Australian Native Plants Society (Australia) Inc.

ACACIA STUDY GROUP NEWSLETTER

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Contents **Page**

From The Leader

Dear Members

This is our last Newsletter before our Study Group Field Trip to the Barakula Ballon Forestry area and surrounds in Queensland, being held from Friday 1 August to Monday 4 August. On page 4 of this newsletter, there is a note from **Len Hubbard** regarding the trip. Now is the time for Study Group members who have already registered their interest, or other members who may wish to attend, to confirm your participation as advised in Len's note.

I recently spoke to a couple of APS Groups in western Victoria, at both the Grampians and at Warrnambool. In the Grampians, it was good to catch up with **Neil and Wendy Marriott**, and to see a "wattle walk" that Wendy is developing on their property – what a great idea! On the way home from Warrnambool I dropped in to see **Bruce Clark**. Bruce was Leader of our Study Group for a period in the 1990s, and was the person who put together the booklet "Wattles Are Golden", featuring excerpts from the first 100 Acacia Study Group Newsletters.

As for all Study Groups, membership fees fall due on 1 July each year – so it is now that time of year. It would be greatly appreciated if you could attend to this payment (or advise if you do not wish to renew your subscription). Details regarding membership fees and payment options are shown on page 12. Some members have paid some years in advance, and some have still not paid for the last twelve months – if you wish to check on what date you are currently paid up to, please let me know. And if you do not wish to renew your membership, could you please let me know so that I can amend our membership records.

Our membership fees remain the same as last year, but we have increased the fee for each seed order from $2.40 to $3, reflecting Australia Post's recent increase in postage cost.

Bill Aitchison

Welcome

A special welcome to the following new members to the Study Group.

Carole Barron, Ungarie, NSW

Carole is a farmer from Central Western NSW, but also has a little garden on the south coast, so is interested in two very different growing climates.

Judy Clark, Hastings, England

Judy lives only 500m from the sea, and recently returned home from a trip to Australia to find a rather blasted *Acacia pravissima* – it had been looking really good but Judy suspects that strong winds may have caused this, and/or the salt in them. But soon afterwards *A. mucronata* (grown from seed) flowered for the first time. It was quite undamaged by the wind, but is in a much more sheltered position.

Mark Hewitson, Dee Why, NSW

Adrian and Gail Wockner, Highfields, Qld

Bob Topping, Kooralbyn, Qld

Bob has a large native garden which includes a number of Acacias. He is prompted now, in retirement, to extend his knowledge and interest in Acacias.

Acacia mucronata **Photo Judy Clark**

From Members and Readers

Mark Hewitson (one of our new members) lives at Dee Why in NSW, and also has a property at Mudgee. He has provided the following regarding his background and interest in Acacias:

"I have no formal background in botanicals, but many many years of informal background growing up, whilst accompanying my father almost every weekend with his trips to the nursery.

I'm interested in Acacias for many reason, from land regeneration and "soil doctoring", to potential nutritional and medicinal value such as honey and teas. Plus - I'm a green and gold patriot!

The Mudgee area has a fair bit of Mistletoe, so may need to do some more research on which species would cope better in these conditions. Also, Acacia honey is not from 'real' Acacia, so I'm interested in experimenting which actual Acacias may produce the healthiest honey.

I'm testing different methods for people to conveniently grow Acacias at home, also using LED lighting due to its energy efficiency.

A current project I would like to work on is to promote a "top 10 rare acacias" to grow list. If we can even get a select few people to grow "mother" plants to provide constant supply of seed to the seed bank, this would go a long way for conservation. Even if the populations get wiped out completely in the wild, we can replant them decades later even. People like the idea of growing "rare" plants. It has the psychological "scarcity" effect and they are therefore treated with higher value. As long as there is always at least one person growing these rare "mother" acacias, they will always be with us.

Here's my top 10 list I have so far, that I would need to source seed for.

01) *Acacia atrox*
02) *Acacia cochlocarpa* subsp. *velutinosa*
03) *Acacia imitans*
04) *Acacia lobulata*
05) *Acacia rhamphophylla*
06) *Acacia purpureopetala*
07) *Acacia pygmaea*
08) *Acacia repanda*
09) *Acacia unguicula*
10) *Acacia equisetifolia* (sp. Graveside Gorge)

Unfortunately, some may not even produce seed, so possibly they can be propagated via cuttings. Yes, risky, but the alternative is extinction in some cases...

What's your top 10?

Glad to be member of the group, I'm looking forward to learning and contributing."

Mark's top 10 list has set a challenge, both to himself to propagate these plants, and to other Study Group members. For other Study Group members, there is a question as to what species you might include in your own top 10 list.

Also can anyone assist in sourcing seed for any of the species in Mark's list, and can anyone share any experiences in growing any of these species?

In a subsequent communication, Mark referred to a recent trip to his Mudgee property on the weekend of 24 and 25 May. He writes:

"I just came back from Mudgee on the weekend.... The *A. baileyana* is out and ready to start blooming soon, and there are plenty of other wattles around the RiverLea area. *A. amoena* and *A. retinodes* are also doing well... The *A. amoena* is growing all over the property (see attached), in rocky clay soil... this is really a sturdy species, have seen new phyllodes appearing on branches that look snapped and dead. The goats don't appear to be eating this species (unlike everything else they destroy). Additionally, I have seen no mistletoe on ANY of these Acacias."

Acacia amoena **Photo Mark Hewitson**

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We have had a few responses to the item in our previous newsletter regarding the **Acacia Spotting Bug**.

Margaret Lee (Brighton, SA) recalls that several years ago she had a similar experience with spots on her 3 bushes of *Acacia iteaphylla* (and she has been told by other landscape designers that they had ceased to use this species for this reason). The marks on Margaret's plants persisted for 2 or 3 years and she decided to pull them out, as they were about 20 years old. She thought they may be stressed making them more prone to disease or pests, as she doesn't water them and there was very low rainfall during those years. However, as usual, there were more urgent things to be done, so she just cut them back a bit and left them.

It was only on reading the article in our Newsletter that she realised that the plants have recovered. They are now in full flower, healthy and unblemished, looking good for more years yet. It may be due to the fact that they had good rain over a couple of days in summer.

Margaret suggests that if the Wright's plants have not recovered, it may be worth cutting them back a little next summer, and giving them a good soaking if there has been a long spell without rain.

Victoria Tanner (Canberra) has had a problem with her *A. iteaphylla*, and initially thought this may be the Acacia Spotting Bug. However, following further examination of the damage to the leaves, she now believes that the problem is a rust fungus (this problem was referred to in 2002 in our Study Group newsletter No. 84). Close examination of the leaves shows rounded slightly raised spots, typical of this rust. One expert suggested to Victoria that she should trim the affected branches back.

Victoria also drew attention to the ANBG website, where there is a reference to *Acacia iteaphylla*, including the Acacia Bug (and it notes that chemical control of the bug is difficult, and pruning out affected parts of the plant is recommended) (http://www.anbg.gov.au/gnp/gnp14/acacia-iteaphylla.html).

Des Nelson (Alice Springs) is not familiar with the Acacia Spotting Bug, but he noted the reference to it being rarely seen and wondered if this is because it is a pretty small creature (it is actually about 8mm long, and elongate in shape). But Des was reminded of a time when he was involved in a study of foliage growth of Witchetty Bush (*Acacia kempeana*) in the 1970s. Selected stems were marked, and it was his job to record the numbers of phyllodes on these stems each month and also to make a note of the numbers of scars where phyllodes may have been shed. Great care was needed with the latter category, due to the presence sometimes of a tiny little jassid type insect whose camouflage was to exactly duplicate the shape of a scar left by a fallen phyllode. Another tiny creature that he encountered during the experiment was a miniature spider which at rest resembled the early beginnings of a Witchetty Bush flower spike.

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Judy Clark (Hastings, England) got some seeds of *Acacia pycnantha* 'Grampians Form' from the APS Victoria seed bank, and advises that her little plants are so far doing very nicely. She enquired as to how hardy these plants may be, and whether they may be hardier than *A. pycnantha*. She noted that she found a reference on the ANBG website stating that *A. pycnantha* is hardy to -7°C but Ross and Irons (in their book, Australian Plants, A Guide to their Cultivation in Europe), state -1°C to -4°C.

I referred Judy's question to **Neil Marriott** (Neil lives close to the Grampians). He advises that as far as he is concerned, the Grampians form of *A. pycnantha* is no different to others - there is no difference in leaves, flowers, etc etc. He does comment that the huge difference in the species is the form (or more likely new subspecies) that comes from Mt Arapiles where it has cream flowers and flowers in autumn. Neil believes that the Grampians/local form would tolerate frosts to about -7°C or even lower as they are common around Great Western where frosts can

drop to these temperatures each winter.

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Des Nelson (Alice Springs) noted the comment in our March Newsletter regarding some *Acacia* spp. seeds germinating while still green. He comments as follows:

"I haven't any experience with attempts at germinating in that manner but I do recall that in the 1960s I collected seed of local bush plants for propagation. I found that it was possible to collect viable seed of just about any legume, *Crotalaria*, *Indigofera*, *Senna*, *Acacia* etc, when green, as long as they were fully formed. The seeds were dried in the shade and were quite good."

In a more recent letter (23 May 2014), Des commented on some of the Acacias currently flowering on his property:

"On the local scene, we have been enjoying spring like mild to cool weather. We had good soaking rain early in April and a month later we watched the Acacias bursting into bloom. We had to go away from home for a week and when we returned we were greeted by a profuse flowering of our dominant woody plant, *Acacia kempeana* and the few *Acacia aneura* we have. These are spectacular because of their vivid yellow spike flowers. *Acacia estrophiolata* are also flowering well but their pale flowers are not so noticeable. Our sole *A. salicina* has a few flowers showing but has a mass of immature buds. The *A. murrayana* trees show no sign of flowering. They stick to a program of flowering at a particular time of the year whether the season is good or bad. They have responded to the rain by producing prolific foliage growth.

Now, we have had another small fall of rain which will top up the ground moisture. This is good as it means that when frost comes they should be white frosts which are not as damaging as dry weather "black" frosts."

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Arthur Baker (Gatton, Qld) has provided a report on his results with seed obtained from our Seed Bank:

Species	Germination rate (approx)	Germination time (approx)
adoxa	100%	7 days
grandifolia	80%	7-14 days
cretata	80%	7-14 days
flocktoniae	75%	7-14 days
bynoeana	50%	14+ days
ruppii	60%	14+ days
peuce	0%	-
pubescens	50%	14+ days
lineata	60%	7 days
loroloba	90%	7 days
hispidula	80%	14 days
lauta	50%	14+ days

Most have been potted on and growing well, especially *loroloba*, *grandifolia*, *cretata*, *flocktoniae*. Maybe because of our sandstone based soil?

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Peter Cox (Garfield, Vic) has reported on his propagation of *Acacia costiniana*:

"I got some *Acacia costiniana* from the seed bank last January and sowed some in February.
Mix: a standard native seed mix
Pre-treatment: soaked in hot water overnight; smoked vermiculite added
Sown: late February
First seedling: appeared 7 days later
The remainder appeared over the following fortnight
Germination rate: approx 95%
Since germination the seedling growth has been very slow.

And just to prove one should never gloat or brag, since my last message to the newsletter my *A. denticulosa* has gone to god. But I had three flowerings so mustn't complain too much.

Finally, if one of our readers has some seed of *A. ulicifolia* var *brownei* I would appreciate getting some."

Final Call to Study Group Field Trip

by Len Hubbard

I would like to advise that at last during the month of March the Barakula Ballon Forestry received 5 to 7 inches of rain. All the creeks and gullies have run, swamps and lagoons have been topped up. Joan and I have run around most areas and many opportunistic acacias species are in full bloom. We are expecting a magnificent floral display come August. We would ask that all participants please contact Len and Joan Hubbard and we will e-mail or post a registration form to you along with a detailed information list and the procedure to register and pre-pay camping fees, as they cannot be paid on site in Queensland.

Joan and I would like to re advise that this outing will be conducted from Friday 1st August 2014, departing the Chinchilla Visitors Centre at 1.00pm to our campsite at Barakula State Forest. Saturday 2nd and Sunday 3rd will see us visiting interesting areas within the Barakula Ballon Forestry. Monday the 4th pack up and head out from the south west corner to Miles, top up with fuel, to Condamine Hotel for lunch and travel east towards Kogan, looking at many acacia species. You can now travel home via Toowoomba.

This Acacia Study Group Field Trip is a self cater, all meals, camping with caravans, motor homes, kampas, tents, outing. No power supplied. We will be using the Forestry

Barracks at Barakula as our base. It contains a modern kitchen, 240 power, flushing toilet, hot shower, along with 5 single beds in two bedrooms. First in for these. These facilities have been given to us free of charge. Only camping fees apply. We are not charging any fees for our contribution.

Forestry roads are open to high clearance two wheeled drive vehicles. Car pooling will be encouraged to reduce impact.

Note that anyone who takes part in a Study Group Field Trip such as this must be a member of their regional APS/SGAP State society.

Looking forward to your valued participation.

Len Hubbard's contact details are as followers:
Phone: 07 46627065
Home Address: Len Hubbard, 2 Leichhardt St, CHINCHILLA. 4413.
lenandjoan@bigpond.com
Cheers Len

WATTLE ver.2.2 release

by Bruce Maslin

The latest version of the WATTLE identification key for Australian *Acacia sens. lat.* species is now available on the web at LucidCentral: http://www.lucidcentral.org. To locate the key from the LucidCentral home page select *Keys/Search for a key* and enter WATTLE in the search box.

WATTLE ver. 2.2 includes 1274 taxa which is 109 more than in the original version of WATTLE that was published in 2001. These represent all Australian occurrences of formerly described *Acacia sens. str*., *Acaciella*, *Vachellia* and *Senegalia* taxa, together with Phrase Name taxa and common hybrid entities where these exist in the public domain and are accompanied by a description.

For most taxa in WATTLE ver. 2.2 links are provided to the following set of information:

- Description (sourced from ABRS Flora Online)
- Images (from WorldWideWattle website)
- Map (from AVH)
- Nomenclature (from APNI)

Note: There are 15 species for which these links are not provided; these are species that are currently in press in *Nuytsia*.

Rebecca Coppin is thanked for her painstaking and professional work in assembling the above cluster of information for me.

I find that the most efficient way to undertake an identification with WATTLE is to answer as many of the questions you can from the default Fast Find character set (that appears when you first start the key), then load the All Taxa subset and run Best. If you are identifying a specimen of section *Lycopodiifoliae* (species with phyllodes arranged in regular whorls) then it is recommended that you load the Whorled phyllode taxa (character set) subset. If you are identifying a specimen of the Mulga group (*A. aneura* and its allies) from Western Australia it is recommended that you invoke the Mulga TAXA and Mulga FIRST CUT CHARACTERS subsets, answer as many questions as possible, then load the Mulga ALL CHARACTERS subset and run Best.

On LucidCentral you will see that there are two options for playing the WATTLE 2.2 key:

1. Lucid Key Server Edition
2. Lucid Java Applet Player

Personally I prefer the latter because it looks and operates in the same way as recently superseded versions of the Lucid Player. By clicking on "Use this version" for option (2) an applet version of the Player will be downloaded to your computer (c. 760 kb; this can take a few seconds to load); the Player will then run and remain active within your browser. If you close your browser then you will need to revisit the url and reload the Player. Note: This Player is Java dependent, so if you have any problems opening the Player then you may have to install the most recent version of Java which is available also at the LucidCentral.

If you find errors in WATTLE2 or have problems identifying specimens then I would love to hear from you because I intend to maintain the currency of data and to provide regular updates.

Bruce Maslin (bruce.maslin@dpaw.wa.gov.au)

Acacia linifolia

by Warren and Gloria Sheather, Yarrowyck, NSW

Acacia linifolia is known as the White or Flax-leaved Wattle and is a tall shrub or small tree. In our high altitude garden (Northern Tablelands of NSW) plants reach a height of four metres. Branches are pendulous.

The phyllodes are crowded, linear, flat and up to 40 millimetres long. There is a small, almost obscure, gland near the centre of the phyllodes.

Yellow flowers are carried in globular heads. Branches are covered by blooms in early spring. They are followed by oblong pods. Growth habit, foliage and flowers are all attractive features.

Acacia linifolia Photo Warren and Gloria Sheather

Acacia linifolia would be an ideal specimen for informal hedges and screens. The species appreciates occasional light pruning.

Acacia linifolia is a New South Wales species whose distribution extends from Bega in the south to Dubbo in the west.

Acacia linifolia has an interesting horticultural history. The species was introduced into England in 1790. It was among the first Australian plant importations and was recorded as growing in a London nursery in 1810. Flax-leaved Wattle was its common name at this time. Plants flowered well in conservatories and greenhouses but did not set viable seed. In our garden there is no problem with viable seed set. With their hard coats, seeds require soaking in boiling water before sowing.

The species name means with foliage similar to *Linum* (Flax).

Spring in autumn

by Warren and Gloria Sheather, Yarrowyck, NSW

A visitor to our garden, in mid March, asked if there was something wrong with one of our wattles (*Acacia subulata)* because it was in full flower. They thought that wattles only flowered in spring. We explained that this species flowered out of the "normal" spring flowering period.

We realised that more by good luck than management our garden is home to a number of wattles that bloom in autumn and winter giving the garden a spring feeling during the colder months. Our garden is situated in the Northern Tablelands, of NSW, and any garden colour during this colder period is welcome.

Five species provide "out of season" colour in our garden.

Acacia deanei, Deane's Wattle, is common in the Warrumbungle National Park, central NSW. This tall shrub or small tree has dark green, bipinnate foliage and yellow globular flowers. We have many specimens that are over ten years old and are still growing vigorously and flowering profusely through the colder months.

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The species is named after Henry Deane a noted railway engineer and botanist. He is also remembered by *Boronia deanei*, *Eucalyptus deanei*, *Leptospermum deanei* and *Melaleuca deanei.*

Acacia calamifolia, Reed-leaf Wattle, and *A. subulata*, Awl-leaf Wattle, are very similar in appearance. The former has hooked phyllodes whilst the latter has straight phyllodes. Both are tall shrubs or small trees. Yellow flowers are held in globular heads. Both species will carry some flowers for most of the year. *Acacia calamifolia* is found in Victoria, South Australia and central western NSW. *Acacia subulata* is a native of the Northern Tablelands of NSW.

Acacia implexa, Hickory Wattle is another tall shrub or small tree. Phyllodes are curved and may be up to 160 millimetres long. Globular flowers are cream and appear from late summer through autumn. Sporadic flowering may occur at other times. *Acacia implexa* is a native of Victoria, NSW, and Queensland. This is one of seven wattles native to our property, Yallaroo. Since sheep were removed about two decades ago the Hickory Wattle has regenerated in large numbers. We now have all stages ranging from tall, mature shrubs to seedlings.

Acacia iteaphylla Photo Warren and Gloria Sheather

We have saved, in our opinion, the best until last. *Acacia iteaphylla*, the Flinders Range Wattle, is one of our favourite native plants. The Flinders Range Wattle comes in a number of forms. There are tall shrubs with either an upright growth habit or pendulous foliage and an interesting dwarf variety with long, spreading branches. The phyllodes are long and narrow. Yellow flowers are held in globular clusters and before opening the buds are enclosed by brown bracts. The bracts fall away as the blooms open. Our specimens start to flower in late March and continue for

many months. The blooms light up our garden during the lengthy flowering period. We have plants with both upright and pendulous growth habit. Some years ago the dwarf variety was grown as a low hedge in front of the Broken Hill Visitor Centre. *Acacia iteaphylla* is a handsome, long flowering plant that would be an eye-catching feature in a native shrubbery.

New species - *Acacia equisetifolia*

This is a recently described rare, new species, known only from Kakadu National Park in the Northern Territory. Previously it was known by the phrase name *Acacia* sp. Graveside Gorge. It lies within *Acacia* sect. *Lycopodiifoliae*, which is a small distinctive group of species characterised by having phyllodes arranged in regular whorls.

Acacia equisetifolia **Photo Kym Brennan**

It is an erect shrub to about 1m tall, its branches being covered with dense white hairs. The phyllodes are in crowded regular whorls, (10-)15-20mm long and slender (0.3-0.4mm wide). Inflorescences are simple, one per whorl, on peduncles 15-30mm long, these also being densely hairy. Bright yellow globular flower heads.

This species has a very restricted distribution, 220km ESE of Darwin, with a total recorded population of less than 1000 mature individuals distributed across two subpopulations about 1km apart. It is regarded as Critically Endangered under both NT and Commonwealth legislation.

The species name relates to the superficial similarity of the phyllodes to species of *Equisetum*.

Reference: Maslin, B.R. and Cowie, I.D. (2014) *Acacia equisetifolia*, a rare, new species from the Northern Territory. Nuytsia 24: 1-5

Distribution of *Acacia decurrens*

When in full flower, *Acacia decurrens* (Early Black Wattle, or Green Wattle) is quite spectacular, which perhaps explains why it is widely cultivated in parks and gardens. According to Flora of Australia it is endemic to New South Wales, chiefly on the coast and tablelands from the Hunter Valley south to the ACT. It is also noted as being naturalised in south-western WA, south-eastern SA, south-eastern Queensland, parts of NSW and ACT, Victoria and possibly Tasmania.

In Canberra there is a sub-group of the ACT ANPSA, called the "Wednesday Walkers" – a group of keen bushwalkers and plant enthusiasts. On one of their recent walks they came across *Acacia decurrens*, and this prompted some subsequent discussion as to the native, and introduced range of this species in the ACT and NSW.

The consensus view of the Group was that *A. decurrens* is not native to the ACT, but is introduced. For example, one of their members commented as follows:

"*Acacia decurrens*, like *A. baileyana*, is not a native to the ACT as far as I know. I'd like to see evidence to the contrary as it is a spectacular species."

Another member commented:

"The ACT Census of Vascular Plants lists *Acacia decurrens* as 'Exotic [Aust]'. The NPA Field Guide to Native Trees of the ACT says *Acacia decurrens* is 'possibly not native to ACT'.

I think it was used in revegetation projects until a couple of years ago. It was used as a mixed planting along with *Pinus radiata* in a block on the south end of Isaacs Ridge probably around 15 years ago."

Dr Stephen Douglas also commented:

"I believe Terry Tame is an authority on this issue, and he is of the view that *A. decurrens*, which is indigenous to the Sydney area, was spread well beyond its natural range by, amongst other things, movement of cattle (which browse

Acacias and their nutritious seeds). It turns up in odd parts of Victoria, where I believe it is even declared noxious, along with several other NSW CC/ST etc things that have moved or been planted outside their natural range.

Around Bundy, there is a population of *A. dealbata* (common in ACT and ST but absent from this area) along the railway to Exeter, that is also very likely naturalised and may have come from livestock being transported by rail, or in contaminated ballast or in mud attached to vehicles working on the track and verge. Stretching this further, there is a supposedly credible record of the Vulnerable *A. pubescens* at Braemar near the old Hume Hwy, and it is again likely that this Sydney-endemic was transported there, possibly by RTA vehicles..."

Following the comments by Dr Douglas, I referred the question to **Terry Tame**, and he responded as follows:

"Your query re the endemic nature of some acacias is a bit of a perennial problem. There are still those who regard *A. farnesiana* as being native, even though it is now fairly well established that it is naturalised.

A. decurrens is a bit of a problem since many eastern Aust. bipinnate acacias were identified as subspecies or varieties of *A. decurrens* and some early reports may have referred to these bipinnates as *A. decurrens*. There doesn't seem to be a foolproof method to establish the status of a species and much depends on the known distribution at the time of typification. But it has been long recognised that *A. decurrens* had been naturalised in many parts of eastern Australia including NSW and Victoria. I blame the NSW RTA with its roadside revegetation by spreading bulk seed along many roads. I don't believe that any attempt is made to select appropriate species seed for this purpose, and *A. decurrens* can be found from the NSW Northern tablelands, on the Liverpool Ra, around Newcastle and on the Southern tablelands, and probably elsewhere.

Your suspicions about *A. dealbata* are likewise probably also correct, as is the suggestion re *A. pubescens*. There is at least one known population to the south of Sydney which is regarded as naturalised."

As noted above, *A. decurrens* is naturalised in Victoria. Flora of Victoria states that *A. decurrens* is "widely established in dry to moist open forest and woodland". I asked two of our Victorian Study Group members about their own local experiences with this weedy species. **Neil Marriott** referred to three local infestations, each of which resulted from original plantings by the Forest Commission. One area in the Grampians was cleared out by Parks Victoria staff. However, after the 2006 bush fires, about 5000 seedlings came up. Parks Victoria staff then did an excellent job in removing all of these seedlings (so that the Grampians is now hopefully free of this weed). Neil advises that two other local infestations are at the Mt Cole Waterfall Picnic Ground and in the Trawalla State Forest just east of Beaufort. Both of these were planted by the Forest Commission and both are still out of control.

Alan Gibb, who lives in NE Victoria, advises that *A. decurrens* is also a problem in his local area. He believes that in one area where it is found, it originated as a garden escape from some plantings about 3km away (although a bigger problem here is *A. floribunda* – this having been planted along each side of a driveway, and then spread into bush adjacent to the house). Alan also recalls having found a lot of *A. decurrens* one day when he was looking for *A. binervia* in the Snowy Mountains. He found a lot of *A. decurrens* in the area from Myrtleford through to Bright, including acres of it at Porepunka (at the bottom of Mt Buffalo).

In Tasmania, I note that in her book Wattles of Tasmania, **Marion Simmons** states that *A. decurrens* is introduced and naturalised in parts of the midlands, north and south of Tasmania.

The Mystery of Hollands Rock

In our Study Group Seed Bank we have some seeds listed as *Acacia* sp. Hollands Rock. Victoria recently asked the question as to what these seeds are, and this prompted us to carry out an investigation.

Our first line of enquiry was to check various references eg Flora of Australia, and the worldwidewattle website. However, these enquiries proved fruitless, and we found no reference to this species. We then asked Bruce Maslin, Australia's Acacia expert from the WA Herbarium, but he advised that he has no record of such a species.

Our next avenue of investigation was to look at the history of the seeds currently held in the Seed Bank. This revealed that we had bought the seeds in about 2008 from the commercial seed company, Nindethana, in WA. We therefore asked them about these seeds. They advised that ownership of Nindethana has now changed, but they checked with the previous owner who advised that the name Hollands Rock was put to a batch of seed that came from the area of Hollands Rock, but was not properly identified at the time of collection. They also advised that the seed was coded into their database in 1992, but couldn't say when it was collected. A note on the batch of seed indicated that it was collected approximately 40km east of Pingrup, but this doesn't match perfectly with Hollands Rock on Google maps. In fact, on Google maps, Hollands Rocks is about 40km north west of Pingrup (not east). (Note: Pingrup is in WA, 361 km south east of Perth and 48km south of Lake Grace).

So this deepened the mystery, and added to the challenge of solving it. Pingrup lies within the Shire of Kent in WA, and we are grateful to the Shire's Chief Executive Officer, Peter Bentley, for solving the mystery. It appears that there are

two separate locations, one called Holland Rocks, and one called Holland Rock.

Peter explains that Holland Rocks is about 40kms north east of Pingrup on Holland Tank Road near the intersection of Day Road. There is a reserve over both sides of the road and this is likely to be the site where the seed was collected by Nindethana. The site has some historical significance as it is the location of a significant tank which was built to facilitate the many people travelling from Albany in the south to the goldfields of Kalgoorlie and Coolgardie during the early goldrush in WA. From Peter's last visit to the site several months ago he remembers that there were acacia species at the site but advises that unfortunately his botanical skills are not sufficient to tell us which.

He comments that another option about 10kms to the east of that reserve is Lake Bryde Reserve which is on Lake Bryde Road - this is an A Class Reserve which also may host the species.

The Final option may be the Lake Magenta nature reserve which is due east of Pingrup and it is a large A Class nature reserve. The control of this reserve lays with the state Department of Parks and Wildlife.

The site referred to in Google Maps to the west of Pingrup would be a small reserve known as Holland Rock, however its true name is Gnowanallup Tank. This site is about 10kms east of Nyabing and 30kms west of Pingrup.

So the result of our investigation is that we believe that we now know where these seeds were collected, they were collected in 1992 or before, and at the time they were collected the species was not identified.

Perhaps some Study Group members may like to have a go at propagating this species – we may then be able to identify what species these plants are. If you would like some seed, please let us know.

Cool Acacias, and smart koalas

It is commonly known that the preferred food tree of koalas are species of *Eucalyptus*, but it is perhaps not so commonly known that during hot weather koalas may prefer to rest in Acacias. Some recent research has been conducted on koalas living on French Island, near Melbourne, and this has shown that during mild weather, koala use of *Acacia mearnsii* was 5%, whereas during hot weather this increased to 29% (the remaining time being spent in the other 3 dominant tree species, *Eucalyptus ovata*, *E. obliqua* and *E. viminalis*).

The reason for this was that *A. mearnsii* had cooler trunk temperatures than the Eucalypts. *A. mearnsii* was measured as having base and mid-trunk temperatures that averaged 6.7ºC and 5.1ºC cooler than air temperature, respectively.

By contrast, the average base and mid trunk surface temperatures of E. obliqua were just 1.87ºC and 1.46ºC cooler than air temperatures.

The koalas recognize the cooler trunk temperatures, and help to maintain their own temperature by hugging the trunks of those trees with cooler temperatures.

Reference: Briscoe NJ, Handasyde KA, Griffiths SR, Porter WP, Krockenberger A, Kearney MR. 2014 Tree-hugging koalas demonstrate a novel thermoregulatory mechanism for arboreal mammals. Biol. Lett. 10: 20140235. http://dx.doi.org/10.1098/rsbl.2014.0235

Acacia baueri

Following the reference to Acacia baueri in our previous (March) newsletter, ***Barbara Henderson*** *(Moore, Qld) has done some research and prepared the following notes on this species. Barbara is a member of the Acacia Study Group, but also Leader of the Wallum Study Group.*

Dear Bill

I originally wrote to you 2 months ago, in early April, about *Acacia baueri* and some facts I'd discovered, but never sent the letter. This time I have all the information I could find in my collection of native plant "reference books". It's amazing what you discover and learn when someone asks you about something. It has been most interesting to learn about *Acacia baueri* and its two subspecies, which has opened up my knowledge of this tiny treasure of our Wallum. Here in Queensland we have a list of "rare, vulnerable and near-threatened (what a silly term that is)" plants which, without the necessary permits/licences, we can only look at, admire, photograph, learn about and put on our excursion lists. The Queensland Nature Conservation legislation doesn't seem to apply to developers and their machinery, Councils and their maintenance equipment, and other such works. Prior to the Sunshine Coast Wildflower Show back in about 2000, the organizer informed me that *Acacia baueri* was "off-limits" for my collection of flowers for my Wallum display. Where the plant grew in Mudjimba, the area was cleared the following year to build more high-rise tourist accommodation! So much for protective legislation!

Over my many years of "heathland rambling", I've seen *Acacia baueri* ssp. *baueri* in many places between the Qld/NSW border and Tin Can Bay, near Fraser Island. It is usually in moist sandy soils of the low-lying near-beachfront Wallum plains, often in association with the Wallum Banksia, *Banksia aemula*. However, I have seen it on the Marcus High Dunes of the Sunshine Coast, between Marcus Beach and Sunshine Beach. Other places at which it has been found include the following: Pine Ridge Conservation Park at Runaway Bay, Gold Coast; Bribie Island in several locations; Ninghi, on the mainland before crossing the bridge to Bribie Island, where the former large

area of exceptional Wallum is now the "Sandstone Lakes" housing estate; the Beerwah Scientific Area 1 of the now Glass House Mountains National Park; near the Caloundra Airport, and the Currimundi State Primary School, and the Golden Beach State School at southern Caloundra at the Airport there was also the protected Acacia attenuata; further north at the developing Mudjimba and Marcoola townships with high-rise tourist developments etc; the Sunshine Coast Airport at Marcoola where an area of Wallum was set aside in an official ceremony about 10 years ago; between Coolum Beach and Peregian Beach (prior to the extension of the Sunshine Motorway around 1992). There are probably a few other places I've missed, but Acacia baueri ssp. baueri was probably once far more common than anyone realised. Because of its tiny size, and a short flowering season between June and November, it probably just wasn't seen.

Acacia baueri* ssp. *baueri **Photo Allan Carr**
This and the photo below were taken on Bribie Island, 18 May 2014.

My own opinions regarding our Nature Conservation legislation are rather cynical, and I sometimes wish I'd removed some of those forbidden Marcoola plants before the high-rises took over.

Acacia baueri* ssp. *baueri **Photo Allan Carr**

The descriptions from the various books are basically similar, though with plants described by Glenn Leiper and Ian MacRae a bit taller, although the former is from south of Brisbane, while the latter did his Wallum studies on Bribie Island. Kathy Stephens' description is quite detailed and botanical, but she is a botanist. Marion Simmons' pruning and propagation tips are interesting for a plant so small. *Acacia baueri* has obviously caught the interest of our Society growers, but has proved difficult, if not impossible to cultivate satisfactorily, when we can get the seed. I think there is more to it than just the availability of seed, however. Being included in a book written in 1975 shows that it has been noticed, probably at a time when coastal heathland plants did attract more interest than they do now. There was probably still a lot of intact heaths even 40 years ago. We'd pretty well lost the Gold Coast here in south-east Queensland at that stage, but still had some marvellous areas up on the Sunshine Coast. Most of that has now gone, as you would have seen last year during the Conference.

Back in 1987 our Queensland State Conference was based on the Sunshine Coast, at the Conference Centre run by the Lutheran Church. It was called "Wallum Yabba", and was my first native plant conference – a week of "wallowing in the Wallum". It was terrific, and I managed to take home a plant of *Acacia baueri*, which survived in a pot for several years, even producing a seedling. I'd love to be able to grow it, and many, many more of our beautiful Wallum species.

It might seem that I went to a lot of trouble "researching" this tiny Acacia, but I enjoyed every minute, and learned so much. Studying our native plants can become a very time-consuming hobby, but we don't only learn about the plants, we learn about Australia's geography, especially as a Study Group leader and with all those Conferences in the other States, then there is a bit of history covering our early adventurers and botanists, we learn a bit of Latin and Greek along the way while we discover where the plants got their names – we really do learn so much, and a lot of it is so interesting.

Regards
Barbara Henderson

Barbara also prepared some notes on *Acacia baueri* from various reference books.

Some information on:
***Acacia baueri* ssp. *baueri* – southeast Qld to Sydney, smooth foliage**
***Acacia baueri* ssp. *aspera* – Sydney region and Blue Mts, rough foliage**

"Wild Plants of Greater Brisbane" – a Queensland Museum Guide 2003
Page 68: *Acacia baueri* ssp *baueri*
Description: Tiny shrub 10-15cm tall; Green leaves whorled around stem; slightly down-turned tip; covered with bumps, Golden-yellow ball flowers on long stalks, followed by flattened seed pod; June – November.

Habitat and Range; Wet heathlands on sandy coastal plains. Sunshine Coast, Bribie Island, Beerwah, Moreton & Stradbroke Islands, Gold Coast; also Wide Bay district, Qld, and NSW.
Notes: Vulnerable. Protected plant, cannot be collected from the wild. Much habitat lost to development on coastal lowlands.
Family: *Mimosaceae*

"Mangroves to Mountains" – G Leiper & other members of Logan River Branch of SGAP Qld Region
Revised edition – 1st edition published 2002
Acacia baueri presumably ssp. *baueri* – Tiny Wattle
Vulnerable; multi-stemmed, spindly shrub to 50cm tall, in sandy, sometimes water-logged soils. Phyllodes to 16mm in whorls of 6 to 8. Yellow flowers in 8mm heads, winter to spring. Pods to 23mm x 3mm.

"Wildflowers of Bribie Island" – (the late) Ian C. MacRae – 1996, 2000
Page 30: *Acacia baueri*
Shrub to 50cm with phyllodes arranged in whorls of 5 to 7, flowers in golden globular heads. Flowers most of the year. The conservation status of this species is vulnerable (Staff of Qld Herbarium, 1993). Not common. Found in moist sandy areas of Wallum heathland.

"Noosa's Native Plants" 3rd edition 2011 – Stephanie Haslam
Page 43 *Acacia baueri*
Shrub often less than 30cm tall
Leaves phyllodes in whorls of 6-9, each 0.7-1.6cm
Branchlets small, round
Flowers Yellow ball with 10-15 individual flowers
Fruit long narrow pod 2.5cm with no stem
VULNERABLE and in danger of extinction in south-east Queensland

"The Flora of North Stradbroke Island" – K Stephens & D Sharp – 2009
(K Stephens is a Queensland Herbarium Wetlands botanist)
Acacia baueri Benth. ssp. *baueri* – Bauer's Wattle, Tiny Wattle
Erect shrub less than 30cm tall; Branchlets terete, glabrous or indumentum of antrorse white hairs, Stipules to 0.8mm long, often absent; pulvinus 0.4-0.6mm long; phyllodes 6-8 per whorl, straight or recurved in upper half, or at apex, mucronate, 7-16mm long. 0.5-1mm wide, obscure longitudinal nerve on each side of phyllode.
Heads of 10-15 flowers, peduncles 2-15mm long; flowers 5-merous.
Pods linear, sessile, to 25mm long, 2-3mm wide; glabrous or sparse hairs at base.
On infertile, often seasonally waterlogged sands in Wallum areas.
It is listed as "Rare" under the Queensland Nature **Conservation** Act 1992. (Nowadays it is "Vulnerable" – B.H.)

"Field Guide to the Native Plants of Sydney" – 2nd edition 1994 Les Robinson
Page 67 *Acacia baueri*. Small shrub with spreading stems to 20cm long, found in heathland. Very rare or extinct near Sydney. Two subspecies have been collected in the same area:
ssp. *baueri* (leaves smooth): this occurred in coastal heaths between Rose Bay and La Perouse, but was last collected in 1911, so it is probably locally extinct. It has a limited range, only occurring in a few other places on the north coast and in Queensland.
ssp. *aspera* (leaves rough): its principle population is in heathland at Wentworth Falls in the Blue Mountains, but it has been recorded at Wilton near Picton, above Bulli, and on the road to Warrumbul in the Royal National Park.
Leaves: cylindrical, hooked, in whorls of 5-8.
Flower heads: Bright yellow, solitary, axillary. Flowering time: May – June.
Name: *baueri* – after Ferdinand Bauer (1760-1826), the fine scientific artist who accompanied Robert Brown on Matthew Flinders' 1801-1803 circumnavigation of Australia.

"Growing Acacias" – 1987 - Marion H Simmons
Page 50, Small undershrub usually 0.3-0.5m tall with fine curved phyllodes 0.7-2cm long, crowded in whorls of 5-9 around the stems; bright yellow ball flowers mainly in summer. Found in damp sandy coastal heaths and suited to similar positions in warm temperate areas.
Prune lightly after flowering. Grow from seeds or cuttings.
New South Wales, Queensland.

"Two Hundred Wattles for Gardens" – published in 1975 by The David G. Stead Memorial Wildlife Research Foundation of Australia.
Acacia baueri – Yellow balls – 0.3m (about 1 foot), Qld, NSW
An attractive, dwarf shrub which appears difficult to bring into cultivation – perhaps because seed seems difficult to obtain. The narrow phyllodes are arranged in whorls of 5-9 along the stems. It once occurred in low-lying coastal areas from southern Qld to Botany Bay in NSW.
ssp. *aspera* has irregularly whorled rough phyllodes and seems confined to exposed areas on the Blue Mountains and Central Tablelands of NSW. A most attractive small shrub which may be difficult to establish outside its natural habitat, but well worth a determined effort.
It is included in the "Special Section" of this little book. In the general section there is a description of *Acacia baeuerlenii*, found in northern NSW and Qld.

A. baeuerlenii – Yellow balls.
1-2m (3-6 feet); flowers in spring; Qld and NSW
A shrubby, downy plant, generally not more than 1.5m high, producing numerous branchless stems from ground level. Branchlets are few, softly hairy, angular with very prominent decurrent lines. Phyllodes about 13.5cm long, narrowed at both ends, broadest in the middle, terminating in a recurved sharp point, leathery, with many parallel

veins. Flower heads solitary, large dense balls on fairly long hairy stalks. Found in northern NSW and Queensland.

Photos of Wattle Places

Ray Turner and Eva Kowal are members of our Study Group, and are privileged to live in a street called Sweet Wattle Drive (at Cranbourne South, Vic). Presumably it was decided by someone that this was a better street name than *Acacia suaveolens* Drive. This forms the basis of this month's Photo of a Wattle Place!

Acacia suaveolens occurs naturally in the sandy soils around Ray and Eva's place (including on their property). They also have some specimens which they have planted in their garden. Ray comments that it is a plant which you don't particularly notice until it comes into flower, but it then looks quite outstanding, with its cream coloured and scented flower heads.

Seed Bank

An up to date list of species held in our Seed Bank was included in Newsletter No. 122 (September 2013).

Our thanks to Bruce Clark and Neil Marriott for recent donations to the Seed Bank.

The procedure for requesting seed from the Seed Bank is as follows. Study Group members are entitled to lodge up to 3 orders per member per year, with 18 packets maximum in each order (negotiable). There is a charge of $3 in relation to each order, to cover the cost of a padded post bag and postage. The $3 may be paid in stamps or by direct credit to our Group's bank account. Some members include an additional payment with their annual subscriptions to cover the Seed Bank charge.

Requests for seed may be lodged in either of the following ways:

1. By email to our Study Group email address, acaciastudygroup@gmail.com (emails to this address go directly to both Victoria and Bill Aitchison). If you make a request by email, you will also need to make the necessary payment by one of the above methods. If you are paying by stamps, these should be mailed to Bill Aitchison, 13 Conos Court, Donvale, Vic 3111.

2. By mail (enclosing stamps if required). These requests should be posted to Bill Aitchison (address as in the previous paragraph). Bill will then advise Victoria of the request.

Although we do purchase some seed from commercial sources, we also rely upon donations of seed. If you are able to help with any seed donations they would be very welcome (we would ask you to post any donations to Bill Aitchison, who will forward them on to Victoria). It also helps enormously if you are able to clean, sort and label the seed correctly. Also, we would like to have provenance information for all seed in the seed bank – so if you donate any seed, could you also provide any information you have in relation to provenance.

We would like to maintain some data on your results in propagating seed from the Seed Bank. We would therefore ask if you could provide a report on your results, recording information on species, number of seeds sown, number germinated and days after sowing.

Study Group Membership

Acacia Study Group membership for 2014/15 is as follows:

$7 (newsletter sent by email)
$10 (hardcopy of newsletter posted in Australia)
$20 (hardcopy of newsletter posted overseas)

Subscriptions may be sent to:
Bill Aitchison
13 Conos Court
Donvale, Victoria 3111

Subscriptions may also be paid directly to our Account at the Bendigo Bank. Account details are:
Account Name: ASGAP Acacia Study Group
BSB: 633-000
Account Number: 130786973

If you pay directly to the Bank Account, please advise us by email (acaciastudygroup@gmail.com).