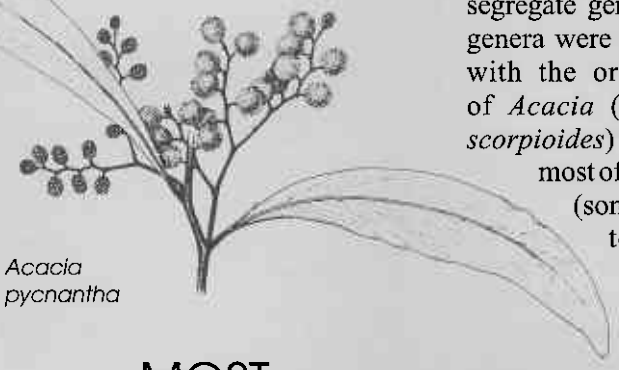
FLORA



Acacia pycnantha

MOST AUSTRALIAN WATTLES LIKELY TO REMAIN *ACACIA*

Bruce Maslin and Tony Orchard

READERS will most likely be aware of the proposal made last year that the generic name of *Acacia* be conserved with a new Type species chosen from the 'Australian group' of the genus (Orchard & Maslin 2003). (Refer to the article in Western Wildlife, Vol. 7 No.3, page 19 – Ed.) Discussions and references concerning this proposal may be found at the following web address: http://www.worldwidewattle.com/infogallery/taxonomy/.

The proposal has now been considered by an international panel of nomenclatural experts, the Committee for Spermatophyta, which is a specialist committee of the International Association for Plant Taxonomy (IAPT). The Secretary of that committee, Dr R. Brummitt, recently informed us that the committee has voted to accept the Orchard & Maslin proposal. An official report detailing the reasons for the committee's decision will be published in the journal *Taxon* (probably in the August 2004 issue). In the meantime we have been given permission to make the report available so it has been posted on the WorldWideWattle website at the above address.

It should be noted that the Spermatophyta Committee's decision does not become binding until it has been endorsed by the General Committee of IAPT and then ratified at the International Botanical Congress in Vienna in July 2005.

The Orchard & Maslin action was triggered by the stated intentions of some workers to subdivide *Acacia* into a varying number (about five) segregate genera. If the resultant genera were named in accordance with the original Type species of *Acacia* (*A. nilotica, syn. A. scorpioides*) it would mean that most of the Australian Wattles (some 948 species from a total of 957 species currently recognized for this continent) would most likely become known as *Racosperma*. Of the 390 or so species that occur outside Australia roughly half would remain *Acacia*, namely, about 60 from a total of 185 in the Americas, 73 from a total of 144 in Africa and 36 from a total of 89 in Asia. In these three regions most of the remaining species would become *Senegalia* except that in tropical Asia there would be ten species of *Racosperma* and in the Americas 28 species would be distributed between two small endemic genera.

The strategy proposed by Orchard & Maslin to move the Type species to the phyllodinous species *A. penninervis* Sieber ex DC.

Table 1: Species numbers for the five genera that will probably be recognized following subdivision of *Acacia sens. lat.* (these numbers follow those given in Maslin, Orchard & West 2003). Generic names (column 1) are those that apply following acceptance of the Orchard & Maslin proposal.

Genus	**Numbers of species**				
	Americas	**Africa**[1]	**Asia**	**Australia & Pacific**	**Total**
Vachellia	c.60	73	36 (incl. c. 15 also found in Africa)	7	**161**
Senegalia	97	69	43 (incl. 7 also found in Africa)	2 (incl. 1 also found in Asia)	**203**
Acaciella	15	-	-	-	**15**
New genus	13	-	-	-	**13**
Acacia	-	2[2]	10 (incl. 7 also found in Australia	955[3]	**960**
Total number of species	185	144	**89** (incl. c. 29 occurring also outside the region)	**964** (incl. 1 also found in Asia)	**1353**

[1] *Includes Madagascar, Reunion and Mauritius.*

[2] *2 species in Madagascar, Reunion and Mauritius. (Note: Du Puy & Villiers 2002 consider that only one species of this group occurs in this region.)*

[3] *948 species in Australia; 7 species in the Pacific.*

continued on page 5

FLORA

continued from page 4

would mean that if (when) *Acacia* is dismembered, the name *Acacia* will remain with the by far largest group of about 960 species comprising the 948 Australian species mentioned above plus 10 in tropical Asia, seven in the Pacific and one or two in the Madagascar region. The 73 African, 60 American and 36 Asian species mentioned above, plus seven Australian species would become known as *Vachellia*. The African, Asian, American and Australian species destined for *Senegalia* (and the two minor segregate genera from the Americas) would be excluded from *Acacia* irrespective of the Orchard and Maslin proposal. This new generic arrangement is shown in the table opposite.

What does this mean for Australian *Acacia* nomenclature? Until a formal proposal to dismantle *Acacia sens. lat.* is published, nothing will change, anywhere. If and when someone formally publishes a proposal that, *inter alia*, separates *Acacia* subgen. *Phyllodineae* from the rest of the genus, then this decision means that the name *Acacia* follows its new Type species into the old *Phyllodineae*. For Australian taxonomy, this means that, apart from nine species which will become *Vachellia* and two which will become *Senegalia*, the rest (975 species) remain as *Acacia*.

Bruce Maslin is a Senior Principal Research Scientist with CALM's Science Division, Kensington. He can be contacted by email: brucem@calm.wa.gov.au.
Tony Orchard can be contacted at the Department of Environment & Heritage, GPO Box 787, Canberra, ACT 2601.
Related web link
http://www.anbg.gov.au/cpbr/taxonomy/acacia-conserved-2004.html
A reference list is available from the Editor.

BUSH TELEGRAPH

Feather on left - upper side.
Feather on right - underside.

These two beautiful feathers were found beside a fence post in a paddock in Helena Valley. They are mainly dark brown with chocolate and cream mottles. The question is - who dropped them?

Answer from Peter Mawson:

"Clearly this is a predator, as these primary wing feathers are shaped for silent flight. They are too big for a goshawk or a kestrel, and too small for eagles and kites. A Boobook Owl is possible, but they have more white on the outside of the feathers, and usually the tips are frayed for really silent flying. They are probably from a Tawny Frogmouth."

IN BRIEF

Acacias - protection against dieback?

COULD this be the start of finding a biological control for dieback disease in plants? Research was carried out on the ability of five Western Australian *Acacia* species to protect the highly susceptible *Banksia grandis* from infection by the pathogen *Phytophthora cinnamomi* in a rehabilitated bauxite pit at Jarrahdale. Only *Acacia pulchella* (prickly moses) gave significant protection to *Banksia grandis* for up to one year after inoculation. In the glasshouse trial, *A. pulchella, A. extensa, A. lateriticola* and *A. drummondii* did not protect *B. grandis* from *P. cinnamomi*, but they significantly reduced *P. cinnamomi* in the soil, indicating a possible biological control effect on the pathogen.

For the full story, read: D'Souza, N.K., Colquhoun, I.J., Shearer, B.L. and Hardy, G.E.St.J. The potential of five Western Australian native *Acacia* species for biological control of *Phytophthora cinnamomi*, *Australian Journal of Botany* 52(2) 267 – 279.

20% decline in Antarctic sea ice extent since the 1950s

If the global temperature were increasing, then you would expect there to be less ice everywhere, including in Antarctica. However it is a difficult thing to measure in a continent so remote and stormy, and with so many natural climate variations to obscure any long-term trends. However, recent evidence from ice cores suggests that the sea ice south of Australia has retreated by about 1.5° of latitude (approximately 170 km) over the last 50 years, which represents a decrease of 20%.

For the full story, read: Curran, M.A.J., van Ommen T.D., Morgan, V.I., Phillips, K.L., Palmer, A.S. 2003. Ice Core Evidence for Antarctic Sea Ice Decline Since the 1950s, *Science* 302: pp. 1203-1206.