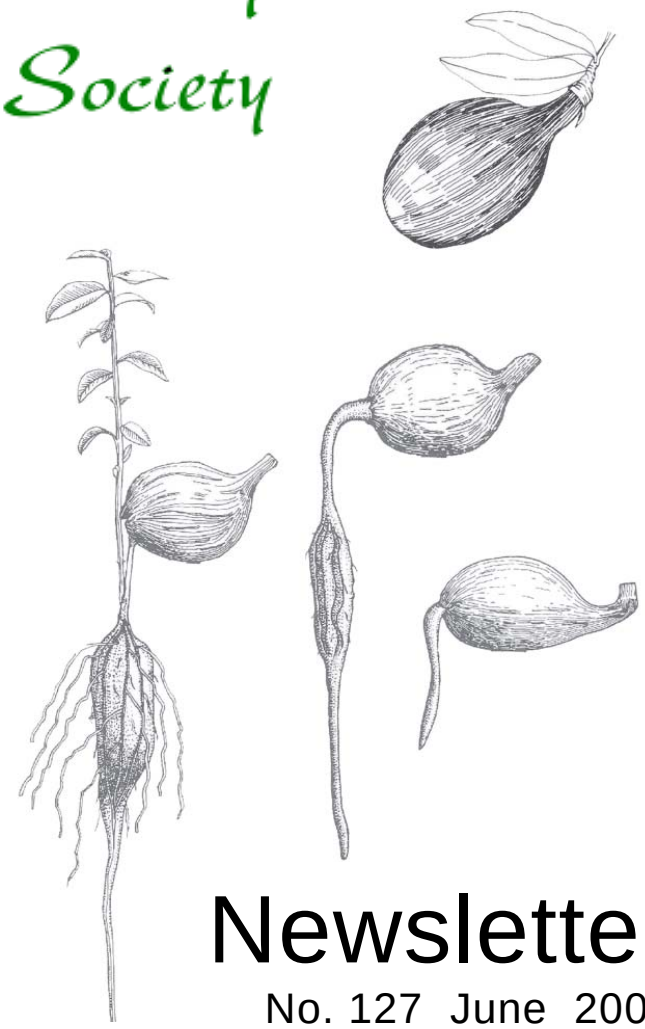
ASBS

Australian Systematic Botany Society



Newsletter

No. 127 June 2006
Price: $5.00

ISSN 1034-1218

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY INCORPORATED

Council

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www.anbg.gov.au/asbs

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Loose-leaf inclusions with this issue

- ASBS Conference, Cairns

Publication dates of previous issue
Austral.Syst.Bot.Soc.Nsltr 126 (March 2006 issue)

Hardcopy: 1st May 2006; ASBS Web site: 2nd May 2006

President's report

I have always been comfortable with the notion that any proposal to change the rules of a society like ASBS should have the approval of a significant majority of members. This ensures that rule changes are not taken lightly and helps provide a measure of stability. The rules of ASBS however go one step further and require 75% of the members who are eligible to vote to participate in any ballot to change the rules. I wonder if members realise how much work is required to secure that sort of response? In the week before the close of the recent ballot it looked as though the proposal would fail once more for want of the required 75%. In the end we got there and Council would like to thank everyone who voted. I would also like to recognise the fantastic job done by all members of Council, particularly in the week before the ballot closed. A lot of time was spent on telephone calls and e-mails to members who had not returned their ballot papers. Thank you for a great effort. In the end the proposal was carried with 212 votes in favour, 1 against and 2 informal. The Society's financial year will now run from July 1 to June 30. Remember, this will not change the membership year. Your subs will still fall due on January 1.

As a consequence of the rule change we have been advised by the Office of the Registrar General that since we have already held an AGM in 2006 there will be no need to hold another until next year. This will be timed to coincide with the conference to be held in Darwin in the second half of the year. This also means that there will be not be another election for positions on Council this year. The incumbent members of Council will hold their positions for about 18 months. This has happened before. It will give an enthusiastic Council time to complete some of the tasks they have taken on. The Treasurer, Anna Monro is also very happy for it means that she will not have to prepare the books for the auditor twice in the one year. It is a lot of work.

Most of you will by now have heard the news announced in May of Stephen Hopper's appointment as the next Director of the Royal Botanic Gardens, Kew. Steve will take up the position in October this year. I am sure all members of the Society will join with me in congratulating him on securing this prestigious position and wish him well in the UK. Darren Crayn suggests that he has no doubt that it was Steve's experience as president of ASBS that clinched the position for him. I hope he will remember this and keep his membership going.

If you returned an expression of interest form for the ASBS conference in Cairns, you should already have received a registration form. If not, then you will find registration forms in this issue of the Newsletter. We look forward to seeing lots of you in the Far North in November. Don't be put off by talk of how badly damaged the forests were by cyclone Larry earlier in the year. The effects were concentrated south of Cairns and any way this is a chance to see just how resilient tropical forests are. The program is developing nicely. We already have offers of several fascinating papers but there is room for lots more. With the masterclass on molecular tools in plant systematics and an interesting field trip to follow the conference, we can promise you a great week.

See you in Cairns.

John Clarkson

ASBS Inc. business

Hansjörg Eichler Research Fund

First round grants for 2006

Council is pleased to announce that the following three students were successful in their application for support from the Hansjörg Eichler Research Fund in the March round of grants for 2006.

- Carlos Parra-Osorio, School of Botany, University of Melbourne.
  A phylogenetic analysis of the bloodwood eucalypts. Awarded $2000.
- Zoë Smith, Royal Botanic Gardens Melbourne.
  Diversity and evolution of the Diuris punctata *species complex and their associated mycorrhizal fungi in Victoria*. Awarded $1500.
- Robert Lamont, University of the Sunshine Coast.
  Now you see it, now you don't: will the Sunshine Coast's endangered Allocasuarina emuina *be lost to urbanisation or hybridisation?* Awarded $1500.

Members of the Research Committee and Council wish these students every success with their studies and look forward to seeing their reports in the Newsletter in due course. The members of the Research Committee (Barbara Briggs, Rod Henderson, Betsy Jackes, Tom May

and Chris Quinn) are gratefully thanked for their dedication to the application review process.

Closing date for second round of applications for 2006

Applicants are reminded that the second round of applications for 2006 closes on **September 14**. Information on the grants and the application form are available from the Society's web page at www.anbg.gov.au/asbs/asbs.html or from the Secretary, Kirsten Cowley (see inside cover for contact details).

Darren Crayn
Chairman
Hansjörg Eichler Research Committee

Presentation of Nancy Burbidge Medal to Alex George

In the March 2005 *Newsletter* (number 122) it was announced that Alex George had been awarded the Australian Systematic Botany Society (ASBS) Nancy Burbidge Medal for service to Australian systematic botany. Alex has had a distinguished and productive career in systematics, as a monographer, biological survey programs and as an author and editor; an account of his career was included with the announcement.

Since he was overseas at the time and has yet to receive this award, the presentation will be made by Professor Stephen Hopper, then president of ASBS, at the Western Australian Herbarium at 2 pm on Friday 8th September, 2006.

Articles

Eucalyptus or Guava rust, *Puccinia psidii* – a serious threat to our forests and plantations

Pam Catcheside
State Herbarium of South Australia

> It is worthy of remark that on some of our most predominant families, such as Myrtaceae and Proteaceae….. the rusts are practically absent.

This was written in 1906 by Daniel McAlpine, Government Vegetable Pathologist, in his excellent monograph, *The Rusts of Australia*. He went on:

> It is passing strange that upon our numerous Eucalypts and kindred species not a single rust-fungus should have developed.

A hundred years later the situation could change dramatically if Eucalyptus or Guava Rust, *Puccinia psidii*, were to arrive in this country.

Rusts are microfungi, they are plant parasites and the majority are host-specific. They appear as small, rust-coloured patches of spores on leaves, stems, flower buds and fruits of a wide range of hosts. Some are systemic, others affect only a part of the plant. Many have complex life cycles, producing up to five types of spores; those with all five are called *macrocyclic*, those with fewer spore types are said to be *microcyclic*. Some rusts complete their life cycle on a single host (*autoecious*), others have two hosts (*heteroecious* – different homes), with different spore types produced on each host. Most are pests causing millions of dollars of damage to crops. They may not kill their hosts, but the lesions caused by the huge spore masses bursting through the waterproof plant epidermis result in tissues drying out and open their host to other pathogens.

Host range and distribution

Since McAlpine's time, a number of genera and species of rust fungi have been reported to infect members of the Myrtaceae, but *Puccinia psidii* Winter is the only rust that has been confirmed to infect *Eucalyptus* species (Coutinho et al. 1998). Eucalyptus/Guava Rust was first described in 1884 by G. Winter, growing on Guava, *Psidium pomiferum* L. (now *P. guajava* L.) from Brazil. In 1973 the first serious outbreak occurred in Brazil in a young plantation of *Eucalyptus grandis* which had been established from South African seed sources (Coutinho et al. 1998). Besides *Eucalyptus* and *Psidium*, other genera of Myrtaceae that Eucalyptus/Guava Rust can also infect include *Melaleuca*, *Callistemon*, *Syzygium* (Lilly Pillies) and *Eugenia*. It has caused extensive damage to guava crops and allspice, *Pimenta dioica* and to eucalyptus plantations, where it may result in the death of up to 90% of trees (Old & Tommerup 2002). It now occurs throughout most of South and Central America and has spread to the Caribbean, to Florida in the U.S.A. and most recently, in November 2005, to Hawaii where it has caused heavy infestations on a range of Myrtaceous plants (Kilgore & Heu 2005). Eucalyptus Rust may have arrived in India and Taiwan (Coutinho et al. 1998) – and the latter is uncomfortably close to Australia. If it were to arrive here the damage to the bush is almost unimaginable.

Life cycle

Rusts are Urediniomycetes in the order, Uredinales. The order comprises 14 families, 163 genera and almost 7000 species (Kirk et. al. 2001) of which approximately 3000 are species of *Puccinia*. Rust life cycles involve up to five spore types and these are frequently numbered 0-IV: (0) Spermatia, (I) Aeciospores (transfer spores), (II) Urediniospores (or uredospores, summer spores), (III) Teliospores (or teleutospores, winter spores), (IV) Basidiospores.

The life cycle of *P. psidii* was worked out only in the early 1980s. The fungus is considered to be autoecious (one host). Four stages have been shown to occur (Stages I to IV), but spermatia have not been seen, although they must form part of the life cycle.

In a full life cycle, that is of a macrocyclic, heteroecious rust, basidiospores, which are of + and - mating types, land on a suitable host and germinate in favourable conditions. The hyphae penetrate the host cells, absorbing nutrients and water, and develop in to tiny flask-like structures called *spermogonia*. *Spermatia* of + or – mating type are produced from the spermogonium, ooze out in a sweet-smelling nectar through an apical pore, and become stuck on a tuft of receptive hyphae protruding through the pore. Insects, attracted to the nectar, transfer spermatia of one mating type to receptive hyphae of the opposite type. This process may be compared to pollination in plants. *Aecia*, cup-shaped structures, sometimes called cluster-cups, develop and produce chains of yellow *aeciospores*. These break through the epidermis of the host and are carried by wind or rain splash and may land on a suitable host. Aeciospores germinate into pustules or *uredinia* (also called uredia, uredosori), which produce rust-coloured *urediniospores* (also named uredospores). These germinate into pustular *telia*. Telia produce thick-walled *teliospores* (also called teleutospores), usually thick-walled, two-celled, stalked spores which are spread by wind or rain splash and germinate to form *basidiospores*. And the whole cycle starts again.

In *P. psidii* the urediniospores and aeciospores are similar: pear-shaped to oval and finely warty. Teleutospores are stalked, dark brown, club-shaped and two-celled, the cells divided by a thick transverse septum.

Symptoms of Eucalyptus rust, *P. psidii*

Juvenile shoots and eucalypt plants less than two years old are most susceptible to infection by *P. psidii*. Most infections of Eucalyptus rust result from germination of urediniospores. If conditions are favourable (presence of free water, at least 8 hours of darkness and temperatures between 15 and 25ºC), the first symptoms appear 2-4 days after inoculation. Symptoms of the disease start as pale yellow specks, the uredinia, on leaf buds. After 10-12 days, these specks have grown to small pustules and colour has deepened to egg-yolk yellow. The pustules coalesce and infection spreads to leaf petioles, branch tips, flower buds and fruits. The infected parts shrivel and die and the whole plant may be stunted (Coutinho *et al*. 1998). Urediniospores are released in huge numbers and transmitted by wind, insects and rain. They may also be produced in successive waves while conditions remain favourable. Teliospores had not been observed in Florida in 2004 (Leahy 2004) but researchers in Brazil have found that infected plants kept at 25ºC are more likely to produce telia than uredinia (Coutinho et al. 1998).

Other plant pathogenic rusts

Probably the most infamous pathogenic rust is that causing *Puccinia graminis*, black stem rust of wheat. Others are *Cronartium ribicola*, causing blister-rust of 5-needled white pines such as *Pinus strobus*, *P. monticola*, and coffee rust, *Hemileia vastatrix* (Kendrick 1992). Examples of rusts that occur in Australia are *Phakopsora pachrhizi*, causing rust on soybeans and native and introduced legumes in coastal NSW (Pascoe & Shipton 1996), *Uromycladium tepperianum*, responsible for some of the ‘witches’ brooms’ of Acacia spp. and *Puccinia pruni* forming yellow spots on leaves of peach, almond, apricot and plum (McAlpine 1906).

Biocontrol by rusts

However, not all rusts are ‘bad’. Some have been ‘harnessed’ as biological control agents: European blackberry rust, *Phragmidium violaceum*, has been effective at suppressing blackberry, first in Chile and now in Australia. Also in Australia, *Puccinia chondrillina*, a rust fungus from Italy, was released in 1971 to combat Rush Skeleton-weed, *Chondrilla juncea*, which infested hundreds of thousands of hectares of wheatlands, clogging harvesting machines and competing with the crop for nutrients and water. By 1992 the introduction had saved Australia 112 times its cost (Kendrick 1992).

Ironically, *Puccinia psidii* was investigated as a biocontrol agent against *Melaleuca quinquenervia*, an Australian paperbark tree that had been introduced into southern Florida in the early 1900s (Web ref. 1). The tree became an aggressive invader, resulting in massive paperbark thickets and choking out the native vegetation (Web ref. 2).

Control of Eucalyptus rust, *P. psidii*

A conference of the Asia-Pacific Forest Invasive Network was held in 2004 in Bangkok, Thailand.

The conference aimed to develop an Asia-Pacific regional strategy to combat Eucalyptus Rust (Web ref. 3). If the rust were to arrive in Australia it could go unnoticed for several months and become firmly established. Recommendations to keep the rust out of Australia and, if it does get in, prevent its subsequent spread include:

- Raising general awareness of the fungus amongst foresters, quarantine officers and environmentalists, and amongst the general public.
- Quarantine. Strict quarantine measures are already in place. In October 2004 Australian Quarantine and Inspection Service (AQIS) suspended all imports of *Eucalyptus* timber from countries where the Eucalyptus rust has been reported. It has since extended the ban to other potential host timbers (Web ref. 4).
- Identification and surveillance. Identification of areas and plant hosts that are most susceptible to infection, followed by regular monitoring for the disease.
- Hygiene. The rust spores are so small they can travel unnoticed on hair, clothing and luggage, and they remain viable for months. Foresters and visitors to infected countries, especially plantations and forests, should thoroughly wash and clean everything they are carrying before leaving the country and again after arriving back in Australia (Tommerup 2002).
- Disease avoidance. Harvesting of plants and taking cuttings should be avoided when conditions favour spore germination: high humidity and temperatures between 15-30^{o}C (Coutinho *et al*. 1998).
- Use of resistant strains of eucalypts and other Myrtaceous plants. Only practicable in the plantation and nursery industries. Here, planting susceptible species such as *Eucalyptus citriodora* and E. *camaldulensis* should be avoided. Obviously use of resistant strains in native vegetation is impractical although, should the rust invade, they may be important in re-establishing native bushland.
- Development of strategies for safe movement of seed and germ plasm. Exchange of seed and plant material is part of inter- and intra-national trade. Codes of 'best practice' should be developed (Old 2004).
- Fungicides such as Triadimenol, Azoxystrobin, Tebuconazol, Mancozeb and copper oxychloride are effective, but costly (Alfenas 2004). They are only practicable in plantations, nurseries and orchards, not in the bush.

A fuller understanding of the fungus is necessary to help in determining effective strategies to combat the rust. Further research needs to be done into the rust's taxonomy, life cycle, epidemiology, genetic variability, host range and geographic distribution.

Promising developments include molecular diagnostics which can provide a quick and accurate diagnosis of *P. psidii*. Such diagnostic tools would enable the screening of any plant material, including germplasm, of travellers and of imported goods (Web ref. 3).

Further research into the genetic basis of rust resistance, and the rust's variability and virulence may lead to the use of resistant genotypes and species. In the long term this offers effective management procedures against the rust, especially in nurseries and plantations.

In the meantime, any rust-like symptoms on eucalypts should be reported immediately to the national freecall (except for calls on mobiles) Exotic Plant Pest Hotline, 1800 084 881.

> It would be an ecological disaster should any of the American rusts gain access to Australian Myrtaceae in their natural habitat. (Walker 1996)

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Web ref. 1: www.apsnet.org/online/feature/quarantine/

Web ref. 2: www.nps.gov/plants/alien/fact/mequ1.htm

Web ref. 3: www.apfcweb.org/publications/APFISN_rust.pdf

Web ref. 3: www.aqis.gov.au/icon32/asp/ex_topiccontent.asp

Notes on *Ormocarpum* (Fabaceae: Faboideae)

A.R. Bean
Queensland Herbarium

The genus *Ormocarpum* consists of about 18-20 species of shrubs or small trees. The distribution of the genus is commonly given as tropical and southern Africa, Madagascar, southern Asia, Malesia, northern Australia and the islands of the western Pacific Ocean (Gillett et al. 1970; Smith 1985; Verdcourt 2000; Klitgaard and Lavin 2005). One widespread species is accepted as occurring east of the Indian subcontinent (Klitgaard and Lavin 2005), but two names have been used for this species. Some floras have adopted the name *Ormocarpum cochinchinense* (Huang & Ohashi 1977; Thuan *et al.* 1987; Rudd 1991), while others have used the name *Ormocarpum orientale* (Backer 1963; Verdcourt 1979; Smith 1985; Reynolds 1990). Another species, *Ormocarpum suberosum*, listed by Backer & Bakhuizen (1963), is apparently endemic to Java.

Many authors have sidestepped the issue of determining the correct name for the widespread species of the western Pacific. Only Smith (*loc. cit*.) linked the two names, and suggested that *O. orientale* is the correct name. That view is endorsed here.

Nomenclature

In 1790, Louriero published the name *Diphaca cochinchinensis*. According to Gillett (1966), Louriero named his genus *Diphaca* because he examined a specimen where some flowers showed two ovaries or young fruits arising within a single calyx. Gillett (*loc. cit*.) examined the type of this name at BM and confirmed that this feature is present on one of the two sheets.

Part of the protologue reads "Hanc plantam Hedysarum Ecastaphyllum vocaverat Linnaeus (Mantissa 446)". This translates as "In Mantissa [page] 446, Linnaeus had called this plant *Hedysarum ecastaphyllum*". Louriero went on to say that Bergius had placed it in *Pterocarpus* and that Burmann ascribed it to *Parkinsonia*, but because Linnaeus' description did not mention the double ovary, "they were unable to assign the plant to the correct place" [genus].

According to Article 52 of the ICBN (St Louis Code), *Diphaca cochinchinensis* is an illegitimate name, because Louriero included the previously published *Hedysarum ecastaphyllum* as a synonym of it.

The relevant synonymy is as follows:

Ormocarpum orientale (Spreng.) Merr.
Interpr. Herb. Amboin. 266 (1917); *Parkinsonia orientalis* Spreng., Syst. Veg. 4(2): 170 (1827). **Type**: *t. 128* "Solulus arbor", Rumphius Herbarium Amboinense 3: 200.

Diphaca cochinchinensis Lour., Fl. Cochinch. 454 (1790), *nom. illeg.*; *Dalbergia diphaca* Pers., Syn. Pl. 2: 276 (1807), *nom. illeg.*; *Solulus cochinchinensis* Kuntze, Rev. Gen. Pl. 205 (1891), *nom. illeg.; Ormocarpum cochinchinense* (Lour.) Merr., Philipp. J. Sci. 5: 76 (1910), *nom. illeg.* **Type:** cultivated in Cochinchina and China, *Louriero s.n.* (BM, 2 sheets), *fide* Gillett (1966).

Aeschynomene coluteoides A.Rich. in Dum. d'Urv., Sert. Astrol. 87, t. 32 (1834). **Type:** Guam, Mariannas, *fide* Reynolds (1990), *n.v.*

Ormocarpum glabrum Teijsm. & Binn., in Tijdschr. Ned.-Indie 27: 56 (1864), *fide* Huang & Ohashi (1977). **Type:** Ceram, Indonesia, 1860, *J.E. Teijsmann s.n.* (?BO), *n.v.*

Ormocarpum sennoides var. *laevis* Benth., Fl. Austral. 2: 226 (1864). **Type:** "Endeavour River?", *Banks & Solander* (holo: ?BM, *n.v.*; iso: BRI)

The recorded occurrences in Australia

Bentham (1864) recorded *Ormocarpum* for Australia, stating "I have seen Australian specimens only in Herb. R. Brown, and a coloured figure in Sir J. Banks's unpublished plates, neither with the precise station". Nevertheless Bentham gave the locality as "Endeavour river?". It is not clear how he knew they were Australian specimens.

Queensland is the only state for which the genus has subsequently been recorded. The Queensland Herbarium (BRI) holds the following specimens:

1. Endeavour River, *J. Banks*. In view of the comment by Bentham above, the locality of this specimen must be very doubtful.

2. an old sterile specimen labelled *Ormocarpum sennoides* by C.T. White, under which someone else, probably W.D. Francis (A. Bolin, pers. comm.), has written "Endeavour River Persieh". Persieh collected specimens for Ferdinand von Mueller. If Persieh did collect this specimen, one would expect to find a collection in MEL. However, there are no specimens of *Ormocarpum* at MEL (V. Stajsic, pers. comm.).

3. Townsville, on garden of B. Jackway, Sep 1992, *J. Roach* (2 sheets). Thulin & Lavin (2001) used this specimen as a voucher for DNA analysis, and it was the only Australian collection cited. The specimen label clearly states that the plant was cultivated.

4. Yam Island, Torres Strait, 8 July 1996, *B.M. Waterhouse BMW3908*. The label says "several plants growing in thicket adjacent to airstrip".

5. Saibai Island, Torres Strait, 13 January 1998, *B.M. Waterhouse BMW4776*. The label states "shrub to 2.5 m tall growing in food garden; probably used as a food plant".

6. Murray Island, Torres Strait, near rubbish dump, 5 Aug 1998, *J. Bon*. According to the label, Aboriginal elders told the collector that the plant 'does not belong' on Murray Island.

7. Yam Island, Torres Strait, 1 Mar 2001, *B.M. Waterhouse BMW6107*. The label states that "several

plants occur on Yam Island at margin of monsoon scrub, but always in cultivated or formerly cultivated sites", and "young leaves used as a green vegetable and to flavour sago".

8. garden near centre of Boigu Island, Torres Strait, 19 May 2003, *L. Hucks LAH149*. The label states that the plant is cultivated, and that young leaves are used as a vegetable.

For Specimens 1 and 2, there is a high degree of doubt associated with their provenance, and if the Endeavour River provenance was correct, why has no-one else found *Ormocarpum* around Cooktown? Specimens 3, 5 and 8 are from plants cultivated for food or medicine; and specimens 4, 6 and 7 are from plants apparently persisting in disturbed areas or old cultivation sites.

It seems highly likely that *Ormocarpum orientale* was never naturally distributed in Australia (including Torres Strait, which is politically part of Australia). I therefore propose that *O. orientale* and the genus *Ormocarpum* be treated as a non-native taxa for Australia.

Acknowledgements

I thank Val Stajsic for looking for specimens of *Ormocarpum* in MEL, and Alan Bolin (BRI) for interpreting the handwriting on a herbarium label.

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Physalis (Solanaceae) in Australia – nomenclature and identification

A.R. Bean
Queensland Herbarium

It is an unenviable task to curate a group of species, all naturalised, belonging to a genus whose taxonomy is poorly understood. This is the situation with Australian *Physalis*.

There are 75-90 species of *Physalis*, all or nearly all originating in the New World. Australia does not have any native species. One species (*P. angulata* L.) was collected by Robert Brown in 1802, but it was undoubtedly an early introduction from the Americas.

A lack of recent revisionary work has meant there are taxonomic problems: "Species identification [in *Physalis*] is difficult, and taxonomists have yet to completely resolve the taxonomy of the genus. Confusion of species and varieties in publications has been common" (Anon. 2006). Waterfall (1958, 1967) revised the North American species, but no other monographic treatment has been forthcoming until the recent paper by Sullivan (2004) covering the species of south-eastern United States.

Nomenclature is also a problem. The weedy widespread species were, naturally enough, described very early on, several by Linnaeus. Many of the early species were poorly described and typified.

I have re-examined all of the *Physalis* material at BRI. Table 1 summarises the naturalised species present in Australia, their distribution, and any name changes.

Notes on individual species

P. alkekengi L.

No Australian material seen. This species is now sparingly naturalised in South Australia (R. Barker pers. comm.). It is distinguishable by the large orange or red fruiting calyx.

P. angulata L.

P. angulata is the most common and widespread species in Australia. Symon (1981) misapplied the name *P. minima* to this species. *P. angulata* has been lectotypified (D'Arcy 1973) and the type (LINN 247.9) is a very good match for the common taxon in Queensland and New South Wales. In those states, *P. angulata* is almost completely glabrous, and frequently the leaves

Table 1. *Physalis* in Australia

Species name applied here	Current distribution in Australia (from state floras, censuses or websites)	Names previously applied in Australia
P. alkekengi	Aldgate Valley, SA (1995)	
P. angulata	WA (Kimberley, south-west), Qld, NSW, NT, SA	*P. minima* (Symon 1981, Purdie et al. 1982)
P. ixocarpa	Qld, NSW	
P. lanceifolia	inland Qld and NSW, WA (Kimberley)	
P. longifolia	southern Qld (Darling Downs), NSW (western slopes)	*P. virginiana* (Symon 1981, Purdie et al. 1982)
P. minima	NT (Symon 1997), Qld	*P. micrantha* (Symon 1997)
P. peruviana	coastal areas of Qld, NSW, Vic, SA, Tas, WA(south-west)	
P. philadelphica	Qld(Killarney), NSW (Urbenville, Gloucester), WA (south-west)	
P. pubescens	WA(south-west), NSW (Coonabarabran, according to PlantNet)	
P. viscosa	Vic, SA, southern NSW, WA (south-west); Qld	

have several lobes. Specimens from the Top End of N.T., the Kimberley of W.A. and Malesia also appear glabrous to the naked eye, but often have numerous antrorse hairs (up to 0.15 mm long) on the stems and pedicels. The leaves of this form are often entire or repand, or have at most a single pair of lobes or teeth.

P. ixocarpa Brot. ex Hornem.

In a very detailed account, Fernandes (1970) discussed the identity of *P. ixocarpa*, including its nomenclature and affinities with *P. angulata*, and gave a detailed description of the plant. After reading this account, one is left in no doubt that *P. ixocarpa* is a species distinct from *P. angulata*. Apart from the rather subtle morphological differences, it differs in chromosome number; *P. angulata* being a tetraploid and *P. ixocarpa* a diploid. The geographical origin of *P. ixocarpa* is obscure, but Mexico seems most likely. Some American references (apparently having overlooked Fernandes' paper) continue to regard *P. ixocarpa* as a synonym of *P. philadelphica*, following Waterfall (1967). *P. ixocarpa* can be distinguished from *P. angulata* in Qld and N.S.W. by the densely hairy petioles, the short pedicels (3-7mm long at anthesis and 8-10mm long in fruit) with numerous erect or somewhat retrorse hairs, and the conspicuously capitate stigma.

P. lanceifolia Nees

Some authorities (including ITIS (2006)) regard this as a synonym of *P. angulata*, some others a variety of it. However, the genotype introduced into Australia is consistently distinguishable on leaf shape and pedicel length, and hence the maintenance of species rank seems a reasonable option.

P. longifolia Nutt.

Australian material was originally identified as *P. virginiana* var. *sonorae*, and this identification seems correct. That name is a synonym of *P. longifolia*, a species widely accepted in, and native to the U.S.A. Diagnostic descriptions and images that I have seen confirm that this species name applies to Australian material. It has been found in agricultural areas of southern Qld and N.S.W.

P. minima L.

A lectotype of *P. minima* L. was proposed by Heine (1976), using a Hermann specimen at BM. I have been advised by C. Jarvis (head of the Linnaean Plant Name Typification Project) that this specimen is not "original material" for *P. minima*, because the protologue did not refer to Flora Zeylanica. Hence another specimen/drawing needs to be chosen as a lectotype. The authors of the Flora of China treatment (Zhang *et al.* 1994) regarded *P. lagascae* Roem. & Schult. and *P. micrantha* Link as synonyms of *P. minima* L. Goncalves (2005) accepted *P. lagascae* and placed *P. micrantha* as a synonym of it. ITIS (2006) accepts *P. minima* and places *P. lagascae* as a synonym. I have followed suit and regard *P. minima* as the correct name for the taxon otherwise known by the later names *P. lagascae* (1819) or *P. micrantha* (1821).

P. minima is a low-growing species (to 0.4 m high) with small broadly-ovate leaves, rarely exceeding 5 x 3 cm. The margins may be entire or with several teeth. The stems are quite densely hairy, with individual hairs antrorse or erect, 0.2-0.4 mm long. The calyx is also beset with hairs, especially noticeable around anthesis.

Key to Australian *Physalis*

1. Leaves elliptical, lanceolate or broadly lanceolate (more than 3 times longer than wide)
   2. Flowering pedicels 19-30 mm long; fruiting pedicels 30-37 mm long; annual habit; corolla 4-6 mm long . . . . . *P. lanceifolia*
   2. Flowering pedicels 9-15 mm long; fruiting pedicels 9-19 mm long; perennial, rhizomatous plants; corolla 15-20 mm long
      3. Fruiting calyx 22-26 mm long; flowering and fruiting pedicels 9-13 mm long; hairs scattered, simple, eglandular, antrorse. . . . . *P. longifolia*
      3. Fruiting calyx 13-20 mm long; flowering and fruiting pedicels 13-19 mm long; indumentum comprising mainly abundant subsessile glands (Qld) or 2-3-forked hairs each <0.2 mm long (Vic.,SA). . . . . *P. viscosa*
1. Leaves ovate to broadly ovate (1.3-3 times longer than wide)
   4. Lamina obviously hairy to the naked eye; leaf base +/- cordate
      5. Fruiting calyx 17-22 mm long; corolla 6-8 mm long; hairs +/- viscid . . . . . *P. pubescens*
      5. Fruiting calyx 30-40 mm long; corolla 10-15 mm long; hairs not viscid. . . . . .*P. peruviana*
   4. Lamina not obviously hairy (hairs absent, sparse or very small); leaf base cuneate to obtuse
      6. Corolla white or creamy; fruiting calyx 30-50 mm long, orange to red. . . . . *P. alkekengi*
      6. Corolla yellow with dark markings; fruiting calyx 12-32 mm long, green
         7. Corolla 15-20 mm long; anthers 2.5-4 mm long, twisted after anthesis. . . . *P. philadelphica*
         7. Corolla 5-8 mm long; anthers 0.8-2.5 mm long, not twisted after anthesis
            8. Petioles with a mixture of long (0.2-0.4 mm) and short (0.05-0.1 mm) hairs; pedicels with numerous erect or somewhat retrorse hairs; stigma conspicuously capitate. . . . . .*P. ixocarpa*
            8. Petioles glabrous or hairs of +/- uniform length; pedicels glabrous or hairs antrorse to erect; stigma scarcely expanded
               9. Hairs frequent on stems, 0.2-0.4 mm long; lamina rarely exceeding 5 x 3 cm, length-breadth ratio 1-1.7; pedicels 2-5 mm long at anthesis, 5-10 mm long in fruit; anthers 0.8-1.5 mm long; fruiting calyx 12-24 mm long; spreading shrubs to 40cm high. . . . . *P. minima*
               9. Hairs absent or sparsely distributed, 0.05-0.15 mm long; lamina 4-9 x 2-4.5 cm, length-breadth ratio 1.7-2.7; pedicels 6-12 mm long at anthesis, 12-25mm long in fruit; anthers 1.5-2.5 mm long; fruiting calyx 21-32 mm long; erect shrubs to 90cm high
                  10. Leaves with 2 or more pairs of lobes; pedicels glabrous; calyx virtually glabrous . . . . . *P. angulata* (typical form)
                  10. Leaves entire, repand or with a single pair of small lobes; pedicels with antrorse hairs; calyx moderately hairy . . . . . *P. angulata* (NT, Kimberley, Malesian form)

P. peruviana L.

Australian material is a good match for American specimens and descriptions.

P. philadelphica Lam.

Australian material is a good match for American specimens and descriptions.

P. pubescens L.

No Australian material seen. Measurements used in the key have been taken from Goncalves (2005).

P. viscosa L.

The *P. viscosa* complex is united by the presence of branched or stellate hairs (Sullivan 1985). Populations from Victoria and SA have the requisite 2-3-branched (stellate) hairs, and hence appear to fit into *P. viscosa*. Specimens from southern Qld lack branched hairs, and instead have very short glandular hairs in abundance. These Qld specimens are only tentatively included with *P. viscosa*.

Acknowledgements

I am grateful to Charlie Jarvis for advice about the validity of a proposed lectotype for *P. minima*, Robyn Barker for informing me about the potential naturalisation of *P. alkekengi*, and to Brendan Lepschi for commenting on a draft of this article.

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A convict-made travelling desk owned by the brothers Ferdinand and Francis Bauer

Alex George

'Four Gables', 18 Barclay Road, Kardinya, W.A. 6163

[1]During my term as ABLO last year I was intrigued by an item listed in the catalogue (number 37818) of the Economic Botany Museum at the Royal Botanic Gardens, Kew, as 'travelling desk of Australian woods' with the collector given as Ferdinand Bauer. The item has been stored in the Museum since 1888 and turned out to be most interesting from several aspects.

The desk is 51.6 cm long, 23.5 cm high and 25.5 cm wide and has a brass lifting handle at each end. The main case is made of *Eucalyptus* (probably *E. resinifera*) with a veneer of *Casuarina* (*C. glauca* or *C. cunninghamiana*). Inset from the margins, the top side is strung with a narrow strip of pale wood, possibly *Callitris rhomboidea*. The writing surfaces and the underside of the desk are covered in green baize. Both the desk and a drawer in the base are locked, the keys being extant and turning easily.

The desk is opened to form a sloping writing surface. Along the upper edge are five compartments (three with wooden slide covers), and there is a storage space beneath each half of the writing surface.

The writing surfaces are probably *Eucalyptus*, as is the base of the large compartment below the upper part, but a board covering the base inside is of softwood, possibly taken from a packing case. The large drawer also appears to be *Eucalyptus*.

A plate, possibly silver, measuring 14.3 by 5.5.cm and screwed to the front, bears text about the desk's origins (Fig. 1).

The wording implies that the plate was made and attached in England. The use of different fonts is itself an interesting feature.

The desk must have been taken to England by Ferdinand Bauer on HMS *Investigator* which sailed from Sydney on 23 May 1805 and berthed at Liverpool on 13 October 1805. He then gave it to his brother Francis. Walter Lack (2003) reproduced a catalogue of belongings of Francis Bauer sold after his death on 11 December 1840. They were auctioned by William Meyer in November 1841, item 186 in the catalogue being 'A Portable Desk made of wood from New South Wales'—almost certainly this desk. There is no record of the buyers or prices from the auction, but presumably the desk was bought by John Smith (Curator of the Gardens at Kew 1842–64), whom the records of the Economic Botany Museum give as the donor. Smith died at Kew on 14 February 1888 and may have bequeathed the desk to Joseph Hooker (Director 1865–85), who then placed it in the Museum.

By searching records of early convicts and their skills and studying the literature on early Australian furniture (e.g. Hawkins 1983-84; Fahy & Simpson 1998), it was possible to narrow the maker of the desk to two possibilities.

One is Thomas Williams, convicted at Chester, England, in 1796 and sentenced to seven years' transportation. He arrived in Sydney per the *Barwell* in May 1798 and was put to work as a carpenter in the Government Lumber Yard, where wooden furniture and equipment was

THIS DESK

was Manufactured by a Convict

AT SYDNEY IN NEW SOUTH WALES

INTIRELY OF THE NATIVE WOODS OF THAT COUNTRY

and brought from thence and Presented to me

BY MY BROTHER FERDINAND BAUER

1805.

Fig. 1. Text as laid out on the plate attached to Francis Bauer's desk.

[1] A more detailed account of the desk appeared in the journal *Australiana* (George (2006).

made for Government offices. On gaining his freedom he set up in business as a cabinet maker. On 22 January 1804 he advertised in the *Sydney Gazette*:

> Cabinet-Work T. Williams, Cabinet-Maker, No. 26 Chapel-Row, Respectfully acquaints Gentlemen and the Public in general, that he Manufactures for Sale all kinds of folding Desks, Tea Chests and Caddies, Writing, Card, Pembroke, and oblong Dining Tables, Sea and Cloaths Chests, Quadrant Cases richly ornamented with the native woods, and a variety of other Articles peculiar to his profession in a handsome Style, and at moderate prices. N.B. Captains of Ships and all other Gentlemen who may favour him with their Commands supplied at the shortest Notice.

Little further is known of Williams, except that he committed suicide in October 1821.

Another possibility is Laurence (or Lawrence) Butler (c. 1750–1820). Butler was convicted in 1800 for his role in the Irish Rebellion of 1798 and transported to Sydney in the *Atlas 2*, arriving in October 1802. He, too, worked in the Government Lumber Yard and was there at the time when Ferdinand Bauer acquired the desk. Butler was pardoned in 1808 and also set up a furniture-making business. He first advertised in the *Sydney Gazette* on 2 November 1811, and a notice in the *Gazette* for 9 December 1815 offered:

> for Sale chairs, tables and sofas, drawers and clothes presses, patent dining tables on pillars, on the newest construction, dressing and shaving boxes with glasses, card tables, an elegant cabinet and escritoire, bedsteads and mattresses, &c.

Butler died in December 1820, aged about 70.

Only two other items of Australian colonial furniture of similar proven age are known—a secretaire bookcase that belonged to Governor King, made c. 1803; and a gentleman's dressing table or toilet stand, made c. 1800.

Acknowledgements

I am grateful to Julia Steele (Collections Manager of the Economic Botany Collection at Kew) for her assistance in examining the desk. My initial study of the desk was made while based at the Royal Botanic Gardens, Kew, as Australian Botanical Liaison Officer, supported by a grant from the Australian Biological Resources Study, Canberra.

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Miscellanea

Australian Systematic Botany

Congratulations to *Australian Systematic Botany* Student Prize winner for 2005 papers: Stuart Gardner. Stuart's paper, authored with Dan Murphy, Edward Newbigin, Andrew Drinnan and Pauline Ladiges was entitled: An investigation of phyllode variation in *Acacia verniciflua* and *A. leprona* (Mimosaceae), and implications for taxonomy (Web ref. 1).

All volumes of *Brunonia*, the predecessor journal to *Australian Systematic Botany*, are now online and available to subscribers to the journal.

Web ref. 1. *www.publish.csiro.au/nid/150/aid/395.htm*

The flowering of *Banksia rosserae*

We hope to bring you Alex George's account of the first witnessing of the flowering of *Banksia rosserae* in the presence of Celia Rosser in the next issue. This event featured in the print media (see Web ref. 1) and on radio and the image of the flower is already available through wikipedia (Web ref. 2).

Web ref. 1: www.theage.com.au/news/national/its-love-at-first-sight/2006/07/02/1151778811487.html

Web ref. 2: http://en.wikipedia.org/wiki/Image:Banksia_rosserae_flower.jpg

From *Fungimap Newsletter*

The latest *Fungimap Newsletter* has some interesting reading. *Agaricus rotalis*, first described from Hawaii in 2000, has now been found in Perth and Estonia; an agaric found on rotting *Pandanus* leaves in the Kimberleys appears to be the first record in Australia of a species which is scattered in other tropical and subtropical areas; a fungus which occurs in burnt sites in Europe and America has now been found in Australia; the possibility of a butterfly as disperser of spores for a stinkhorn; and use of fungi by our native dung beetles.

To find out more contact Fungimap at the Royal Botanic Gardens, Melbourne, Private Bag 2000, South Yarra, Vic. 3141 or go to the Fungimap website at *www.rbg.vic.gov.au/fungimap_/welcome*

New journal for fungi

The new scientific journal *Pacific Northwest Fungi* is now online. The journal publishes papers on all aspects of fungal natural history, ranging from ecology and biogeography to taxonomy, morphology and phylogeny. Article categories include Notes, Brief Reports, Full-Length Research Articles, and Reviews.

Web site: www.pnwfungi.org

An on-line journal for teachers in biology and other natural sciences

Looking for some new teaching ideas, then have a look at this web-site which features a web-journal *Bioscience Explained* (Web ref. 1). The journal has review articles, laboratory exercises, classroom activities and reviews of educational resources and equipment. *Bioscience Explained* is produced jointly by the universities of Göteborg (Sweden) and Reading (United Kingdom). Examples of stories which caught the eye were Ancient DNA (review), cloning a plant (with recipes), Green DNA (isolation, restriction and electrophoresis of DNA for school students), Avian flu and using viruses for gene therapy (review)

Web ref. 1. www.bioscience-explained.org/ENMAIN/about.html

Latest Weeds CRC's newsletter, *Weed Watch*

The CRC for Australian Weed Mangement's newsletter *Weed Watch* can be accessed on-line (Web ref. 1). 1

Topics in the latest issue, number 12, include:

- Rescuing rangelands from exotic weeds – using satellite imagery to plot the distribution of *Acacia nilotica* in the landscape
- Weeds withering in WA – the benefits of training courses on weed management and identification in Western Australia
- Beware the green invaders – teaching primary school children in Adelaide about weeds in the environment as part of World Environment Day
- Flea beetle fights ragwort and wins – effectiveness of biological control of *Senecio jacobaea* L. with a beetle in Tasmania
- Minimising salinity without maximising weeds – potential plant species to be introduced to Australia for combating dryland salinity by the Salinity CRC are to undergo a weed risk assessment
- Weed detection project goes national – launch of a National Weed Detection Project which has been running in Queensland
- Weeds of the future threaten Australia's grazing lands – identifying introduced garden plants which might cause problems to the pastoral industry if they escape

Web ref. 1. www.weeds.crc.org.au/publications/index.htm

English translation of Malaspina's journals

The first English translation of Malaspina's journals has been published by the Hakluyt Society, London, in association with the Museo Naval, Madrid. For more information visit the Society's site (Web ref. 1).

There has also recently been published a collection of papers on Malaspina and Haenke (botanist on the American part of the expedition) – this has been reviewed by Ceska in *Botanical Electronic News* (BEN) (Web ref. 2) where it is pointed out that these papers are all in Spanish and without English abstracts. Details are:

> La Expedicion de Alejandro Malaspina y Tadeo Haenke. Ibero-Americana Pragensia Supplementum 14/2005. Universita Karlova, Praha. 175 pp. ISBN 80-246-0962-2 [soft cover] Price: Kc 160.00 (= ca. US$7.00) Order from: *edice@ff.cuni.cz*

If you want a précis of Malaspina and Haenke's backgrounds and their contributions to science and botany see the articles in volumes 287 and 288 of BEN (Web ref. 3).

Web ref. 1. www.hakluyt.com/bibliography/bibliography-third-series.htm

Web ref. 2. www.ou.edu/cas/botany-micro/ben/ben358.html

Web ref. 3. www.ou.edu/cas/botany-micro/ben/2002.shtml

A second bridal creeper for Australia

A second form of *Asparagus asparagoides* (Bridal creeper) has been found in Victoria and South Australia. This form, designated the Western Cape form, refering to its South African natural provenance, has been found to be much less susceptible to the rust species which has been having such good results on the much more widespread and familiar form of this species. Distinctions between the two forms are clearly documented in the *Bridal Creeper Newsletter* and in a separate report prepared in February 2006 (Web ref. 2); they are based primarily on "leaf" size and tuber size. The map portrayed in the February report is already out of date as distribution was restricted to the south-east of South Australia and western Victoria, but we now have collections in the State Herbarium of South Australia from the Adelaide region.

Web ref. 1. www.weeds.org.au/WoNS/bridalcreeper/docs/Abridged_report-AWC.pdf

Web. ref. 2. www.weeds.org.au/WoNS/bridalcreeper/docs/Abridged_report-AWC.pdf

An interesting time ahead for Australian willows

The arrival of the Willow Sawfly (*Nematus oligospilus*) in Australia has been confirmed. It was first noticed in Telopea Park, Canberra in March 2004 by El Bruzzese of DPI, Victoria, and during 2004 was recorded as being present at least 150 km south of Canberra. Later reports of its presence were made from Queanbeyan (2005), Braidwood in New South Wales (2005), the Adelaide Hills in South Australia (February 2005) and East Keilor in Victoria (April 2005). It is thought that it might have arrived from New Zealand where it has been known since about 1998.

Willow sawfly is predominantly a pest of willow (*Salix*) species but has been recorded on poplar in South America.

The Consultative Committee on Emergency Plant Pests considers that the sawfly is already too widespread to be eradicated. They have a number of images of the sawfly and its larvae on their website (Web. ref. 1). There are further links from this page to information on the species in New Zealand, to further information and images on the CSIRO Entomology pages and information on the Weeds CRC site.

A short paper by Bruzzese & Mcfadyen (2006) addresses some of the issues of whether this introduction may be beneficial (due to a number of *Salix* species classification as Weeds of National significance, lowering cost of their control, increased biodiversity with their removal) or detrimental (shade loss, potentially increased water temperatures, river bank erosion, threat to ornamental or heritage plantings).

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Web ref. 1. www.daff.gov.au/content/output.cfm?ObjectID=0E21BEB4-527B-4B50-8FC5A33287FB718A

London plane naturalised in the ACT

In a previous ASBS Newsletter (126: 44) Robyn Barker alluded to the naturalisation of the London Plane, P. × acerifolia (L.) Willd. (= P. occidentalis L. × P. orientalis L.), in North America and Australia, where this taxon has been recorded sparingly from Western Australia (Web ref. 1).

As with many other southern Australian cities, London planes are widely planted in urban Canberra. Occasional seedling plants may appear in garden beds and other areas adjacent to where parent trees occur, but these are routinely removed during horticultural work on these amentity plantings. During a recent (March 2006) collecting trip around the shores Canberra's oldest and largest ornamental waterbody, Lake Burley Griffin, numerous seedling or sapling plane trees to c.1m or more (e.g. *Lepschi 5491 & Mallinson*), were noted growing at various points along the southern shore of the lake. In addition to these, a small population of trees to *c*. 8 m was also located, including some fertile plants (*Lepschi 5505 & Mallinson*). All plants, whether seedlings or mature trees, were growing at the waters edge, associated with various other naturalised trees and shrubs, in particular *Alnus glutinosa*, *Rosa rubiginosa*, *Rubus* sp. and *Salix* spp. The oldest plants at this site are probably no more than 20 years old.

The paucity of collections of naturalised *Platanus* in CANB (or indeed in any Australian herbaria) is not surprising, given the unwillingness of Australian botanists to collect and document the non-indigenous flora. Nonetheless, it is still somewhat surprising that no other naturalised plants of *Platanus* are known from the Canberra area, given that at least three taxa, *P.* × *acerifolia*, *P. occidentalis* L., *P. orientalis* L. and *P. wrightii* S.Wats. (cf. Spencer 1997), have been widely cultivated in the city for many decades.

The origin of plants referred to *P.* × *acerifolia*, the London plane, and their associated nomenclature is complex and uncertain, but the fertile plants cited above agree with the circumscription of this taxon adopted by Spencer (1997).

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Spencer (1997). *Horticultural Flora of Southern Australia*

Web ref. 1. FloraBase. http://florabase.calm.wa.gov.au/

Brendan Lepschi
Australian National Herbarium

As innocent as a lamb – a potential naturalised euphorb

A plant freely available to South Australian gardeners, *Euphorbia lambii* Svent., is a drought tolerant shrub native to the Canary Islands. One Adelaide gardener has complained about the spread from his neighbour's garden into his own domain, where he's had to cope with numerous seedlings. Our own inspection of a planting just outside the State Herbarium in the Botanic Gardens, indicates that *E. lambii* has a potential nuisance value in its immediate vicinity. This winter it has produced masses of seedlings beneath the parent plant and, while easily pulled out, the sheer numbers make this a labour-intensive task. The ability of the species to spread further is not known at this stage.

At the peak of fruiting outside the Herbarium, the sound of capsules popping every 30 seconds

or so, is perceptible from several metres – a fine example of seed dispersal.

The promotion of *E. lambii* by landscaping firms as a plant for low water conditions, as for example recommended by horticulturists at the Burnley Campus, University of Melbourne (Web ref. 1), might prove to be of concern in the future.

Web ref. 1. www.horticulture.unimelb.edu.au/lscape.pdf

D. Cunningham et al.,
State Herbarium of South Australia

Alfred Ewart – history repeats?

Helen Cohn's recent comprehensive paper on Alfred Ewart, Victorian Government Botanist in the early 1900s, reveals striking parallels with the situation herbaria, universities and systematists find themselves in today.

Reference

Cohn, H.M. (2005). Watch dog over the Herbarium: Alfred Ewart, Victorian Government Botanist 1906-1921. *Historical Records of Australian Science* 16: 139-167

Bill and Robyn Barker

Great Australian Bushwalk

The date 10th September 2006 marks the Great Australian Bushwalk, a nation-wide, non-profit bushwalking event. People are offered the opportunity to try bushwalking at no cost with some of the country's leading community bushwalking groups. This year over 110 different walks are on offer. Visit the event website (Web ref. 1) for more information on joining a walk or for on-line registration.

Web ref. 1. www.greataustralianbushwalk.org.au

The Great Cactus Hoax

Received in an email:

> A true story and its source was the Australian Quarantine Inspection Service in Adelaide.
>
> A bloke and his family were on holidays in the United States and went to Mexico for a week. An avid cactus fan, the man bought one-metre high, rare and expensive cactus there. On arrival back home Australian Customs said it must be quarantined for 3 months.
>
> He finally got his cactus home. Planted it in his backyard, and over time it grew to about 2 metres. One evening while watering his garden after a warm spring day, he gave the cactus a light spray. He was amazed to see the plant shiver all over, he gave it another spray and it shivered again.
>
> He was puzzled so he rang the council who put him on to the state gardens people. After a few transfers he got the state's foremost cactus expert who asked him many questions. How tall is it? Has it flowered? And so on.
>
> Finally he asked the most disturbing question. "Is your family in the house?" The bloke answered yes. The cactus expert said get out of the house NOW, get on to the front nature strip and wait for me; I will be there in 20 minutes.
>
> Fifteen minutes later, 2 fire trucks, 2 police cars and an ambulance came screaming around the corner. A fireman got out and asked "Are you the bloke with the cactus?" I am, he said. A guy jumped out of the fire truck wearing what looked like a space suit, a breathing cylinder and mask attached to what looked like a scuba backpack with a large hose attached. He headed for the backyard and turned a flame-thrower on the cactus spraying it up and down.
>
> After a few minutes the flame-thrower man stopped, the cactus stood smoking and spitting, half the fence was burnt and parts of the gardens were well and truly scorched. Just then the cactus expert appeared and laid a calming hand on the bloke's shoulder. "What the hell's going on?" he says. "Let me show you" says the cactus man. He went over to the cactus and picked away a crusty bit, the cactus was almost entirely hollow and filled with tiger striped bird-eating tarantula spiders, each about the size of two hand spans.
>
> The story was that this type of spider lays eggs in this type of cactus and they hatch and live in it as they grow to full size. When full size they release themselves. The cactus just explodes and about 150 dinner plate sized hairy spiders are flung from it, dispersing everywhere. They had been ready to pop. The aftermath was that the house and the adjoining houses had to be vacated and fumigated: police tape was put up outside the whole area and no one was allowed in for two weeks.
>
> And here's what one looks like sitting on a FULL SIZE dinner plate ... [Fig. 1]

I've received this story before via email and it has been around for a number of years. This latest version came from a relative in Scotland under the title "A true story.....honest!!!!". What took my eye was the purported origin of this tale, the Australian Quarantine Inspection Service in Adelaide. Was it just chance that this was given as the origin or did someone know that Bob Chinnock is our cactus expert and that his daughter Kiri works for AQIS? Kiri was also aware of the story saying that the last time that she had seen it there was no reference to the 3 months in Quarantine, thus making it more plausible. She says that the eggs would not have survived the mandatory fumigation applied to all imported nursery stock!

Fig. 1. The bird-eating spider on a large plate. The original source appears to be *www.extremescience.com/BiggestSpider.htm*

The story is of course a hoax – see the site (Web ref. 1) for some real information about these spiders which are apparently more likely to eat rodents and frogs than the birds implied by their common name, bird-eating spiders.

There are lots of email hoaxes and urban myths about on the web, some of them very clever. You can usually check their veracity relatively easily by doing a Google on "email hoax" and using one of the number of websites which come up to check the story. The one above is dealt with at the site (Web ref. 2), but it will undoubtedly be on other sites as well.

Web references

Web ref. 1. www.guinnessworldrecords.com/content_pages/record.asp?recordid=51536
Web ref. 2. http://www.truthorfiction.com/

Robyn Barker

News

Australian systematists will have welcomed the news that former President of our Society, Steve Hopper, is to become the 13th Director of the Royal Botanic Gardens, Kew (web ref. 1). He will take up the appointment on the 9th October. He replaces Sir Peter Crane who, after seven years in the position, is returning to the University of Chicago to devote more time to research, teaching and writing.

Steve is the first non-British botanist to take up the office. He will be accommodated in the house formerly occupied by plant systematists as illustrious as the Hookers.

He is well credentialed for the position through his endeavours in systematic botany, conservation, tertiary education and his successful role as head of the Kings Park and Botanic Gardens.

Web ref. 1. www.bgci.org/worldwide/news/0228/

Staff update from MEL

David Cantrill commenced as the new Chief Botanist and Divisional Director, Plant Sciences and Biodiversity Division on Monday 26 June.

June 23rd marked the end of the AVH project, with 11 staff finishing on the one day! There was a sense of achievement when reflecting on the 450,000 specimens that had been databased during the course of the project, but also a sense of sadness at having to farewell so many dedicated staff at the one time. We wish them luck in the next stage of their careers.

A review of the Collections Branch was held to determine the strategic priorities of the branch post-AVH. Pina Milne was appointed as the new Manager, Collections and Catherine Gallagher continues as Co-ordinator, Collections.

Joan Thomas (Database Co-ordinator) is retiring on June 27th, after 19 years at MEL, and Alison Vaughan has been appointed to the expanded role of Collections Information Officer.

Helen Jolley has a one week break after the end of the AVH, before commencing work on a *Flora of Australia* treatment of Pottiaceae with Pina Milne.

Simone Louwhoff was welcomed back from maternity leave to continue her work on lichens for the *Flora of Australia*.

After the last few months of resignations, reviews, interviews, ends of contracts and projects, we look forward to a period of stability and consolidation with David at the helm.

Frank Udovicic

Andrew Lowe at Adelaide

Andrew Lowe has took up his position as Head of Science in South Australia's Department for Environment and Heritage and Professor of Conservation Biology in the School of Earth and Environmental Sciences, University of Adelaide on 1st May. A major part of his charter includes the expansion of the research capacity of the State Herbarium.

Bill Barker

Pilbara field work for Australian specialists

A number of botanists across Australia have taken up the invitation to participate in a huge biodiversity conservation survey of Western Australia's Pilbara over the past three years.

Organised by the former Department of Conservation and Land Management (now Environment and Conservation) under Stephen van Leeuwen's lead, access was gained to remote areas and the facilities of a well-organised survey team which included experienced botanists Greg Keighery and Neil Gibson.

Hopefully more on this next issue.

Bill Barker

New funds for data capture

The Australia's Virtual Herbarium Trust has been successful in obtaining over one million dollars from the Natural Heritage Trust for specimen data capture in the major Australian government herbaria which balances the shortfall in the original $9.84 million dollars allocated in 2000.

The announcement of the funds came too late to prevent the disbandment of data capture teams around the country. Allocations to herbaria should be finalised shortly by CHAH and the Trust, which hopefully will enable some skilled data capture staff to be reinstated.

Bill Barker

Tony Orchard departing systematics and the Australian Plant Census

Tony Orchard is leaving his current role as Australian Plant Census Coordinator. His recent email to the APC working group and associates well summarises his predicament and we suspect that of any older skilled taxonomists who might be looking for employment:

> Despite my extensive enquiries, sadly I have found that there are no jobs in Australia for older traditional taxonomists with skills in nomenclature, with "a little Latin and less Greek", and I have been forced to look elsewhere for employment.
>
> I will be going on leave on 30 August, and on my return starting work with another Department, in a policy area far removed from taxonomy and nomenclature. After over 30 years working in taxonomy at a national and international level, it will be daunting to begin a whole new career. I will miss the many friends and colleagues I have interacted with for a lifetime. I wish you, and taxonomy, success.

Australia, a first-world country with a unique and inadequately known biota, has its own taxonomic impediment, and it applies to both young and old.

Bill & Robyn Barker

Changed email addresses for WA Herbarium

With the change of departmental name from Conservation and Land Management to Environment and Conservation, email addresses of staff at the WA Herbarium have changed from *e.g. [name string]@calm.wa.gov.au* to *[name string]@dec.wa.gov.au.*

The FloraBase web site at this stage is the same: *http://florabase.calm.wa.gov.au*.

Postal address and phone numbers are unchanged.

Deaths

Jenny Chappill, legume systematist and teacher

Jenny Chappill died peacefully on 7th August following her ferocious four year battle against ovarian cancer. She will be greatly missed over here in Western Australia both as a botanical researcher and as excellent company over a pint and a bowl of hot wedges with aoli. I would like to leave you with the fond thought that she was checking anomalous *Jacksonia* map-points on AVH up until the last days before her body capitulated to the inevitable.

Ryonen Butcher
University of Western Australia

Bruce Grivell, South Australian plantsman

Bruce Grivell, well known to South Australian botanists wishing to find examples of Australian flora in cultivation, passed away on 12th May 2006. He was long associated with the Botanic Gardens of Adelaide and in particular the Wittunga Botanic Garden, formerly the private garden of the Ashby family. Through strong ties with the family he also had an intimate knowledge of their Mt Alma garden at the family property at Inman Valley, west of Victor Harbor. He was a great help, for example, in accessing the extensive *Hakea* plantings on these gardens.

Bruce also collected about 300 herbarium specimens for the State Herbarium, gathered on field trips in search of new plantings.

Bill Barker

Ian Common, Australian butterfly man

A tribute to the life and work of Ian Common, author of the major works on Australian butterflies and moths can be found at *www.ento.csiro.au/anic/iancommon.html*

For your dictionary

Don Colless on the Taxacom list (see Taxacom archives for Wed 24/05/2006) has pointed out that a new verb – to *clade* – has been invented. It is used in the context that "Taxon A clades with Taxon B", or "Taxa A and B clade together". Further discussion also unearthed the adjective *concladal* ("Taxa A and B are concladal") – surely an excellent addition to the English language.

This then led to what might be the first good cladistic joke (thanks to Barry Roth):

> "Who was that concladal I saw you with last night?"
> "That was no concladal, that was my sister-group."

Kevin Thiele
K.Thiele@cbit.uq.edu.au

CHAH Inc. business

Australian Plant Census report

Work proceeds smoothly and more or less on schedule for the 'first pass' of the APC. We have now completed compiling the synonymies of all taxa that have been published in the *Flora of Australia* series, excluding grasses and those families only treated to date in the Territories volumes (*Flora* vol. 49 & 50). We are now working on the remaining, approximately half, of the flora for which no comprehensive, collated national account is available. I have had discussions with Annette Wilson at ABRS about this next phase, and we have developed plans to work together on unpublished flora volumes. In this way the synonymies adopted in the APC and the *Flora* will stay approximately in step with each other, and work already done by *Flora* authors will provide a useful check on APC listings. One side effect is that those who have manuscripts with ABRS for the *Flora* may be hearing from both Annette and me to clarify points of species acceptance and synonymy.

Additional families/major groups treated

The list of groups compiled over the last three months may look a little shorter than normal, but covers a substantial number of taxa. The big achievement has been to complete compilation of the *Eucalyptus/Angophora/Corymbia* group. This has been based on the synonymy adopted for the upcoming edition of *Euclid – Eucalypts of Australia*, with minor departures. This eucalypt compilation is currently with the APC Working Group and probably will not meet with universal approval, and will depart to a greater or lesser extent from State and Territory censuses. However, it is based on the latest country-wide review of the genera, and if nothing else, should provide a unified basis for discussion. The other major groups treated are the gymnosperms, ferns and fern allies, and Iridaceae and related families.

In the attached table (Table 1) I list all families added to the APC since the last Newsletter list (March 2006). Note that the classification adopted (for convenience) at this stage is the Cronquist scheme used in *Flora of Australia*. All or most of these family accounts should be available in pdf form on the APC website by the time this newsletter appears or shortly afterwards (Web ref. 1 - note that this has changed slightly). They will be progressively added to the APNI/APC database over coming months.

Statistics

By 30 June 2006 the estimated numbers of names compiled in the family-by-family section of the Australian Plant Census stood as follows:

Total number of accepted generic names: 1004
Total number of accepted species names: 9371
Total number of accepted infraspecific names: 2080
Total number of synonyms (all ranks): 15915
Total number of names accounted for: 28370

In addition, all taxa listed as extinct, threatened or vulnerable on the schedules of the Commonwealth's Environmental Protection and Biodiversity Conservation Act (EPBC Act) have also been treated. The numbers here are:

Accepted species names: 1289
Accepted infraspecific names: 107
Total synonyms: 1401
Total names: 2797

Thus compilation of well over 10,000 accepted species names (and over 30,000 names in total) is completed, a milestone of some note.

APC trivia

The most recent compilations have impacted on the league table of taxa with the most synonyms. The top of the table now stands as follows:

Acacia paradoxa - 46
Marsilea drummondii - 34
Eustrephus latifolius - 31
Geitonoplesium cymosum - 24
Lomatia silaiifolia - 22
Banksia marginata - 21

The numbers of accepted species have increased substantially for many genera and families since publication of the *Flora of Australia* treatments. The most prominent among these are listed in Table 2.

Tony Orchard
APC Coordinator

Web reference

Web ref. 1. www.chah.gov.au/chah/apc/families-treated.html

Table 1. New families and major groups (since *Austral. Syst. Bot. Soc. Nsltr.* 126)

Adiantaceae	Cupressaceae	Gleicheniaceae	Marsileaceae	Schizaeaceae
Agavaceae	Cyatheaceae	Grammitidaceae	Ophioglossaceae	Selaginellaceae
Aloaceae	Cycadaceae	Hanguanaceae	Osmundaceae	Smilacaceae
Angophora	Davalliaceae	Hymenophyllaceae	Parkeriaceae	Stangeriaceae
Araucariaceae	Dennstaedtiaceae	Iridaceae	Pinaceae	Stemonacaceae
Aspleniaceae	Dicksoniaceae	Isoetaceae	Platyzomataceae	Taccaceae
Athyriaceae	Dioscoreaceae	Lindsaeaceae	Podocarpaceae	Thelypteridaceae
Azollaceae	Dipteridaceae	Lomariopsidaceae	Polypodiaceae	Vittariaceae
Blechnaceae	Dryopteridaceae	Lycopodiaceae	Psilotaceae	Xanthorrhoeaceae
Corymbia	Equisetaceae	Lygodiaceae	Pteridaceae	Zamiaceae
Culcitaceae	*Eucalyptus s.str.*	Marattiaceae	Salviniaceae	

Table 2. Families or genera with greatest increase in accepted names since publication in the *Flora of Australia*.

Group	Flora of Australia		Australian Plant Census	
	Date of publication	No. of species	No. of species	% increase
Narcissus	1987	2	10	400
Calectasia	1986	3	12	300
Salicaceae	1982	6	24	300
Brunoniaceae	1992	1	3	200
Iris	1986	3	10	233
Aloaceae	1986	3	8	167
Ulmaceae	1989	9	18	100
Droseraceae	1982	55	110	100
Flacourtiaceae	1982	17	31	82
Stackhousiaceae	1984	16	29	81
Urticaceae	1989	21	36	71
Iridaceae	1986	79	138	75
Alectryon	1985	9	15	67
Gladiolus	1986	9	15	67
Passifloraceae	1982	11	18	63
Liliaceae	1987	266	393	48
Violaceae	1982	26	38	46
Solanaceae	1982	206	284	38
Cactaceae	1984	32	42	31
Moraceae	1989	47	60	28
Aizoaceae	1984	60	77	28
Brassicaceae	1982	160	199	24

Points of view

A project for the Society

Over the past few years there has been some discussion about a project that ASBS might undertake, in particular a publication. Suggestions have included a generic flora of Australia, a handbook on botanical Latin, and a new edition of the *Flora of Central Australia* (first published by the Society in 1981, edited by John Jessop). These are good ideas; but I believe that the greatest need, one with the greatest potential value in so many ways, is to complete one that we started in 1981 and which, after a sound start, is now floundering—the *Flora of Australia*.

The *Flora* project was established largely as a result of the efforts of we taxonomists, supported over many years by user groups and the wider scientific community. In recent years it has suffered for various reasons, not least the diversion of effort by ourselves into other projects such as State and regional Floras and Australia's Virtual Herbarium. These are also good projects, but we are trying to do them with the same resources that we need for the *Flora of Australia*.

Our taxonomic resources, especially people and funding, are too scarce to be spread over yet another large project. The need for the *Flora* remains great. We owe it to ourselves, to users, and to those who put in so much effort over decades to get it started, to finish the job. That should be our project. A completed *Flora* will be a great national and international achievement. It will be one for which Australia and the rest of the world will be most grateful. It will allow a myriad of spinoffs. And we will then truly have a strong foundation on which to build, whatever the next stages in systematic botany may be.

The Society should get behind this task, which surely has to be our main focus for the next five years. Launching the final volume of the vascular *Flora* at the XVIII IBC in Melbourne in July 2011 would be a fantastic achievement. It sounds daunting—but it can be done.

Alex George
'Four Gables', 18 Barclay Road, Kardinya, Western Australia 6163
email *a.george@murdoch.edu.au*

An additional observation on phrase names

The following is from the Introduction to P.J. de Lange, J.W.D.Sawyer & J.R.Rolfe, *New Zealand Indigenous Vascular Plant Checklist.* New Zealand Plant Conservation Network, Wellington (July 2006):

The list does not include the approximately 200 plant entities that are currently considered

"taxonomically indeterminate" meaning they have not been formally described or recognised as distinct taxa ... This is because, to practising biosystematists, the mass proliferation of "tag named" entities to a wider audience is unhelpful. There is much more required in testing a hypothetical entity than its provisional listing, usually without specific voucher specimen citation. In our experience, all that has been achieved by past listings of such entities is much debate, dissension and confusion amongst the wider botanical audience.

Seems like this is a trans-Tasman disease (see my note in the last *ASBS Newsletter*). In NZ it is worse because they have not implemented the Hispid voucher system, but it is interesting that their percentage of 'phrase name' taxa is between 5% and 10%, about the same as my gut feeling for the Australian flora.

Tony Orchard
c/- Northern Territory Herbarium

ABLO report

There's nothing quite like the magic of a Kew spring to erase the bitter memories of an English winter. Kew's floral displays have been nothing short of spectacular this year and I have been taking regular advantage of my after-hours access to explore the gardens and marvel at the seasonal changes as they unfold. June heralds the arrival of seemingless endless summer evenings, and there is no better way to enjoy them than with a cold beer on Kew Green.

The herbarium at Kew has been a hive of activity these past few months with staff preparing for their 5-yearly Science Audit, which took place in early June. I continue to be kept busy attending to ABLO enquiries and my own research. I have also extracted some 2,500 Australian types and historical specimens for scanning as part of the Australian GBIF project. Over 6000 collections across a range of families and genera have now been targeted.

In March I visited the Museo di Storia Naturale dell'Università Firenze (FI) and last month I examined collections at both the Swedish Museum of Natural History (S) and Upsala University (UPS). It was a thrill to inspect specimens used by both Labillardière and Swartz for their respective taxonomic accounts of *Stylidium* – amongst the earliest for the genus. Like a true taxonomic geek I also visited the tomb of Linnaeus in the beautiful Upsala cathedral. Preparations to commemorate his 300th birthday next year are well underway in both Sweden and London.

Loans

The embargo on specimen loans from Kew to Australia has recently been lifted. Guidelines have been put in place to facilitate the safe passage of specimens through AQIS. These have been circulated to the main Australian Herbaria.

Kew News

Rumour and speculation were finally laid to rest with the marvellous announcement that Professor Stephen Hopper is to become the next Director of the Royal Botanic Gardens, Kew. Steve will commence at Kew in October, taking over from Sir Peter Crane who leaves Kew in mid-September. Steve is the first Australian, and indeed the first non-Briton to take up this most prestigious position. The number of "ABLO enquiries" from Kew sources have sky-rocketed since this news was made known!

Professor Arthur Bell, Director of Kew from 1981 to 1988, sadly passed away in early June following a short illness.

Mike Bennett officially retires as Keeper of the Jodrell Laboratory on August 6 and Mark Chase has been appointed as his replacement. The new £6 million Wolfson Wing of the Jodrell Laboratory is virtually complete and will be officially opened on June 23. The eucalypt trees at the west end of the building have been retained and complement the building design to stunning effect. Mycology, Conservation Genetics and Palynology have moved into the new facility, along with the staff and library of the Centre for Economic Botany. The Economic Botany collections are to remain in the Sir Joseph Banks Building.

To make way for the new herbarium wing, the mycology building adjacent to the herbarium has been reduced to a pile of rubble and the much-loved vegetable plots removed. Preparatory works will continue over summer with construction commencing in Autumn.

Adult admission to Kew Gardens has risen to £11.75 (almost AUD$30!), although entry for children remains free. A new garden feature is the Sackler Crossing, a stunning sinuous walkway across the lake at the western end of the gardens, designed by eminent London-based architect John Pawson. Kew Palace, the former residence of King George III, and the Pagoda are also currently open to the public.

African Plants Initiative

Just over two years ago, Kew embarked on the African Plants Initiative (API) — a large-scale

collaborative project to digitise African plant specimens and related material. This month marks the end of work on digitising the 68,000 African type sheets housed at Kew, although digitisation of archive material and texts is ongoing. Partner herbaria around the world are simultaneously digitising their own African type collections, which will be united into a complete resource, to be released by Aluka in early 2007.

Books

R.J. Johns, P.J. Edwards, T.M.A. Utteridge & H.C.F. Hopkins. A Guide to the Alpine and Subalpine Flora of Mount Jaya. Royal Botanic Gardens Kew, 2006.

Visitors

Ross Beaver (Landcare, New Zealand); Stuart Pillman (Department for Environment and Heritage, South Australia); John McLean (Ferguson Architects, Perth).

Juliet Wege

ABRS report

General news

ABRS has secured funding for a further two years from the Natural Heritage Trust (NHT). This will fund work on *Flora of Australia* Grasses volumes and several interactive keys. ABRS has also secured two year's NHT funding to continue the development of the Australian Biodiversity Information Facility node of GBIF.

Grants and Bursaries

Seven new and 13 continuing Flora grants (including algae, fungi and protists) have been approved by the Minister and the successful applicants informed. Details will be published in Biologue and are currently available on our website One PhD scholarship will also be awarded. Eight student travel bursaries have also been funded in this round. Bursaries are awarded twice each year and the closing date for the next round of applications is 10 September.

Nominations for the next ABLO (2007–2008) have also been called and details are available on the ABRS website (http://www.deh.gov.au/biodiversity/abrs/admin/ablo/index.html). The closing date is 31 August 2006.

Staff news

As mentioned in the last newsletter, Mary Colreavy has left ABRS for a new position. The Director's position was advertised in June, and Helen Thompson continues as Acting Director in the interim.

Anna Monro returns to ABRS in July as an assistant editor, working mainly on grasses.

Publications

Flora of Australia volume 51 - Mosses.

This is the first of three volumes describing and illustrating the more than 1000 species of Australian mosses. The main features of this volume are:

A introduction documenting 200 years of research on Australian mosses; moss classification and an overview of morphology and sexuality; an account of ecology and biodiversity; the origin and evolution of mosses; fossil bryophytes; a key to the more than 300 genera of mosses known from Australia and its island territories; and taxonomic treatments of 22 families, 42 genera and 238 species and infraspecific taxa.

The book is available from CSIRO Publishing for $120 (hard cover) or $99 (soft cover).

Helen Thompson
Acting Director

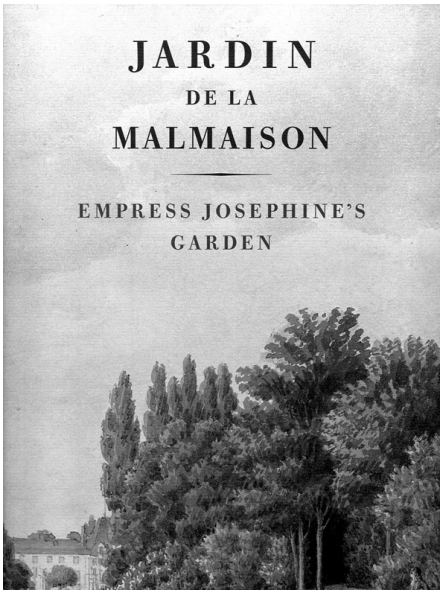
Book reviews

Botany and art of Empress Josephine's garden

Robyn Barker
State Herbarium of South Australia

Jardin de la Malmaison: Empress Josephine's Garden. With an essay by Marina Heilmeyer
H Walter Lack
328pp, 2004, Prestel Publishing Limited,
ISBN 379133185X
Price usually cited as US$180.00, £99 (boxed).

Although I had been vaguely aware of its existence through my research into the early French collections of Australian plants, I first saw this book sitting in a glass case in the Art Gallery gift shop of Bellagio in Las Vegas! The attendant was helpful in allowing a look at the book and on return to Australia it was recommended for purchase to the Botanic Gardens & State Herbarium library, where it was eventually bought using funds provided by the Friends group. This is the copy used for review and I have to confess that having now looked at it in much more detail, I wonder whether the same recommendation would still be made.



The book is large, on its own about 34 × 22.7 × 4 cm, but these dimensions are added to by its inclusion in a very solid slipcase. The frontispiece is Lefevre's portrait of Empress Josephine in full regalia, her dress and cloak lavishly embroidered with plant motifs and with her hand resting on a specimen and a painting of a plant. For those of you who don't already know, Malmaison was the home of Napoleon and Josephine and the place where many of the early French collections of Australian plants and animals were to find a home.

The text consists of a foreword, introduction, a brief section on Mal-maison before Josephine, and a much longer section on Malmaison and Josephine (topics covered include enlarge-ment, redesign and renovation, animals and plants, staff, the garden and a discussion of the two major publications emanating from the plants grown there); all of this text is by Professor H. Walter Lack, Director of the Botanic Garden and Botanical Museum, Berlin-Dahlem. A section entitled Malmaison after Josephine consists of a reproduction of an eye-witness account by a visitor to Malmaison and the botanist Bonpland in 1809 (including the observation of a sitting black swan and the attempted escape with disastrous results of the only kangaroo), a list of the 64 plants illustrated in Bonpland's *Description des plantes rares cultivées à Malmaison et à Navarre* (Bonpland 1812-17) – these plates are not included here – a list of the formal names of people mentioned in the text with birth and death dates and a brief bibliography. This section of the book is well illustrated with watercolours of Malmaison, all of these by Auguste Garnerey who began painting the park at Malmaison in 1812 or 1813 and completed a series of watercolours before the sale of the estate in 1824.

The bulk of the work is the reproduction of the 120 plates of plant specimens painted by the famed Pierre-Joseph Redouté in association with the botanist Ventenat, virtually a facsimile of his *Jardin de la Malmaison*, published between 1803 and 1805 - except for one major omission! Ventenat's botanical text, associated with each plate in the original, has been completely omitted. Since each plate is faced by an almost entirely blank page, this is a total disservice to botanists, particularly when it is realised that this text would represent the protologue for at least 30 of the Australian species treated (figures compiled from a search of APNI, June 2006) and there were only ever 200 copies produced according to Lack (p.38). The plates have also been, understandably, reduced in size by a third, but less understandable is the omission of the plate number, the name of the artist and the name of the engraver, although this information is offered at the base of the facing page.

An essay on Malmaison today by Marina Heilmeyer, art historian of Berlin, a postscript by

Lack and an index complete the volume. Most of the garden of Josephine's time is no more, gone along with the *Eucalyptus* and *Acacia* of that time, but clearly enough exists to make me want to see for myself!

Although most other reviews of this book consider that it will be bought for the Redouté illustrations, from my point of view the interest is more in the background material – a history of the particular volume, once in the hands of two Emperors' of Austria, on which this facsimile was based, the conditions under which the plants were attained and grown at Malmaison, the production and engraving of the illustrations and the general historical background of the time. Much of this same information is admittedly available in Jill, Duchess of Hamilton's (1999) *Napoleon, the Empress & the Artist,* together with many of the same images by Pierre-Joseph Redouté and Garnerey, but here the information is all focussed on Malmaison.

If your library does not have a copy of Ventenat's, *Jardin de la Malmaison*, you would, unfortunately, from the viewpoint of a botanist in need of seeing protologues, be better off investing in a copy of the fiche. In so doing you would miss the glorious and pain-staking stipple engravings of Redoute's plants and a background that brings the shortly-lived Malmaison to life in the mind's eye. However the good news is that by judicious shopping on the web you can probably pick the book up for a lot less than the originally advertised price (although postage is likely to be high); be careful though that you get a volume in your language of choice since there are both French and English versions translated from the original German. All comments above relate to the English version.

And by the way, you can visit Malmaison on the web and see the contents of the house (Web ref. 1).

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Jill, Duchess of Hamilton (1999). *Napoleon, The Empress & the Artist. The story of Napoleon, Josephine's Garden at Malmaison, Redouté & the Australian Plants.* (Kangaroo Press, Kenthurst, New South Wales).

Ventenat, E.P. (1803-05). *Jardin de la Malmaison.* 2 volumes, 20 parts. (Paris)

Web Ref. 1. www.chateau-malmaison.fr/

CD adjunct to Costerman's book on southeastern Australian native trees and shrubs

Robyn Barker
State Herbarium of South Australia

CD-ROM Supplement to Native Trees and Shrubs of South-Eastern Australia by Leon Costermans
Cost: $25.00 (includes GST and postage). Available from Victorian National Parks Association Inc., Level 3, 60 Leicester St, Carlton, Victoria 3053. Tel. (03) 9347 5188; Fax: (03) 9347 5199; Email: *vnpa@vnpa.org.au*

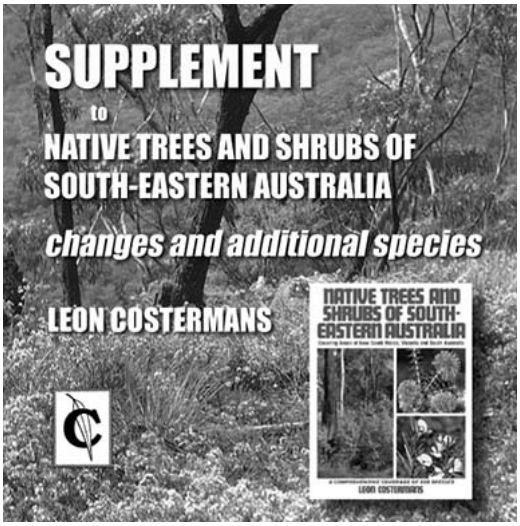
If you have a copy of Leon Costermans' 1981 book Native Trees and Shrubs of south-eastern Australia, or one of its later editions, you can update it with the purchase of this CD-ROM. There are updates to the original species included in the book and any new species described since 1981 are also added. Previously the definition for inclusion in the book was any shrub greater than about a metre in height. This restriction has been lifted and an extra 80 species less than a metre in height have also been treated.

There are three versions of the supplement included on the CD even though the content of all of the versions is identical. The largest version, designed to be read on screen, has high resolution photos which can be enlarged to show fine detail. Certainly the photographs which I viewed were of excellent quality, with hair type usually discernible. A number of the species are represented by herbarium specimens, some of them with superposed close-up images of particular features (e.g. *Hovea pannosa*, *Hibbertia empetrifolia*). The second, medium, version is also designed to be read on screen but the photographs are a lower resolution and consequently faster navigation is possible – this is the version to use for just looking. The third version is designed to be printed out – be warned though it is 125 pages and if you want to do justice to the photographs it will need to be printed in colour. While some might prefer the printed format you do of course lose the very handy hyper-linking throughout the volume when viewed on screen.

There are eight sections in each of the versions: a contents page, an index (page numbers for each species are hyperlinked to all relevant text and to the photographs), Part A which lists any changes to species already treated in the 1981 book, Part B covers all the extra species, whether new taxa or additional taxa (less than 1m high), references, 216 photographs in alphabetical order and in the same style as the original book, a map of the south-eastern Australia region and to complete, a list of the botanists describing taxa included in the book and supplement.

It is somewhat unfortunate that the Introduction to the supplement, which is not part of the version referred to above has been kept separate from the rest since it makes some very good points. From the section on name changes Costermans' offers the following personal opinion

> Given that most taxonomic work is undertaken in taxpayer-funded institutions, I would argue that such institutions have an obligation to the wider public to publish major changes not only formally in specialised journals but also in more 'everyday' terms, with advice for differentiation *in the field*, in widely distributed journals such as those of Field Naturalists Clubs or Australian Plant Societies, or on the internet. This is rarely done at present. By explaining (and justifying) the changes and their implications, taxonomists would earn more respect than they presently tend to receive as a consequence of the confusion they generate. Are any of the taxonomic institutions prepared to show some initiative in this regard?"



Some of this can be answered by another set of questions. Don't we already interpret name changes for the general public in the provision of censuses? But do we do it well enough when even systematists have problems working out what is happening in some groups because of inadequate synonymies? And how many of us have time to produce yet another publication, when we have enough problem finding time to produce the initial scientific treatment. At least working in the south-eastern Australian region Costermans has not had to deal with the plethora of phrase names so denigrated by our ex *Flora of Australia* editors in this, and other, issues of the *Newsletter*; although it might have been preferable if he too had used this convention since there are no vouchers cited for the few un-named taxa such as *Astrotricha* sp. (Grampians), *Kunzea* sp. aff. *ericoides* and *Ozothamnus* sp. aff. *hookeri* included in the coverage. These are the very sorts of names which are often extremely difficult to track down as time passes.

This CD-ROM is exceptionally good value for $25 – if you don't already have a copy of the book then it can also still be purchased for around $45-50 (or even cheaper from the Australian Online Bookshop).

Celebrating four centuries of Dutch impact on Australia

Dieuwke Jessop[1]
Holdfast Bay History Centre
14 Jetty Road, Brighton SA 5048

***The Dutch Down Under 1606-2006*, Co-ordinating author Nonja Peters**
University of Western Australia Press 2006

This beautifully produced book is a series of essays by various experts in their field, under a number of chapter headings which loosely relate to what the Ambassador of Australia to the Netherlands refers to as the three Ms – Mariners, Military and Migrants. It is not a narrative history of Dutch contact with Australia but rather a series of points of interest, which the reader may want to explore in more depth.

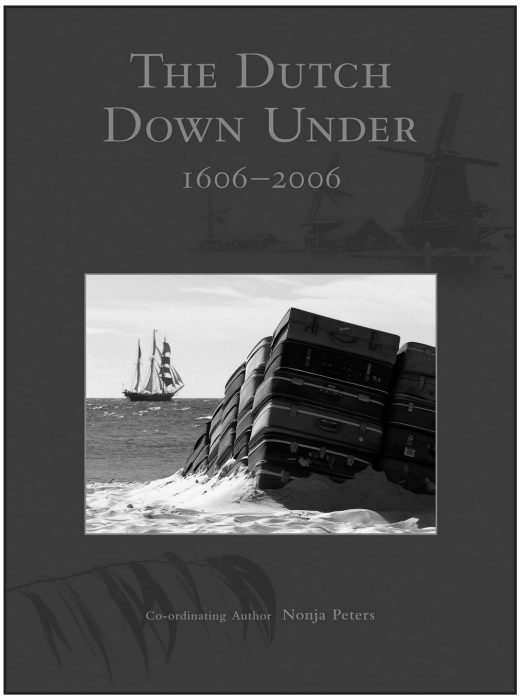
Dutch exploration of the West coast of Australia, starting with *Duyfken* in 1606, left a legacy of Dutch place names and contributed significant additions to charting of what was known of the Great Southlands. Dutch shipwrecks contributed to co-habitation and integration with the indigenous population. The Dutch were not interested in the land they charted, as from a merchant's point of view, the land was useless. Most of the exploration was by default except for voyages that went looking for missing ships and the voyage of Abel Tasman. The most infamous shipwreck was that of the *Batavia* where sailors were marooned on the Albrolhos Islands for 3 months while a boat went out to seek and came back with rescue. In the meantime the ship wrecked sailors had set about murdering each other. Nuyts' voyage in the ***Gulden Zeepaard*** reached the boundaries of present South Australia in 1627.

During WWII, from 1942 to 1945, as part of the Pacific War, Dutch armed forces were based in

[1] Dieuwke Jessop is the Local History Officer of the Holdfast Bay History Centre, Holdfast Bay being the original name of Glenelg where the colonists who established Adelaide under Governor Hindmarsh landed in 1836. Dieuwke was formerly Director of the South Australian Maritime Museum. Eds

Australia and about 10,000 Dutch, Eurasians and Indonesians were evacuated to Australia from the Netherlands East Indies, including the Netherlands East Indies Administration. Dutch evacuees from the Netherlands Indies lost their lives when the North coast of Australia was bombed.

Between 1910 to 1920, a group of about 80 working class Dutch from Buiksloot, a village outside of Amsterdam, fired by ideological socialist farming principles, set up a rural community in Queensland. They started from scratch on the land allocated. After the Dutch-Australian immigration agreement in 1951 until 1970, 170,000 Dutch nationals arrived in Australia. 5% of the Dutch population left the Netherlands in the post war period. Today 270,000 of Australia's population claim Dutch ancestry.



The book does not state whether there was any botanical interest in the coastline explored. Despite many early visits to Australia by Dutch ships, it appears that plant specimens were rarely collected, or if they were, then their records are lost. However, Tony Orchard in his historical chapter in the second edition of the *Flora of Australia* introductory volume, considers that Willem Vlamingh (who explored the Swan River in 1697):

> may be the collector of two specimens in G, erroneously described as ferns from 'Java'. If so, these are the earliest surviving herbarium specimens from Australia.

There were relatively high profile botanists in the Netherlands in the eighteenth century. Linnaeus went there for his doctorate and met with well known botanists such as von Haller, Boerhaave and Burman and worked for Clifford but very few Hollanders appear to have taken any interest in the flora of the East Indies or of their settlement in the Cape. Even the famous Rumphius (1628-1702) although working for the Dutch East India Company, was actually German by birth.

Being part of the 5% immediate post war Dutch diaspora (albeit not initially to Australia), I found the book of great interest. It is well referenced allowing for further reading on topics of special interest. However, if one's main interest is botanical, one will be disappointed.

Accessing two Western Australian conference proceedings

Drummond Symposium, Toodyay 2004

The collected papers of the Drummond Symposium held in Toodyay in 2004 were listed as having been published in issue 125 of the *Newsletter*, but we had no purchase detail. Alex George informs us that copies are available from:

Toodyay Naturalists' Club,
PO Box 328, Toodyay, W.A. 6566.

Price is $25 per copy plus postage. This is payable by cheque to the Club. The only other form of contact to expedite sales are two phone numbers:

Don Smith – (08) 9574 5854
Sue Eldridge – (08) 9574 5407.

Investigator 200, Albany 2001

The proceedings of the Investigator 200 conference in Albany 2001, *Matthew Flinders and his Scientific Gentlemen: the expedition of HMS Investigator to Australia, 1801-1805*, are now being advertised on the Western Australian Museum website (see below: there's no reference to the shop on the site's front page). Recommended price is $59-95. Purchases can be made from:

The Western Australian Museum Shop
Perth Cultural Centre
James St, Perth. W.A.
Tel: (08) 9427 2776 Fax: (08) 9427 2864
Email: perth.shop@museum.wa.gov.au
www.museum.wa.gov.au/shop/publications/wampubs.asp

Conferences

Current conferences

8th International Mycological conference

The programme for this conference in Cairns from 20-25th August, the first to be held in the southern hemisphere, is available on the web.

Web site: www.sapmea.asn.au/conventions/imc8/index.html

Acacia 2006

The programme for the scientific part of *Acacia 2006* being held in Melbourne from 25th-28th August is available on the web.

Web site: www.rbg.vic.gov.au/acacia2006/science_behind_acacia.html

Coming conferences

15th Australian Weeds Conference

The program for the 15th Australian Weeds Conference being held in Adelaide from 24-28th September is now available on the web

Web site: *www.plevin.com.au/15AWC2006/program.htm*

Plant Diversity in the Tropics – ASBS 2006 meeting

At James Cook University, Cairns, on 13-15th November 2006.

See the website and brochure with registraiton form enclosed with this issue of the *Newsletter* for more information. Registration is a remarkably low $120 (full) or $60 (student) for this 3 day conference and a further $80 for a one day workshop on *Molecular Tools in Plant Systematics*.

Web site: at www.anbg.gov.au/asbs/conferences/

Flora Malesiana Symposium VII

First Announcement: to be held at the National Herbarium of the Netherlands, Leiden University from 17-22 June 2007

Web site: www.nationaalherbarium.nl/FMVII

Exhibitions

Australian exhibitions

Waterhouse Natural History Art Prize Exhibition, Adelaide

Although only in existence since 2003 this event is eagerly anticipated in Adelaide circles and 2006 is no exception. From over 500 entries 112 finalists have been chosen for display at the South Australian Museum from Saturday 5th August until Sunday 10th September. If you are in Adelaide between these dates pay the exhibition a visit and see the artists' often thought-provoking interpretations of the natural world.

The Museum website has three examples of finalist's work.

Web site: www.samuseum.sa.gov.au

A change of emphasis at the National Botanic Gardens, Canberra

In keeping with the propensity of females to bare all for their particular sport, charity, fund-raising activity, the Botanic Gardens newest exhibition, *Bare Winter*, is:

> ... a remarkable series of photographic images of female nudes in the Tasmanian wilderness.
>
> *Bare Winter* is the work of Hobart photographer Kirsty Pilkington and was first shown at the Long Gallery, Hobart, last year. It reflects her passion for the preservation of our natural heritage and is a sensual record of the beauty and connection between Woman and Mother Earth.

Bare Winter was opened on July 29th by Ms Pilkington and Tony Orchard, the latter the foundation Curator of the Tasmanian Herbarium. It will be on display in the Gardens' Visitor Centre from 1st August until 29th October 2006.

Subjects of the exhibition can be viewed and limited edition prints purchased through the artist's website at *www.rappawprints.com.*

Forster exhibition, National Museum of Australia, Canberra

From 1st July – 10th September. This exhibition contains over 350 Pacific artefacts from the Cook-Forster collection of the University of Göttingen combined with historical objects and artworks relating to James Cook from Australian collections. The Forster's referred to are more familiar to us as the father and son botanists, Johann Reinhold Forster and his son, Georg.

The collection was first shown at the Honolulu Academy of Arts and represents artefacts such as musical instruments, jewellery, clothing, weapons and tools acquired by gift or trade by Cook, crew members and the Forsters' from numerous Pacific communities.

The Cook-Forster collection will return to Germany after the Canberra showing.

If you can't make it to Canberra then much of the exhibition is on show on the web.

Web site: www.nma.gov.au/exhibitions/now_showing/cooks_pacific_encounters/

National treasures from Australia's Great Libraries

National Treasures from Australia's Great Libraries is a travelling exhibition, which has already shown in Canberra, Melbourne and Tasmania. It brings together, for the first time, more than 170 items that have shaped Australia and is drawn from the collections of national, state and territory libraries.

It includes familiar icons such as Joseph Banks' and James Cook's Endeavour journals, William Bligh's notebook, Ned Kelly's helmet and Donald Bradman's favourite bat. But for the natural history person there are examples of First Fleet Art such as George Raper's depiction of the waratah and other plants and birds of Port Jackson, George Perry's 1811 *Arcana* with early depictions of the koala, kangaroo and wombat, Rose de Freycinet's original published account of her voyage as a "stowaway" on the Uranie, Captain John Hunter's sketchbook, *Birds & Flowers of New South Wales Drawn on the Spot in 1788, '89 & '90*, and John Lewin's *1808 Birds of New Holland*. There is also the diary of the making of the Overland Telegraph Line in the Roper River area in 1871-2 by 17-year-old construction worker, W.A. Crowder.

The website contains plenty more of what may be of interest to you.

Dates

Mitchell Library, Sydney (26 August - 22 October 2006)
Queensland (25th November 2006 - 7th January 2007)
South Australia (25 January — 25 March 2007)
Northern Territory (13 April — 10 June 2007)
Western Australia (29 June — 26 August 2007).

Web site: http://nationaltreasures.nla.gov.au/

On-line exhibitions at the Natural History Museum, London

First Fleet artwork

There are three collections involved. The **Thomas Watling Collection** is the largest of the 3 collections, consisting of some 571 paintings, not all of them necessarily by Watling. The majority of the pictures are of natural history subjects (59 plants, 271 birds, 16 mammals, 15 fishes, 9 reptiles, 17 molluscs, 13 arthropods). Others show topographical and ethnological subjects. Most of the plant paintings are not fully identified and are not fully searchable at species level and so you might have to browse.

The George **Raper Collection** consists of 72 drawings. George Raper (c. 1767-97) was a midshipman who sailed on HMS *Sirius* and his work includes paintings from Port Jackson as well as from Norfolk Island after the *Sirius* was wrecked. The watercolours depict a variety of natural history subjects (1 plants, 9 birds and plants, 20 birds, 2 mammals, 1 mammals and plants, 8 fishes, 1 reptile) and a further 30 show events in the early history of the colony, topographical and ethnological subjects.

The third collection of water-colours is known as the **Port Jackson Painter Collection** or Banks Mss 34, since the Natural History Museum acquired the collection in 1827 as a part of the Sir Joseph Banks bequest. It is unknown how Banks acquired the collection or its earlier history, or even how many artists are involved. Some pictures were made in the Port Jackson area but others are probably from specimens that had been taken back to England. Some images appeared in John White's 1790 *Journal of a Voyage to New South Wales*. There are 69 drawings in the collection mostly of natural history subjects (15 plants, 3 mammals, 32 birds, 5 fishes, 9 reptiles, 1 arthropod) but there are also 4 ethnographic studies.

Web site: http://internt.nhm.ac.uk/jdsml/nature-online/first-fleet/index.dsml

Sydney Parkinson's artwork on-line

On the same site you can also view all of Sydney Parkinson's surviving botanical artwork held by the Botany Library of the Natural History Museum. These were published as the limited edition, very expensive *Banks' Florilegium* between 1980 and 1990 and are not generally available to botanists. Now you can view the 743 coloured engravings and finished drawings through this site. There is a search facility and searches can be conducted on a country (Australia, Brazil, Java, Madeira, New Zealand, Society Islands, Tierra del Fuego) or botanical basis.

Web site: www.nhm.ac.uk/jdsml/nature-online/endeavour-botanical/about.dsml

Wildlife Photographer of the Year

And if you haven't had enough then you can also see the 2005 Wildlife Photographer of the Year exhibition tpm the web, with the 2006 exhibition to go on-line on 21st October 2006.

Web site: www.nhm.ac.uk/wildphoto/www.nhm.ac.uk/jdsml/nature-online/endeavour-botanical/about.dsml

Websites of interest

Another summary of the Nomenclature session in Vienna

John McNeill's summary report of the Nomenclatural session of the Vienna Congress can be found in *Botanical Electronic News* 356: 4-7 available on the web.

Web site: www.ou.edu/cas/botany-micro/ben/ben356.html#3

Biomimicry

A recent visitor to Australia, Janine Benyus, is the author of *Biomimicry: Innovation Inspired by Nature* (1997) where biomimicry is described as a new science studying nature's models and then imitating or taking inspiration from them to solve human problems. Yearly 5-day workshops for biologists are conducted in Montana, USA.

Web site: www.biomimicry.net/intro.html

Artists' Kew

For those of you who have spent time at Kew you might be interested in having a look at this now finished Kew Exhibition on-line. This is an exhibition of contemporary artworks from Kew and surrounds, attempting to raise funds to increase public accessibility to Kew's botanical art collection.

Web site: www.rbgkew.org.uk/artistskew/index.html -

J.D.Hooker website

If you are searching for information on J.D.Hooker, the *JDHooker* website, maintained by Jim Endersby of Cambridge University and author of a forthcoming book on Hooker, is a good place to start. There are a couple of recent publications missing, and the latest dated page seems to be February 2005, but the site includes a comprehensive catalogue of Hooker material held by Royal Botanic Gardens, Kew as well as background information on collectors who collaborated with Hooker.

Web site: www.jdhooker.org.uk

Explorion – travel and exploration site

This travel and exploration site houses a huge number of classic books and journals of discovery of people such as Marco Polo, Alexander von Humboldt, Richard F. Burton, David Livingstone, Charles Dickens, Gustave Flaubert and Theodore Roosevelt.

Add to this reproductions of Australian books and journals by David Collins, Major Mitchell, John Forrest, Charles Sturt, McDouall Stuart, Oxley and Wills, as well as Ernest Scott's *Terre Napoleone* and *Life of Captain Matthew Flinders* and Ernest Favenc's *The Explorers of Australia and their Life-work* and there is a lot of reading to do.

You can search the contents of the site by author, title or geographic location, but the date for each volume would have been useful in the listings. Each volume has a table of contents or a list of page numbers hyperlinked to the text but if you are looking for any one topic in particular there are no search facilities for a whole volume. Nor do the page numbers given relate to the original book judging by the list of plants at the end of Mitchell's journal where there is a reference to the page number in the original publication.

Web site: http://explorion.net/index.html

Encycloweedia

Fantastic name, wish I'd thought of it first! This Californian weed site covers many of the usual suspects and there are lots of images and comprehensive fact sheets.

Web site: www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm

Like looking at pictures of fungi?

This Belgian site has some fantastic fungal images. The 1700 images of some 1000 species are best accessed through the alphabetical list of Latin names since the site is not in English. Photos are by Yves Deneyer. The correctness or otherwise of the identifications will govern its usefulness to mycologists.

Web site: http://users.skynet.be/deneyer.mycology/intro.html

Herbarium specimens as works of art

Want to see some beautifully arranged herbarium specimens? Resurrecting an old craft, here is a catalogue of specimens for sale which are also on display in different Museums in Massachusetts. Perhaps herbaria can also make use of this technique to raise some much-needed revenue!

Web site: www.portableherbarium.com/catalog.html

Career in Science?

Aimed at years 9 and 10 students to make informed decisions about careers in science

Web site: www.careersinscience.gov.au/

Chapter Conveners

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Vacant

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Sydney, NSW 2000
Tel: (02) 9231 8111

Contacting Major Australian Herbaria and Systematics Institutions

From outside Australia: add the country code 61 and omit the leading zero of the area code

AD tel: (08) 8222 9307 fax: (08) 8222 9353 www.flora.sa.gov.au	HO tel: (03) 6226 2635 fax: (03) 6226 7865 www.tmag.tas.gov.au/Herbarium/Herbarium2.htm	MEL tel: (03) 9252 2300 fax: (03) 9252 2350 www.rbg.vic.gov.au/biodiversity/	NSW tel: (02) 9231 8111 fax: (02) 9251 7231 www.rbgsyd.gov.au/conservation_research/herbarium_&_services
CANB tel: (02) 6246 5108 fax: (02) 6246 5249 www.anbg.gov.au/	BRI tel: (07) 3896 9321 fax: (07) 3896 9624 www.epa.qld.gov.au/nature_conservation/plants/queensland_herbarium	DNA tel: (08) 8999 4516 fax: (08) 8999 4527 www.nt.gov.au/pwcnt	PERTH tel: (08) 9334 0500 fax: (08) 9334 0515 http://science.calm.wa.gov.au/herbarium/
QRS tel: (07) 4091 8800 fax: (07) 4091 8888	MBA tel: (07) 4048 4745/4743 fax: (07) 4092 3593	NT tel. (08) 8951 8791 fax: (08) 8951 8790	*Australian University Herbaria* Contact CHAH representative: Jeremy Bruhl UNE (02) 6773 2429

Council of Heads of Australasian Herbaria (CHAH) Chair: Dr Brett Summerell (NSW) brett.summerell@rbgsyd.nsw.gov.au www.chah.gov.au/	ABRS tel: (02) 6250 9554 fax: (02) 6250 9555 email: abrs@deh.gov.au www.deh.gov.au/biodiversity/abrs	*Australian Botanical Liaison Officer* (ABLO) Juliet Wege Herbarium Royal Botanic Gardens, Kew Richmond, Surrey TW9 3AB England	 tel: 44-20-8332 5270 fax: 44-20-8332 5278 email: ablo@rbgkew.org.uk

These listings are published in each issue. Please inform the Editors of any change

ASBS Publications

History of Systematic Botany in Australia

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

For all those people interested in the 1988 ASBS 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, Wilhelmi).

Systematic Status of Large Flowering Plant Genera

Austral.Syst.Bot.Soc.Nsltr 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*.

Australian Systematic Botany Society Newsletter

Back issues of the Newsletter are available from from Number 27 (May 1981) onwards, excluding Numbers 29, 31, 60-62, 66, 84, 89, 90, 99, 100 and 103. Here is the chance to complete your set. Cover prices are $3.50 (Numbers 27-59, excluding Number 53) and $5.00 (Number 53, and 60 onwards). Postage $1.10 per issue, apart from $1.75 for the Large Genera issue (Number 53).

Evolution of the Flora and Fauna of Arid Australia

Edited by W.R. Barker & P.J.M. Greenslade. Peacock Publications, ASBS & ANZAAS, 1982.
$20 + $8.50 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.

Also available from. Peacock Publications, 38 Sydenham Road, Norwood, SA 5069, Australia. (To obtain this discounted price, post a photocopy of this page with remittance).

Ecology of the Southern Conifers (Now out of print)

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.

Postage rates: Those quoted apply only within Australia. Please e-mail for prices to other locations.

Send **orders and remittances** (payable to "ASBS Inc.") to:

Helen Thompson
ASBS Sales
ABRS
GPO Box 787
Canberra, ACT 2601, Australia

Or fax credit card details to:

Helen Thompson
Fax: 02 6250 9448

Contact details. Email: helen.thompson@deh.gov.au . Ph. 02 6250 9445. Fax. 02 6250 9448

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, available on the Society website, and forwarding it, with the appropriate subscription, to the Treasurer. Subscriptions become due on January 1 each year.

The ASBS *annual membership subscription* is $45(Aust.); full-time students $25. Payment may be by credit card or by cheques made out to *Australian Systematic Botany Society Inc.*, and remitted to the Treasurer. All changes of address should be sent directly to the Treasurer as well.

The Newsletter

The *Newsletter* is sent quarterly to members and appears simultaneously on the ASBS Web site. It 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.
Citation: abbreviate as *Austral. Syst. Bot. Soc. Nsltr*

Contributions

Send to the Editors at the address given below. They *preferably* should be submitted as: (1) an MS-DOS file in the form of a text file (.txt extension), (2) an MS-Word.doc file, (3) a Rich-text-format or *.rtf* file in an email message or attachment or on an MS-DOS disk or CD-ROM. *Non-preferred* media such as handwritten or typescripts by letter or fax are acceptable, but may cause delay in publication in view of the extra workload involved.

Formatting of submitted copy. Please use Word in formatting indents, bullets, etc. in paragraphs and for tables. Do not format primitively with tabs, which change with the Normal style sheet. If embedding tables or references or other Objects from other software (Excel, bibliographic software, etc.) ensure that these are converted to Word tables or paragraphs. Letters in abbreviations of Australian States (SA, WA etc., but Vic.) and organisations (e.g ASBS, ABRS) should not be separated by full-stops, but initials should be (e.g. W.R. Smith, not WR Smith).

Images: their inclusion may depend on space being available. Improve scanned resolution if printing your image is pixellated at a width of at least 7 cm (up to a 15 cm full page). Contact the Editors for further clarification.

The *deadline* for contributions is the last day of February, May, August and November. All items incorporated in the *Newsletter* will be duly acknowledged. Any unsigned articles are attributable to the Editors.

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A 20% discount applies for second and subsequent entries of the same advertisement. Advertisements from ASBS members are usually exempt from fees but not the insertion costs in the case of a flier. Contact the Newsletter Editors for further information.

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