC meeting.

### **5. TEN TOP ISSUES**

FASTS' Ten Top Issues will be released just before the New Year, and their selection and ordering is causing headaches among Board and Executive Members.

There is certainly no lack of issues! The difficulty lies in weighing and balancing the relative merits of matters like better funding for universities and the need to preserve a competitive, peer-reviewed system for selecting basic research projects.

### **6. FASTS' ANNUAL COUNCIL**

Council this year was held at the National Press Club, and I was delighted to see so many Member Societies represented by their Presidents.

Discussion ranged over a number of policy issues, including the commercialisation of science and the future of the ARC.

Bob Frater of CSIRO and Bob McMullan (ALP spokesperson on Industry and Technology) addressed the meeting, and Toss Gascoigne gave a preliminary report on a FASTS' study on the impediments scientists and technologists face in commercialising their science.

Dinner guests included Professor Vicki Sara (Chair of ARC), Stuart Hamilton (Director of AV-CC) and

Professor Brian Anderson (President of Australian Academy of Science).

**7. PRESIDENT-ELECT PROFESSOR SUE SERJEANTSON** I am delighted to announce that Sue Serjeantson has been elected President-elect of FASTS, and will take up office at the Council in November 1999.

Sue has a distinguished career in research and research administration. A molecular biologist, she served as Director of the Institute of Advanced Studies, and Deputy Vice-Chancellor at the ANU.

The full Executive is:

President

Professor Peter Cullen (CRC Freshwater Ecology, Uni of Canb)

President-elect

Professor Sue Serjeantson (ANU, Canberra)

Vice-presidents

Ms Jan Thomas (Victoria University of Technology, Melbourne)

Dr Bob Carter (James Cook University, Townsville)

Secretary

Dr John Rice (Flinders University, Adelaide)

Treasurer

Professor Snow Barlow (Bureau of Resource Sciences, Canb.)

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Dr Ken Baldwin (Laser Physics Centre, ANU, Canberra)

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Dr Peter French St Vincent's Hospital, Sydney

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Professor John Pilbrow Monash University, Melbourne

Medical Sciences

Professor David Tracey University of NSW, Sydney

**8. IMPEDIMENTS TO COMMERCIALISATION**

The FASTS' study on the impediments scientists face in commercialising their work has involved talking to scientists across Australia in focus groups in Townsville, Brisbane, Sydney, Melbourne, Canberra, Adelaide and Perth.

An interim account was presented to a Research Commercialisation Forum in Melbourne (as well as to FASTS' Council); and showed many scientists find the road to commercialisation is a difficult one.

The project is funded by a grant from the Department of Industry, Science and Resources, and the full report is due by the end of the year.

**9. MEETING OF STATE AND TERRITORY S&T GROUPS** Representatives from all States and Territories (and NZ) met in Canberra last month to discuss the scientific priorities within their jurisdictions. I played a dual role at the meeting, as a member of the ACT Science Council and President of FASTS.

FASTS considers that science should be a part of government thinking at all levels, and sees these discussions as important promotions for S&T nationally. We were happy to assist with the planning of the meeting.

FASTS considers that science should be a part of government thinking at all levels, and sees these discussions as important promotions for S&T nationally. We were happy to assist with the planning of the meeting.

**10. FASTS IN NATURE**

An account of the ARC issue appeared in the journal *Nature* this week, and featured FASTS' letter to Minister Kemp. Another illustration of the deep commitment scientists internationally have to the peer-reviewed process!

It has been another challenging year for those involved in science and technology, with continuing financial stresses and many of our institutions being the subject of review. I hope 1999 is a more settled year, and that you manage to get a relaxing break over the holiday period.

Peter Cullen

President

14 September 1998



### **Scholarships in Germany**

I would like to inform you that the German Academic Exchange Service (DAAD) offers Research grants for 'Short Term Visits' (1 - 6 months) for Ph.D. candidates and recent Ph.D's for their dissertation or post-doctoral research (age limit 32).

The DAAD also offers 'Study Visits' for research projects in Germany for 1 - 3 months. At least 2 years post doctoral teaching experience at a university or research is necessary to be eligible.

For further information please contact the Embassy of the Federal Republic of Germany, Tel. 02/62701911.

POEA Internet Canberra  
<106030.2144@compuserve.com>

Yours sincerely,  
Marie-Louise Cordes  
Third Secretary

## A.S.B.S. PUBLICATIONS

### **History of Systematic Botany in Australia**

Edited by P.S. Short. A4, case bound, 326pp. A.S.B.S., 1990. \$10; plus \$10 p. & p.

For all those people interested in the 1988 A.S.B.S. symposium in Melbourne, here are the proceedings. It is a very nicely presented volume, containing 36 papers on: the botanical exploration of our region; the role of horticulturists, collectors and artists in the early documentation of the flora; the renowned (Mueller, Cunningham), and those whose contribution is sometimes overlooked (Buchanan, Wilhelm).

### **Systematic Status of Large Flowering Plant Genera**

A.S.B.S. Newsletter Number 53, edited by Helen Hewson. 1987. \$5 + \$1.10 postage.

This Newsletter issue includes the reports from the February 1986 Boden Conference on the "Systematic Status of Large Flowering Plant Genera". The reports cover: the genus concept; the role of cladistics in generic delimitation; geographic range and the genus concepts; the value of chemical characters, pollination syndromes, and breeding systems as generic determinants; and generic concepts in the Asteraceae, Chenopodiaceae, Epacridaceae, *Cassia*, *Acacia*, and *Eucalyptus*.

### **Evolution of the Flora and Fauna of Arid Australia**

Edited by W.R. Barker & P.J.M. Greenslade. A.S.B.S. & A.N.Z.A.A.S., 1982. \$20 + \$5 postage.

This collection of more than 40 papers will interest all people concerned with Australia's dry inland, or the evolutionary history of its flora and fauna. It is of value to those studying both arid lands and evolution in general. Six sections cover: ecological and historical background; ecological and reproductive adaptations in plants; vertebrate animals; invertebrate animals; individual plant groups; and concluding remarks.

### **Ecology of the Southern Conifers**

Edited by Neal Enright and Robert Hill.

ASBS members: \$60 plus \$12 p&p non-members \$79.95.

Proceedings of a symposium at the ASBS conference in Hobart in 1993. Twenty-eight scholars from across the hemisphere examine the history and ecology of the southern conifers, and emphasise their importance in understanding the evolution and ecological dynamics of southern vegetation.

### **Australian Systematic Botany Society Newsletter**

Back issues of the Newsletter are available from Number 27 (May 1981) onwards, although several issues have now sold out. Cover prices are \$3.50 (Numbers 27-59, excluding Number 53) and \$5.00 (Number 53, and 60 onwards). Postage \$1.10 per issue.

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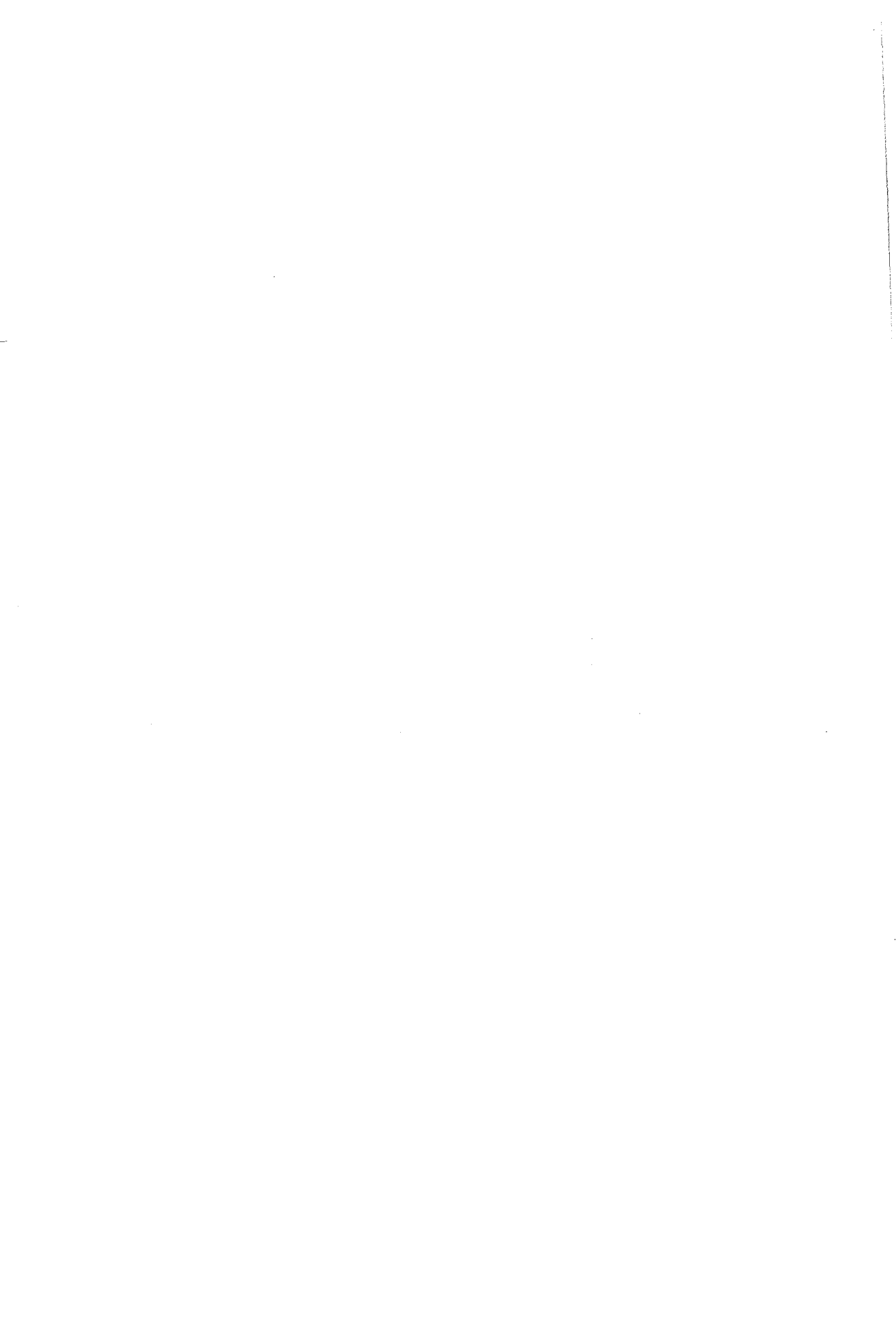
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This list will be kept up to date, and will be published in each issue.  
Please inform us of any changes or additions.







# AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

## 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 apply for membership by filling in a "Membership Application" form and forwarding it, with the appropriate 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 the editor at the address given below. They should preferably be submitted as: - an unformatted word-processor file on an MS-DOS or Macintosh diskette (Microsoft Word 6 or an earlier version is preferred), accompanied by a printed copy; as an email message or attachment, accompanied by a fax message reporting the sending of the file; or as two typed copies.

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

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