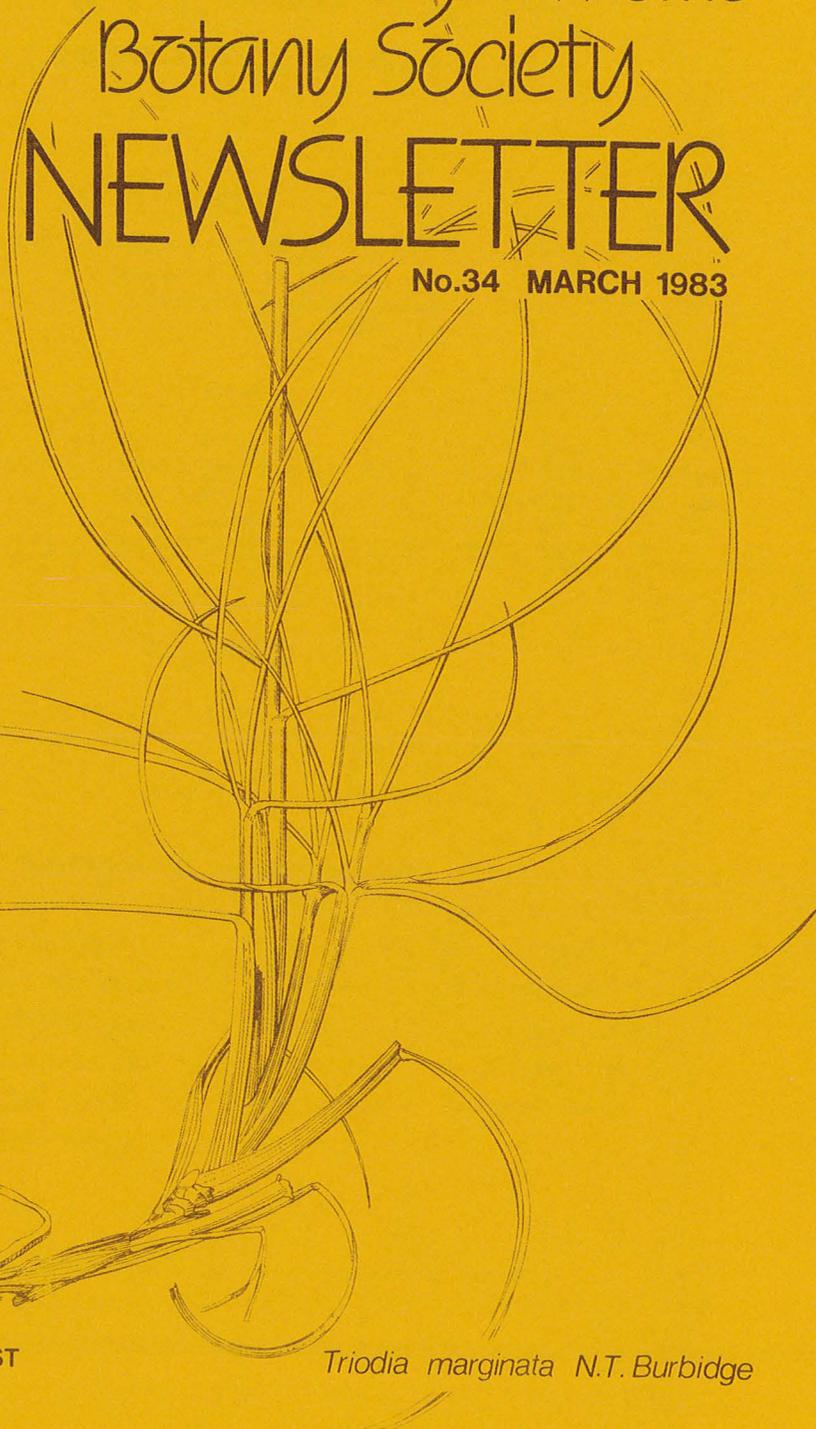


Australian Systematic  
Botany Society  
NEWSLETTER

No.34 MARCH 1983



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*Triodia marginata* N.T. Burbidge

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## The Society

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

## Membership

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

## The Newsletter

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

## Notes

- (1) The deadline for the next Newsletter is 31st May.
- (2) ASBS Annual Membership is \$8 (Aust.) if paid by 31st March, \$10 thereafter. Please remit to the Treasurer.
- (3) Advertising space is available for products or services of interest to ASBS members. Current rates are \$30 per full page, \$15 per half page. Contact the Newsletter Editor for further information.

## Mailing List

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

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## Notes on some Hibbertia Species

R.D. Hoogland, Rijksherbarium, Leiden

In recent years I have used, in a few cases, validly published names which have evoked comment. The following notes are meant to clarify my use of these names, the more complete taxonomic comment being reserved for the ultimate revision.

*Hibbertia tasmanica* Baill. - an N.T. endemic

*Hibbertia tasmanica* Baill., *Adansonia* 6: 264 (1866) & *Hist. Pl.* 1: 97 (1868) fig. 132 - Type: "Crescit in Tasmania ubi, anno 1840, legit Le Guillou (herb. Mus. par.)" (P!).

*Hibbertia holtzei* F. Muell., *Wing's South. Sci. Rec.* N.S. 1 (1885) distributed galley proof, reprinted in *Bot. Centralbl.* 24: 373 (1885) & *Repert. Spec. Nov. Regni Veg.* 42: 86 (1937) - Type: "Near Port Darwin, Maurice Holtze" = M. Holtze 525 (MEL!). Synon. nov.

There are three sheets of this species in the Paris herbarium from the collections of the "Voyage de l'Astrolabe et de la Zélée 1838-1840". The specimen annotated by Baillon and thus clearly representing the type has the printed locality "Baie Raffles Côte N. de la Nouvelle Hollande" crossed out and replaced in Baillon's handwriting by "Van Diemen Tasmanie". The Astrolabe and Zélée visited only two areas in Australia: the Northern Territory (Raffles Bay and Port Essington) between 27 March and 8 April, 1839 and Tasmania between 17 and 25 February, 1840. In 1868 Baillon wrote "originaire de Van Diemen", and confusion concerning Van Diemen Gulf and Van Diemen's Land is the obvious explanation for the inappropriate naming of this species, only known from the Darwin area to the Cobourg Peninsula.

*Hibbertia fasciculata* DC. and *H. prostrata* Hook.

Two morphologically quite distinct and geographically segregated species currently go under the name *H. fasciculata*. The species to which the name is correctly applied occurs in the coastal districts of New South Wales and southern Queensland. The other species, for which the correct name is *H. prostrata* Hook., is widespread in Victoria, South Australia, and Tasmania. In both species both prostrate and erect (often several-stemmed: fasciculate) forms occur.

The synonymy runs as follows (nomenclatural synonyms listed together):

*Hibbertia fasciculata* DC., *Syst. Nat.* 1: 428 (1817).

*Pleurandra camforosma* Sieb. ex Spreng., *Linn. Syst. Veg.* (ed. 16) 4(2): 191 (1827) - *Hibbertia camforosma* (Spreng.) A. Gray, *U.S. Explor. Exped. Bot. Phan.* 1: 21 (1854) "camphorosma".

*Hibbertia prostrata* Hook., *Hooker's J. Bot.* 1: 246 (1834) - *H. fasciculata* var. *prostrata* (Hook.) J.D. Hook., *Fl. Tasmaniae* 1: 14 (1855).

*Hibbertia virgata* Hook., *Hooker's Icon. Pl.* 3, t. 267 (1840), non DC. (1817) - *H. virgata* var. *glabra* Hook. ex Walp., *Repert. Bot. Syst.* 1: 64 (1842).

*H. virgata* var. *pilosa* Hook. ex Walp., *loc. cit.*

*H. fasciculata* var. *glabrata* J.D. Hook., *Fl. Tasmaniae* 1: 14 (1855).

*H. fasciculata* var. *pubigera* Benth., *Fl. Austral.* 1: 33 (1863).

*H. fasciculata* f. *adunca* Gandoger, *Bull. Soc. Bot. France* 47: 305 (1900).

*H. fasciculata* f. *spiceri* Gandoger, *loc. cit.*

*Hibbertia fasciculata* var. *clavata* Maiden et Betche, Proc. Linn. Soc. New South Wales 33: 304 (1908) does not belong here but represents an as yet unnamed species.

*Hibbertia cistiflora* N.A. Wakef.

*Hibbertia cistiflora* N.A. Wakef., *Victorian Naturalist* 72: 119 (1955) -  
*Pleurandra cistiflora* Sieb. ex Spreng., *Linn. Syst. Veg.* (ed. 16) 4(2):  
191 (1827); non Reichenb., *Iconogr. Bot. Exot.* 1, t. 79 (1825), x, 57  
(1827).

Wakefield's name is treated as a *nomen novum* because Sprengel's *Pleurandra cistiflora* is illegitimate as it is a later homonym (Art. 72 ICBN 1978) as Reichenbach's name represents the same species but has a different type.

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*Kalanchoe crenata* (R.Br.) Haw. (Crassulaceae) -  
A new record for Australia

Kevin F. Kenneally  
Western Australian Herbarium, Perth

In August 1980 I received a living vegetative specimen of a *Kalanchoe* collected by Mr J.A. Smith from near Mount Jameson (16° 03'S, 125° 40'E) in the north Kimberley of Western Australia. Mr Smith informed me that he found it 3.3 km SW of Mt Jameson on a south facing sandstone scree slope below an unnamed peak with an altitude of 614 m. It grew amongst massive sandstone boulders shaded by a vine thicket which included *Bombax ceiba* var. *leiocarpa* and the biggest fig trees he had seen outside of the Atherton Tableland, north Queensland. The area had been recently burnt and cattle were grazing the *Kalanchoe*.

The presence of the *Kalanchoe* in the Mt Jameson area was brought to Mr Smith's attention by Mr Frank Lacy the owner of Mt Elizabeth Station. Mr Lacy told Mr Smith that he knew of a 'cactus-like' plant growing in the Mt Jameson area having first observed it when droving cattle overland from Spencers Gulf to Walcott Inlet in 1943/44.

The material has been successfully cultivated at the Perth herbarium and flowering material obtained for both pressed and liquid preserved specimens.

At the suggestion of Dr Hellmut Toelken (State Herbarium of South Australia) duplicate specimens were forwarded to Dr G.E. Wickens at the Royal Botanic Gardens, Kew. Dr Wickens determined the material as *Kalanchoe crenata* (Andr.) Haw. (syn. *K. integra* (Medic) Kuntze) and commented that it was a "rather variable species, widespread in tropical and southern Africa, extending eastwards to India, Malaysia and the Philippines, also in South America. Perhaps it is to be expected that it would eventually turn up in Australia".

It is difficult to imagine that *K. crenata* could have been introduced as Mt Jameson is so remote and the surrounding country so inaccessible, the nearest homestead being Mt Elizabeth Station, 60km to the south east.

It is hoped that further collecting in remote areas of the Kimberley will establish whether this species is native or introduced.

## ACKNOWLEDGEMENTS

I extend my appreciation to Joe Smith for his continuing interest in the Kimberley flora and Dr G.E. Wickens for determining the material.

## Plantae Preissianae Specimens

K.L. Wilson  
Royal Botanic Gardens, Sydney

Recently I had occasion to lectotypify species described in Plantae Preissianae (P. Preiss.) and based on Preiss collections. In the course of this work, I found information on Preiss collections additional to that presented in Don McGillivray's useful paper (1975). I present it here as being of general interest.

Nordenstam (1980) discusses the portions of Lehmann's and Sonder's herbaria held in Stockholm (S). While the greater portion of Lehmann's herbarium is in S, various sections and particular families were sold to other institutions and individuals. The "original specimens" of Pl. Preiss. (i.e., those in Lehmann's own herbarium) were sold to Agardh in Lund (LD) by Lehmann's widow. These, of course, were not necessarily the only set used by the different authors of family treatments but their significance increases in families such as Cyperaceae where the main set used by the author may subsequently have been destroyed. Dr Nordenstam (in litt.) says that the Pl. Preiss. collection of phanerogams in LD is probably nearly, but not quite, complete.

Sonder acted as agent for N.J. Andersson (S) in purchasing parts of Lehmann's herbarium. Dr Nordenstam quotes this passage from a letter Sonder wrote to Andersson (15/8/1860):

"At the same time, I have received, earlier than expected, the news from Prof. Lehmann's widow that she is willing to sell the standard [original] collection of Plantae Preissianae for 10 Prussian thalers per 100. The collection is complete, that is to say all that Preiss has collected is there except a small part of the Algae, but Lehmann did not possess those at all, on the contrary they were sold to Binder immediately after Preiss' return [now in HBG, according to Index Herbariorum, 1981] - they were to be delivered to me for revision, but she subsequently recovered them. The Phanerogams and the remaining Cryptogams are complete; the former will be especially important to you. Many species exist in several locations - it will always be counted as the first [set], the others to be considered as doubles - I have made this stipulation. I think the collection is worth the price and exists nowhere [else] in such completeness". - Translation by A. Wilson].

That Sonder exaggerated the completeness of this Pl. Preiss. collection is suggested by the following extract from a later letter (15/4/1861) to Andersson (after Agardh has bought the collection):

"J. Agardh in Lund has bought the Herb. Preiss for 240 thaler, much too dear in my view, in that so many things are missing, [and] much exists only in small examples - of this I have recently convinced myself again". - Translation by A. Wilson].

Dr Nordenstam suggests that Sonder was exaggerating in both letters and that the truth lies between these extremes. The tone of the letters suggests that Sonder would have made a good used-car salesman today.

A series of Preiss collections (Pl. Preiss. nos. 2621-2644) consisting of various specimens probably without duplicates and not placed in their family order in Pl. Preiss. could not be found by Don McGillivray in the late 1960's. However, Dr P. Lassen, the Curator of the University Herbarium, Lund (LD), has informed me that he has found at least some of these numbers in LD, thus reinforcing Sonder's claim that Lehmann's set of Preiss specimens is the most complete. The numbers found and their corresponding species' name in Pl. Preiss. are:

2627	<i>Boronia colorata</i>	2634	<i>Caleana nigrita</i>
2628	<i>Cyanothamnus tridactylites</i> (=Boronia)	2636	<i>Spiculaea ciliata</i>
2632	<i>Pterostylis turfosa</i>	2644	<i>Boronia ledifolia</i>
2633	<i>Caladenia discoidea</i>		

Dr Lassen says that a more thorough search may reveal more of this series of numbers in LD. Don McGillivray would be pleased to hear from anyone who knows the whereabouts of 2626 (the type of *Grevillea hookeriana* Meisn.), which he has so far not located.

Various questions about Preiss' collections and the writing of Pl. Preiss. remain to be answered. In particular, is this set in LD the same set that Preiss tried to sell to Robert Brown (Telopea 1: 17) as "the collection I intended to keep for myself ... including all Unica?" If not, where is the latter set? What materials did the authors of family treatments in Pl. Preiss. work from? Did they see all the material, before the duplicates were sold, as suggested by the preface to Pl. Preiss. 1 (1844-45)? Did they retain a set for their own herbaria? Don McGillivray (pers. comm.) suggests that many such questions would be answered if Preiss' correspondence could be located. Preiss lived (occupation unknown) for about 40 years in Herzberg am Harz (West Germany) after his Australian journey so further investigations should probably begin there.

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- Nordenstam, B. (1980). The herbaria of Lehmann and Sonder in Stockholm, with special reference to the Ecklon and Zeyher collection. Taxon 29: 279-291.

## Domatia - And their occurrence in the Australian Flora

Yvonne Brouwer  
Botany Dept., University of Queensland

The small pits, pockets, or hairtufts found in the vein axils on the abaxial (lower) surface of the leaves of certain dicotyledons have been called domatia. These are a morphologically diverse set of organs originally believed to serve as a refuge or home for mites and hence their name. The pit forms vary from shallow to more or less deep depressions, and in some species the margins of the pit are raised to form a dome elevated above the leaf surface, with the pore at or near its centre (Fig. A1). In the case of pockets, a triangular layer of tissue is formed between the midrib and the base of a lateral vein forming a space beneath (Fig. B1). Tufts of hair in the axils of veins have also been called domatia (Fig. C).

Domatia are restricted to woody dicotyledons, and in Australia occur in at least 26 families (see Table 1). No apparent function for domatia has as yet been discovered but all authors agree that they are nonglandular, although in certain respects, there may be some analogy with extrafloral nectaries. They are restricted largely to species of humid habitats and are possessed by more tropical than temperate species.

Domatia have been recorded sporadically in species descriptions for a very long time, but more often than not their presence has not been noted even when they are quite obvious. Only in cases of large well developed dome types have they sometimes been described as 'glands' or in the case of large pits, as 'foveoles' or scrobicules (fovea: a pit, scrobiculus: a little ditch).

The Swedish botanist Lundstroem (1887) was the first naturalist to investigate these structures and he introduced the term "domatia", a word derived from the diminutive form of the Greek "doma": room or house, and therefore the meaning is literally "small house". He defined domatia as "those formations or transformations in plants intended to harbour mutualistic symbionts during an essential part of their development". He saw acarids in possession of most of them, and so he defined them as 'acarodomatia' in contrast to 'myrmecodomatia', the name he applied to the structures inhabited by ants. These he also thought of as mutualistic symbionts. He proposed that in 'acarodomatia' the plant provided shelter for the mite which in turn, kept the leaf surface free of fungal hyphae and spores, and also provided nutrients in the form of carbon dioxide from their respiration, and nitrogen from their excrement and dead bodies. Lundstroem wrote at a time when teleological concepts were flourishing and so the idea of mutualism was accepted by most but not all botanists of the time. In Australia, Hamilton (1897) was sceptical of this theory and disagreed with most of Lundstroem's conclusions. His work was apparently ignored by European botanists who continued to accept the theory of the role of mites in domatia. It was not until this century that Jacobs (1966) proved that plants with domatia develop normally in the absence of mites.

Various classifications of the types of domatia have been proposed - the main difference between these classifications being the considerable overlap of characteristics between the classes. Jacobs (1966a) in a general review paper on different aspects of domatia, proposed that four main 'elements' of domatia be recognised, namely pit, pocket, hair tuft, and dome, and that the proportions of these elements can vary - sometimes in the one species or even on the one leaf. Different types of domatia may occur in the same family or, at times, in the same genus. Thus pockets and pits occur in different species of *Antidesma*, while pits and hair tufts are to be found in different species of *Cryptocarya*. Furthermore, there is often a size gradient on the one leaf with the best developed domatia occurring in the lowest axil and progressively smaller ones higher up the midrib. However, very often the most prominent domatia are to be found in the mid axil, while those of the lower axils are very small or absent.

Variation also occurs in the position on the leaf with respect to the veins. In certain species they occur in the primary axils (*Olea paniculata* R.Br.) and this is the most common position. In other species they are found in the primary, secondary and tertiary axils (*Alangium villosum* (Bl.) Wangerin), and there are also a few species in which they occur mostly in secondary and tertiary axils (*Pennantia cunninghamii* Miels).

The form of domatia often depends on the position on the leaf. Thus, in *Cissus antarctica* Vent. they are pockets in the basal axils and in many specimens are seen as small pits in the upper axils; so that although diverse in their morphology the domatial types are still homologous.

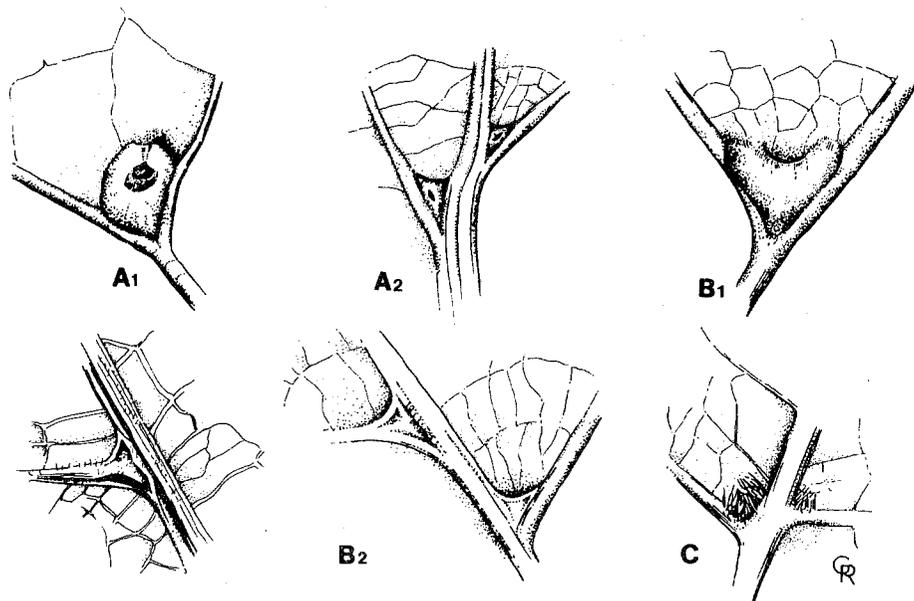


Fig. 1. Main types of domatia. A, Pit domatia. A1, *Pennantia cunninghamii* (domed). A2, *Cinnamomum camphora*. B, Pocket domatia. B1, *Endiandra discolor* (domed). B2, *Elaeocarpus largiflorens*. C, Hair tuft domatia, *Rhodosphaera rhodantha*.

TABLE 1. Families in the Australian Flora in which domatia occur

ALANGIACEAE	MELIACEAE
ANACARDIACEAE	MORACEAE
ANNONACEAE	OLEACEAE
APOCYNACEAE	ROSACEAE
CELASTRACEAE	RUBIACEAE
COMBRETACEAE	RUTACEAE
CUNONIACEAE	SAPINDACEAE
EHRETIACEAE	SIMAROUBACEAE
ELAEOCARPACEAE	STERCULIACEAE
EUPHORBIACEAE	ULMACEAE
FLACOURTACEAE	URTICACEAE
ICACINACEAE	VERBENACEAE
LAURACEAE	VITACEAE

Domatia occur on both simple and compound leaves. The families in which they are found are widely separated taxonomically, but even so, the form of domatia is very similar. All types, pits, pockets, and hair tufts and their intermediate forms are to be found in almost all the families in which they have been recorded. They do not occur in every genus of any family, nor even in every species of any genus, e.g. *Carpodetus serratus* J.R. & G. Forst. and *Ailanthus triphysa* (Dennst.) Alston (Simaroubaceae) are the only species with domatia recorded for these families, so that it is only at the species level that domatia are a useful character for identification. The type of domatia is usually not of importance; their presence or absence is what counts.

In earlier Australian literature domatia have been described as conspicuous hollow glands, large swellings, raised lumps etc., and treated as separate entities. Because of the increased work being carried out on rainforest floras, in the past few years the awareness of domatia is increasing and in most taxonomic works they are found to be a very useful character in identification keys. However, in some species the constancy of occurrence of domatia is not to be relied upon. Such variability has been seen to occur in *Elaeocarpus obovatus* G. Don, *Argyrodendron actinophyllum* (F.M. Bail.) H.L. Edlin, and *Endiandra muelleri* Meisn. in which domatia are not always present on every leaf, and the number and position may also vary. This latter variation is especially noticeable in *Toechima tenax* (Benth.) Radlk. In other species of *Elaeocarpus* (*E. grandis* F. Muell.), *Endiandra* (*E. discolor* Benth.), and *Toechima* (*T. dasyrrachne* Radlk.) this character is wholly reliable, so that it seems that the main value of the presence of domatia in identification is as a supportive character.

Although domatia are well known on adult foliage it has been reported that domatia are absent from the leaves of seedlings of species possessing them on adult leaves (Jacobs, 1966b). Recently, however, it has been shown (Brouwer, 1979) that they are a common feature of the seedlings of many rainforest trees where they are seen to be a very small reduced form of the adult type.

The species which have domatia occur in the humid environments of the tropics and subtropics, with only an occasional representative in temperate regions. However, it is of interest to note that in Australia there is one xeromorphic species, *Canthium oleifolium* Hook., common in the arid interior, in which domatia sometimes occur. The other domatia bearing species in this genus in Australia, *C. odoratum* (Forst. f.) Seeman and *C. coprosmoides* F. Muell. are to be found in the drier littoral and subtropical rainforests.

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## Data Banking has Advantages

George M. Chippendale, Canberra

I sense many taxonomists are wavering as to whether data banking is a good thing, or do they know it is a good thing, but can't make the decision to be in it? Most of the doubts seem to revolve around the time needed, as mentioned by Barry Conn in ASBS Newsletter 33: 5. Hall (1974) said that "the museum has become a DATA CRYPT". The same goes for herbaria unless they are computerised. The abilities of the computer to retrieve, rearrange and sort data are ideal for herbarium use. Sure, there will be errors ... but only the same ones that the herbarium already has. The computer allows you to find the errors easily and points out others. I have found this in practice.

One can be discouraged by the amount of work ahead in starting a data bank. You can think all the negative thoughts and it will never be done. Anybody starting an herbarium faces a huge task, too, but where would our taxonomy be today if Mueller, Cunningham and others hadn't made a start in building herbarium collections. The history of science is that we build on previous knowledge and endeavour. We MUST start this task.

Likewise, the use of computers for key-making as shown by Richard Pankhurst in recent talks in Australia is certainly a technique for use. An adaptation of his system was tried recently by my colleague Ludek Wolf using data from 57 species of Central Australian eucalyptus. A most workable system resulted. A number of non-botanists, as well as other taxonomists, were invited to use the scheme and they were able to identify masked specimens each time. This test was sufficiently encouraging that we are proceeding to code all *Eucalyptus* species to see if a key can be produced.

Back to data banking ... a list follows of information requested of me and retrieved from my *Eucalyptus* data bank (EUCALIST). This is from enquiries in the last couple of years, and may be helpful to show what time-saving is possible.

Species lists - 1) Kosciusko National Park, 2) Fraser Island, 3) Broome area, 4) A.C.T.

Specimen lists - 1) before white settlement, 2) *E. paniculata*, 3) Fraser Island

Flowering times - 1) A.C.T. species, 2) Broome area

Maps - 1) for new ed. of Forest Trees of Australia, 2) for ecological studies, 3) species of *Reduncae*, 4) ironbark species

Label data - 1) for seed collectors, 2) *Setosae*, 3) *E. tereticornis* and *E. robusta*, 4) 7 coastal Queensland eucalypts, 5) *E. kitsoniana*, 6) species of *Reduncae*, 7) endangered species

Distributional data - 1) *E. behriana* and *E. microcarpa*, 2) *E. badjensis*, *E. parvifolia*, *E. globoidea*, *E. considiana*

### REFERENCE

Hall, A.V. (1974). Museum specimen record data storage and retrieval. Taxon 23(1): 23-28.

## Report on The Flora of Australia

### VOLUME 8

Flora of Australia, Volume 8 (xii + 420 pp), containing the families Lecythidaceae to Bataceae, was published on 9 December, 1982. This volume is dedicated to Sir Rutherford Robertson, inaugural Chairman of the Editorial Committee, in recognition of his untiring efforts over many years to bring the Flora project to reality.

Sir Rutherford achieved fame as one of Australia's most distinguished plant physiologists, although he showed some leaning towards taxonomy in his youth. He confessed recently, at the Bureau of Flora and Fauna, that he had once assembled a very comprehensive collection of Australian sedges but committed the indiscretion of throwing it away. As President of the Australian Academy of Science some years ago he petitioned the Government of the day to embark on the Australia-wide biological survey which eventually came into being as the Australian Biological Resources Study.

As Vice-Chairman of the Australian Science and Technology Council (ASTEC) Sir Rutherford contributed to the advice given to the Government by ASTEC, that ABRS be established as a long-term program after its three years of operation under an Interim Council. In adopting that advice the Government appointed Sir Rutherford to chair the first ABRS Advisory Committee, which recommended that the Flora of Australia be the first major project to be commenced as part of the long-term program.

It was largely due to Sir Rutherford's personal association with the Flora that we were able to have it launched, very appropriately at the 13th IBC, of which he was President.

A small ceremony was held at the Bureau of Flora and Fauna on the day of publication, at which Dr Barbara Briggs, the current Chairman of the Editorial Committee, presented an inscribed copy to Sir Rutherford. Although now living in semi-retirement he still hopes to see the Flora completed in his lifetime.

### Fabaceae

A workshop was held in the Bureau of Flora and Fauna on 14-15 February to begin work on the three volumes that will be devoted to the Fabaceae (vols. 13, 14 and 15). These three volumes were scheduled for publication in 1991, 1989 and 1993 respectively. Volume 15 will contain the major Australian component of the family, the tribe Mirbelieae. It has been planned for publication last of the three, so as to allow time for as much research as possible to precede it.

If you are looking for a new group to work on, the Editor (Alex George) could make a few suggestions in the Fabaceae!

Alison McCusker  
Assistant Director (Flora)  
Bureau of Flora and Fauna

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## ASBS MEETING PROGRAMME

53RD ANZAAS CONGRESS

UNIVERSITY OF WESTERN AUSTRALIA, NEDLANDS, W.A., 16th MAY, 1983

TUESDAY, 17th May

7.30 p.m. ASBS General Meeting to be followed by Presidential Address by Dr H.T. Clifford on "The Classification of the Liliaceae".

WEDNESDAY, 18th May

9.00-4.00 Excursion to Darling Range and W.A. Herbarium

6.30 p.m. ASBS-ANZAAS Section 12 dinner at Murdoch University. The cost will be approximately \$10.00 per person if you let Neville Marchant know as soon as possible that you are coming.

THURSDAY, 19th MaySymposium on the Systematics and Biogeography of the MyrtaceaeChairman: Dr H.T. Clifford

9.00- 9.30	M. Crisp	"Plantae Preissianae" Type specimens in the Lund Herbarium
9.30-10.00	N. Trudgen	Studies in the <i>Baeckea</i> complex
10.00-10.30	J. Thompson	<i>Leptospermum</i>
10.30-11.00		Morning Tea

Chairman: Dr L.A.S. Johnson

11.00-11.30	S. Hopper and I. Brooker	Biogeography and relationships of some new Western Australian species of monocalypts ( <i>Eucalyptus</i> ).
11.30-12.00	J. Marginson	Geographic variation in <i>Eucalyptus alpina</i> Lindl.
12.00-12.30	C. Anderson	Effect of pH and calcium on the development of lime-chlorosis in two seedlings populations of <i>E. obliqua</i> L'Herit.
12.30- 2.00		Lunch

Chairman: Dr N.G. Marchant

2.00- 3.30		Poster Session and Afternoon Tea
3.30- 4.00	P. Ladiges	Cladistic and biogeographic study of the peppermint eucalypts in south-eastern Australia.
4.00- 5.15	L.A.S. Johnson	Myrtaceae - an overview
5.15- 8.00		Free
8.00- 9.00		1983 Nancy Burbidge Memorial Lecture by Emeritus Professor B.J. Grieve.

Please note that it will be necessary for participants to enrol for ANZAAS. Day registration is available and is \$20.

Convenor: Neville Marchant, W.A. Herbarium, Jarrah Road, South Perth, W.A. 6151  
Phone - (09) 367 0111 ext. 301 (work), (09) 450 3664 (home).

## Constitutional Amendments

The following amendments to the Constitution and Rules of the Australian Systematic Botany Society will be proposed at the Society's 8th General Meeting to be held in Perth on 17th May next.

### Proposal 1 - Responsibility of Committees

It is proposed that the seventh clause of the "Conduct of the affairs of the Society" be expanded to read -

"The Council shall have power to appoint Committees. Such committees are responsible to Council and are to report to Council only".

(The underlined sentence has been added to the existing clause).

This proposal aims to define the basic responsibilities of any committee set up by Council.

### Proposal 2 - Percentage of subscriptions to be used for publications

It is proposed that the eighth clause of the "Conduct of the affairs of the Society" be expanded to read -

"There shall be an annual subscription payable by all members. The amount of this subscription shall be subject to determination at each General Meeting. Between 50 and 75% of subscriptions will be used for production and distribution of the Society's official publications".

(The underlined sentence has been added to the existing clause).

This proposal aims to define the maximum and minimum proportions of members' subscriptions to be used for Society publications. The principle publication is the ASBS Newsletter.

### Proposal 3 - Appointment of Newsletter Editor as ex-officio member of Council

A second clause be added to Rule 6 to read -

"(b) The ASBS Newsletter is the official publication of the Society. The Newsletter editor is appointed by Council and is thereby ex-officio a member of Council".

The third proposal aims to specify the ASBS Newsletter as the official publication of the Society and the position of its editor as an ex-officio rather than elected position on Council. At present the Editor is not a member of Council.

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## Chapter News

### CANBERRA CHAPTER

In July 1982 the A.C.T. Chapter applied to the Australian Heritage Commission to have Stirling Ridge in Canberra placed on the Register of the National Estate in order to preserve the main populations of *Rutidosia leptorrhynchoides*. This is a rare and endangered species. You may recall Max Gray's review: Austral. Syst. Bot. Soc. Newsletter 20: 2-5 (1979).

Following this application, the Commission indicated an interest in encouraging further work in the A.C.T., particularly with regard to rare and endangered species and to ecologically sensitive areas.

Subsequently the A.C.T. Chapter applied to the Commission for a grant of \$15,000 to employ a botanist to undertake a floristic study of the Gibraltar Falls - Smokers Gap area of the Brindabella Range. This area was considered to be under some threat from both feral animals (brumbies and pigs) and the proposed development of an artificial ski slope.

A sub-committee of four, comprising Dr H. Hewson, Dr B. Barlow, Mr W. Hartley and Mr M. Gray, was convened to administer the grant in the event of the application being successful.

However, we have heard unofficially that the application has not been successful due to severe cuts in the Heritage Commission vote in the Federal Budget.

Although our attempt was unsuccessful ASBS should feel encouraged to apply to the Heritage Commission for assistance for similar worthy projects in the future. It should however, be pointed out that any given local Chapter would need to make special arrangements to handle the funds involved - e.g. the Treasurer should be an ex-officio member of the management committee.

Helen Hewson, Convenor

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## Book Reviews

Grasses of New South Wales: D.J.B. Wheeler, S.W.L. Jacobs and B.E. Norton. University of New England, Armidale. 1982. 306 pp. Price \$22.00 (incl. postage).

It is very pleasing to see this account of the grasses of New South Wales. It is much modified expansion of the original keys of Brian (Ben) Norton in an appendix to his Ph.D. thesis on the grasses and grasslands of the New England region (1971), which was subsequently twice reprinted (with amendments and additions) in 1976 and 1979 by the Department of Botany, University of New England. There is however, a considerable amount of interesting information in the introductory sections not previously published and the book should appeal to a wide-ranging audience from laymen to professional biologists and be a standard reference work in New South Wales for some time to come. It will also be useful in other Australian States particularly for those areas adjacent to New South Wales.

The artwork is copious and many species appear to have some diagnostic character illustrated. The illustrations accompanying the species keys are particularly bold but in many places detail is lost in reduction. In some cases the spikelet illustrations are too large (e.g. *Digitaria*) and illustrations of the size shown in the pictorial key to genera would have produced a more pleasing effect. One anomaly is that *Digitaria velutina* is illustrated but is not mentioned in the *Digitaria* key.

The presentation of three keys to genera, two of them wholly artificial is presumably aimed at a readership whose prime aim is to identify specimens as readily and as accurately as possible. The pictorial key is a good idea and should become the most used of the generic keys overall, particularly by those people with little or no previous botanical experience. With regard to the key to *Aristida* I regret to see that my recent alterations to the manuscript

were not included. The most important of these alterations include the deletion of *A. ingrata* Domin and *A. longicollis* Henr., both of which do not occur in New South Wales.

Nomenclature is mostly up-to-date, although some cases there is a somewhat independent stand taken. The scheme of classification presented is one of the current trends of classifying the grass family into five broad sub-families. In cases where certain tribes have been placed tentatively in sub-families (indicated by asterisk) it may have been a good idea also to show their positions in the other sub-families where they have also been placed. Nomenclatural corrections within the classification scheme include *Chloridoideae* having priority over *Eragrostoideae*, *Eragrostideae* (stem Eragrostid-) for *Eragrosteae* and similarly *Agrostideae* for *Agrosteae*. Taxonomically *Maydeae* is an artificial tribe, being better placed within the *Andropogoneae*, and *Eragrostideae*, *Chlorideae*, *Sporoboleae* and *Zoysieae* are doubtfully separated from each other at tribal rank. In the hierarchy given on p. 31 the ending *-aneae* for super-tribe has been previously used for super-order by Cronquist and Takhtajan and it appears that the super-tribe ending which has been used most often is *-formes* (Butzin in *Willdenowia* 7: 113 (1973)).

The number of typographic errors is small and there is a good bibliography where more detailed studies on particular genera may be pursued. It is a pity that a hard covered or cloth covered edition was not prepared at the same time as the paper cover will not last long on the fairly awkward size and thickness of the text.

Overall this is a very balanced and informative production on New South Wales grasses. Furthermore, the publication at this stage is very timely in that it will be an essential reference work to be consulted in the writing of the grass volumes for the Flora of Australia.

B.K. Simon

Tuberous, Cormous and Bulbous Plants: Pate, J. and Dixon, K.W. University of Western Australia Press, Nedlands. 1982. 268 pp.

Despite the title, this book is essentially a treatment of Western Australian tuberous, cormous or bulbous plants, although many of the genera (or species) occur outside this region.

The majority of the book is composed of descriptions of species found to possess fleshy storage organs (occupies pages 32-151), namely 79 species of Dicotyledoneae, 120 species of Monocotyledoneae and 5 species of Pteridophyta and Gymnosperms; introduced species are also included but treated briefly. While the aim of this section is stated to "provide detailed written and illustrated accounts of the species to enable botanists or interested persons to identify the species in the field by their under or above ground parts", it is not a field book, nor does it contain any keys. One really needs to know at least the genus before being able to identify the species, and in several large genera only one species (e.g. *Wurmbaea dioica*) or a few species are treated. I doubt anyone would use this book to identify material in preference to a revision, or complete field key, as it is often incomplete in coverage. For this reason this section is excessively long.

The chapter on Phenology and Reproduction contains much new and often exciting information on the aging of small perennials, the nature and extent of vegetative reproduction and on the success and timing of sexual reproduction.

The Chapter on storage organs should be of great interest to plant physiologists. The section on aboriginal usage of fleshy storage organs collates in one place much information which is normally very scattered throughout the literature.

The final chapter deals with the distribution of these species throughout the state.

For taxonomists, it contains a wealth of new data on many groups.

The book's chief drawbacks are its limited geographical scope and its relative high price (\$39).

G. Keighery

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A CHANGE OF ADDRESS FOR THE HERBARIA OF THE  
NORTHERN TERRITORY

From 1st February, 1983 administration of the N.T. Herbaria at Alice Springs and Darwin were transferred from the Department of Primary Production to the Conservation Commission of the Northern Territory. Both herbaria will remain in their present accommodation. The new postal addresses will be:

Herbarium of Northern Territory (NT),  
Conservation Commission of N.T.,  
P.O. Box 1046,  
ALICE SPRINGS. N.T. 5750

Herbarium of Northern Territory (DNA),  
Conservation Commission of N.T.,  
P.O. Box 38496,  
WINNELLIE. N.T. 5789

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REMINDER NOTICE

Have you sent in your questionnaire on assistance for travel to Council Meetings - see last Newsletter.

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**ASBS Council Elections** 1983-84 TERM

An election is necessary to fill the two (2) Councillor positions on ASBS Council. For further details and the Ballot Paper, refer to the enclosed loose leaf page in this issue of the Newsletter.

Express your interest in the Society and support for the nominees by voting.

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RECORD OF A.S.B.S. COUNCIL MEMBERSHIP

P: President; VP: Vice-President; S: Secretary; T: Treasurer;  
C: Councillor; E: Editor.

Limit of term: P and VP = 2 consecutive terms; others = 4 consecutive terms. Term = period between consecutive general meetings.

	1973- 75	1975- 76	1976- 77	1977- 79	1979- 80	1980- 81	1981- 83
Mr J. Armstrong		C	C				
Dr B. Barlow							VP
Mr D. Boyland	C,E						
Prof. R. Carolin			P	P	VP	VP	
Prof. D. Carr	VP						
Dr T. Clifford							P
Mr B. Conn						T,E	T,E
Mr A. George	C	C	C	C,E	E	E	
Mr L. Haegi							C
Mr R. Henderson		VP,E	E	VP,E			C
Dr R. Hnatiuk						C	
Dr J. Jessop				C	P	P	
Dr A. Kanis	T						
Mr M. Lazarides		T	T	T	T		
Mr D. McGillivray	S						
Mr A. Mitchell					C	C	
Dr J. West					S	S	S
Dr T. Whiffin	P	P	VP				
Mrs K. Wilson		S	S	S	C		

AUSTRALIAN SYSTEMATIC BOTANY SOCIETY COUNCIL ELECTIONS 1983-84

The following nominations have been received for the 1983-84 Council:

President:	BRYAN BARLOW	Councillors:	LAURIE HAEGI
Vice President:	BARBARA BRIGGS		ROD HENDERSON
Secretary:	JUDY WEST		HELEN HEWSON
Treasurer:	PHILIP SHORT		KAREN WILSON

Therefore, an election is necessary to fill the two (2) Councillor positions on Council.

INSTRUCTIONS FOR VOTING

Please fill in the ballot paper at the bottom of the page, detach it and either:

- (i) place it in an unmarked envelope and put that envelope inside another which is addressed to the Returning Officer with the sender's name and address on the back, or
- (ii) sign the back of the ballot paper and send it to the Returning Officer along with other signed ballot papers from your institution or chapter.

In either case, write "Ballot paper" on the outside of the envelope and send it to the Returning Officer, Dr J.G. West, Herbarium Australiense, P.O. Box 1600, Canberra City, A.C.T. 2601, by 30th April, 1983.

The new Council will be announced at the General Meeting to be held during ANZAAS in Perth on Tuesday 17th May.

Brief details on the nominees for the Councillor positions are as follows:

Laurie HAEGI is a botanist at the Adelaide Botanic Gardens.  
Rod HENDERSON is a botanist at the Queensland Herbarium.  
Helen HEWSON is a flora writer at the Bureau of Flora and Fauna.  
Karen WILSON is a botanist at the National Herbarium of New South Wales.

A.S.B.S. BALLOT PAPER 1983-1984

Election of two (2) councillors: number the boxes 1 to 4 in order of preference.

<input type="checkbox"/>
<input type="checkbox"/>

L.A. HAEGI  
R.J. HENDERSON

<input type="checkbox"/>
<input type="checkbox"/>

H.J. HEWSON  
K.L. WILSON

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, accounts receivable, and accounts payable. It also outlines the procedures for recording these transactions, including the use of double-entry bookkeeping and the importance of regular reconciliations.

The second part of the document focuses on the analysis of the recorded data. It explains how to calculate key financial ratios and metrics, such as the gross profit margin, operating profit margin, and return on investment. These calculations are essential for understanding the company's financial performance and identifying areas for improvement. The document also discusses the importance of comparing the company's performance against industry benchmarks and historical data to provide context for the results.

Finally, the document addresses the reporting requirements for the financial statements. It outlines the format and content of the income statement, balance sheet, and cash flow statement, and provides guidance on how to present the information in a clear and concise manner. It also discusses the importance of providing a management discussion and analysis to accompany the financial statements, which should explain the reasons for any significant changes in performance and provide insights into the company's future prospects.

## Contents

Notes on some <i>Hibbertia</i> species. <u>R.D. Hoogland</u> .....	3
<i>Kalanchoe crenata</i> (Andr.)Haw. (Crassulaceae) - A new record for Australia. <u>K.F. Kenneally</u> .....	4
Plantae Preissianae Specimens. <u>K.L. Wilson</u> .....	5
Domatia - their occurrence in the Australian Flora. <u>Y. Brouwer</u> .....	6
Data banking has advantages. <u>G.M. Chippendale</u> .....	10
Report on the 'Flora of Australia' .....	11
ASBS Meeting Programme for 53rd ANZAAS Congress .....	12
Constitutional Amendments .....	13
Chapter News .....	13
Book Reviews .....	14
Change of Address for Herbaria of the Northern Territory .....	16
ASBS Council Elections 1983-84 Term .....	16
1982 Index (Nos. 30-33)	