



Association of Societies for Growing Australian Plants

ACACIA STUDY GROUP NEWSLETTER

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From The Leader

Dear Members,

First of all I would like to say thank you to everyone for being patient and understanding since we didn't know whether the Acacia Study Group was going to go into recession or not. But after much discussion, back and forth, with Bill Aitchison and Sue Guymer and their much needed help and support, I finally agreed to take on this new role as leader of the Acacia Study Group.

I was told that a bit of "background information" of myself would be a good start, so I will try to do that now . . .

I was born and raised in Australia. Mt. Isa was my home town where the burning red earth left an incredibly lasting impression on me. Outdoors and barefoot of course was the life . . . Fast forward 17 years - For quite a while I worked in a Nursery in Lara, Vic. Of course, I didn't realise at the time, how valuable this would later become, since my goals were different then. At 19 - as adventurous young people do - I left the country to spend time in Europe and discover many things. Strangely enough, I fell in love, got married and had two kids. But, I became extremely homesick. (Even though I had a wonderful family there and many friends, I couldn't quite put my finger on what I was really missing.)

12 long years later we finally moved to Australia - bought a house and we start to think about the garden. I knew for sure that the only plants going in MY garden were to be native ones!!! So off we went to the nursery where I found some *Acacia longifolia* (Sydney Golden Wattle) in 6" pots that were about 70cm high. The label said "Fast Growing". OK . . . I put 3 of them in the car and then all of a sudden I am overwhelmed by this incredible smell!!! The knot comes undone as I realise, THIS is what I have missed for so long and the Australian landscapes and smells all

come flooding back to me! (There will be more on wattles and their smells in this newsletter later)



I plant, water and watch. My husband, being a fanatic with statistics, sets up a growing chart and we measure them every week. Incredibly, 3 months later they have reached the top of our boundary fence. 3 MONTHS!!! This incredible growth prompted me to do more research and that was the beginning of my extreme passion for wattles. I discover that there are hundreds of different varieties, but so many were hard to get at nurseries. Finally, I find a nursery (Suntuff Natives - David and Barbara Pye at Bullengarook, Vic) that had more than your average natives and where I learn more about the APS.

In early 2004, I joined the APS - Bacchus Marsh/Melton group. In the meantime I have become heavily involved in my own Wattle Nursery work - growing many varieties of wattles, especially the hard to get ones and I also promote the incredible cultivars that are on the market now - including *A. cognata* 'Limelight', 'Bower Beauty', 'Green Mist', 'Copper Tips', *A. howittii* 'Canberry Honey Bun' etc. I also do landscaping jobs where wattles are the main feature of course.

This is of particular interest to me as I firmly believe that you can design a garden any style (formal, contemporary, cottage etc) using only natives and a large part of Acacias. My own garden is now a 'Display Garden' where I feature exactly this. (Visitors welcome, please make appointment)

I have hedges of *A. floribunda* (15 in a row) and *A. howittii* (20) and many beautiful specimens, some also look excellent as standards, which I am focusing on a little more at the moment. As the majority are drought hardy, the issues of water and wattles take on new meaning. All of my established plants do not get watered at all and my garden has never looked greener! There are now 140 odd Acacias growing in all shapes and sizes and of these there are about 60 different varieties. All this is on an average urban sized garden!

These are just some of the aspects that I will be featuring in the newsletters. I certainly hope that everyone will continue to be involved in this Study Group and we will try to answer some of the questions from members that were still open. If I seem to have missed something, please don't hesitate to drop me a line either per email or mobile as above and I will try to get on to it straight away.

As most of you would already know we have an extensive Seed Bank that, many thanks to our former leader, Thais Eisen, is in immaculate condition. Please keep in mind, that I will try to send seed that is true to type but because Acacias readily hybridise, there may be some surprises. If this is the case, please let me know as soon as possible as these are of great interest in the horticultural world and can be used to our advantage in promoting Acacias.

At this point I would especially like to thank Thais Eisen, for all the hard work that she has put into the Study Group over the last 5 years (May 2001 - 2006). She has played a major role in collecting and collating information and pictures for the wonderful Photo Library that we now have on CD. Also her wealth of knowledge in relation to insects and their relationship with Acacias is absolutely amazing and I'm sure we will still receive interesting articles and pictures from her in the future.

The setup of these newsletters will be a little different but we still want plenty of input from our members - all your questions, ideas, pictures, viewpoints, achievements, disasters, whatever you have on your mind - is important to us and we would like to hear from you.

Bill Aitchison will be our editor and he will be taking care of a lot of that computer stuff (very much to my relief - and if there's any spelling mistakes, it's his fault!). We will have a 'Feature Plant' for each newsletter. That is, plants that have excellent horticultural qualities and that are especially useful in the small home garden but also for landscaping en masse. We will also be looking at the many, many uses of wattle in every conceivable way. One particular favourite of mine is the use of wattles in Floral Art. These will all be in future issues of the Acacia Study Group Newsletters, so stay tuned and don't forget to pay membership fees and with everyone's help we should have a great year and I'm also looking forward to meeting some of you down the track . . .

Esther Brueggemeier, Wild about Wattle

Feature Plant – *Acacia howittii*

Acacia howittii is commonly known as Howitt's Wattle (named in honour of Dr Alfred William Howitt (1830-1908) an English explorer and botanist) or Sticky Wattle due to the nature of its fairly sticky phyllodes. These dark green phyllodes have a spicy aroma.

This species is a beautiful, very hardy, fast-growing plant and grows well in a wide range of soils. Surprisingly, it is on the rare list although in its natural habitat (a small distance of 20km in the southern Gippsland hills, Victoria) it is not thought to be under any threat.

Personally, this is one of my favourites since it is so versatile in the garden. It can be used as a glorious dense hedge, a specimen tree or even a beautiful pendulous standard! It responds extremely well to hard pruning.

My own experience with this hedge (as seen in the following photo) was very satisfying.



I planted 20 tubes at 1m spacings. With meticulous, regular pruning right from the start my hedge was a thick, strong wall of 2.5m only 2 years later! Once the ideal height is reached pruning becomes much easier. I cut a good metre off the top 1-2 times per year.

Due to much pruning, flowering was scarce. Generally though, this species flowers profusely with perfumed, soft lemon yellow flower-heads in Spring. A **dwarf form** has also been introduced into cultivation, the 'Canberry Honey Bun' (see photo below). This one is ideal for small hedges and to block out those pesky weeds you could also use a lush groundcover, the **prostrate** version – which is the most recent introduction of this plant.



Acacia howittii is also frost tolerant although some protection may be beneficial for young plants in a newly established garden. The only pests noticed have been spittle bugs but these do not require control.

Most good retail nurseries stock these plants but don't be tempted to buy advanced plants as they are usually slow to establish. Tubes or at the most 6" pots have a much faster growth rate and it's more fun to literally watch them grow. Of course, you can order some seed from the seed bank and do it yourself too.

Acacias and Bees

Bob Luttrell from Queensland has raised a question regarding acacias and bees. He writes as follows and has also provided the photo:

I am a member of the Samford, QLD branch of SGAP. I have a question about *Acacia bancroftii* which is I understand a CQ species, but I have planted it here in SEQ. My interest is that the stingless bees (*Trigona carbonaria*) are very interested in a secretion from the gland on the leaf(phyllode) stem which seems enlarged perhaps to cope with the gland. The output is quite profuse, and is also of interest to wasps and of course ants. I have 30 stingless bee colonies and have a deep interest in photography.



I attach a photo of what I am observing. I aim to get better but this photo shows the bee at the gland opening. More commonly they just have to lick up the secretion from the stem or in the axil joining the stem to the branch. I am wondering just what the nature of the secretion is, it does seem to be sweet so I assume it is not resin but it is not easy to get enough material to evaluate the taste.

A meliponary enthusiast, and SGAP member
Bob Luttrell

Bob has raised an interesting question as in fact the purpose of bees' visitation is not fully understood. We referred Bob's question to Dr Graham Stone, Senior Lecturer in Animal Biology, Institute of Evolutionary Biology at the University of Edinburgh, who is a leading authority on this subject. Dr Stone replied as follows:

Dear Bill,

Thanks for passing the letter and excellent photo on to me. Your interpretation of our paper is correct! We know that bees do visit these glands, and they secrete nectar - ie a sucrose-rich solution that may well contain other constituents such as amino acids. The general belief is that these secretions are intended to recruit ants to guard the plant against attack by herbivores, rather than to attract pollinators. Evidence in support of this view is the fact that the nectaries are not in among the flowers, and bees are perfectly able to visit the leaf nectaries without contacting the flowers.

I think bee visitation to these nectaries could be interpreted in 2 ways.

First, the bees are robbers, exploiting unprotected nectar not intended for them. If this is true we expect the glands to be visited primarily by ants.

Second, that the nectar IS meant to attract bees, fulfilling their sugar and water needs so that they can also visit the flowers for pollen. Australian acacias don't produce floral nectar, and the phyllode nectaries could be an alternative way of meeting the nectar needs of pollinating bees (that need both pollen and nectar to

stock their cells). We usually think of these resources as being packaged together in the flower, but there is no need for this to be true. I like this theory, and it would be very useful to know whether the same solitary bees observed by your Enquirer also visit the flowers for pollen.

As long as ants and bees don't get in each other's way, the extrafloral nectaries could fulfil both functions.

If he/she is of an enquiring mind, and I'm guessing yes, it would be really interesting for your enquirer to spend a day watching the *Acacia bancroftii*, and recording when the bees (and any other insects) (a) collect nectar, and (b) collect pollen. I would sit and watch a few nectaries (the same set all day) for maybe 10 minutes every hour, and count the number of bees visiting the nectaries. And, for another 10 minutes each hour, count the bee visits to a constant set of flower heads. Then you can see if the bee colony is harvesting the two resources at the same or different times of day, and also get a feeling for when the nectar is being secreted during the day. American and African acacias that secrete nectar to pay ant guards tend to have a morning nectar secretion peak, which the ants track really accurately. I know of no other data on possible bee exploitation of distinct nectaries and pollen resources.

Alternatively, your correspondent could decide to keep taking excellent photos, and just enjoy this fine bit of natural history over a glass of fine wine (much as the bee is doing).

All best,
Graham

Acacia derwentiana

Acacia derwentiana is a new species from Tasmania described by Alan Gray in 2005 (Muelleria 21: 107-110). It is a small to medium shrub 1-3 metres high, with pale yellow to almost lemon yellow flowers held in loose cylindrical spikes from October to December.

We asked Alan whether the species has been introduced into cultivation. He advises that it has been propagated, chiefly from cuttings as it seems to be a poor seed setter. This has been done by Will Fletcher of Plants of Tasmania nursery. Alan advises that well before he described it Will Fletcher was calling it *Acacia* 'Derwent Cascade', either because it grew on the bank of the River Derwent near some small cascades or because of its weeping habit 'cascading' – he is not certain. Alan has also seen a large plant in a garden at Cygnet - it looked really ornamental but he has no idea from whence it came!

The following photograph of *Acacia derwentiana* is by courtesy of the Tasmanian Herbarium.



Acacias and Fungi

On a recent bush walk that Esther participated in, one particular point of interest was a fungi, *Cordyceps gunnii*, that has a particular relationship with acacias. This prompted us to ask Geoff Lay if he would write a note for our newsletter on the relationships that exist between acacias and fungi.

Geoff is a long time member of the Australian Plants Society, but has a special interest in fungi. He is an active member of the Fungi Section of the Field Naturalists Club of Victoria, works as a volunteer on the Fungimap project at the National Herbarium of Victoria, and has spent probably thousands of hours searching for fungi on field expeditions.

Geoff has provided the following note and photograph of *C. gunnii*, taken at Dom Dom Saddle.

Three fungal tales

1. Moth murdered under wattle – no witnesses

The larval state of the Australian Ghost Moth eats the trunks of mature wattles such as Black Wattle (*Acacia mearnsii*) and Silver Wattle (*A. dealbata*). It then digs about 10-20 cm into the soil to eventually reappear as a moth. However, some unfortunate larvae ingest spores of a fungus in the genus *Cordyceps*. The fungus will kill the larvae while it is underground and consume the soft tissue. It then sends a white column up to the surface where it emerges as a club the size of a large finger. *Cordyceps gunnii* (shown in photo below) is the most common species and has an olive green to black club to 120 mm long that smoothly integrates into the narrower yellow stem for another 40 mm. above ground. *Cordyceps hawkesii* has a creamy brown club to 80

mm with a sharp demarcation (like a match) into a lighter colour stem for another 20 mm. above ground.



So if you are walking under Black or Silver Wattles between March and September and see clubs sticking up out of the ground then spare a thought for the innocent larvae that lie buried below. Other members of the *Cordyceps* genus parasitise beetles.

2. Which came first – the gall or the insect?

Rusts in the genus *Uromycladium* usually cause inconspicuous leaf spots or shoot disfigurements, but branches infected by *U. tepperianum* produce prominent galls in wattles with phyllodes. Older galls become tunneled by insects (species of Coleoptera and Lepidoptera) which use them for food and egg laying. Infected branches eventually die back beyond each gall, leading to the gradual destruction of the host tree. Fungal spores are produced on the gall surfaces and are wind dispersed to new hosts. These spores also provide food for certain insects (eg. Phalacrus, Coleoptera). *U. notabile* is similar to *U. tepperianum* but is found on wattle species with true bipinnate leaves.

3. The good guys

Fungi resemble a tangled mass of tiny white threads that penetrate the material on which the fungus is growing – looks like cotton wool and called hyphae. Hyphae grow outwards, produce enzymes, which soften and break apart the chemicals in the substrate; they then absorb these simpler chemical substances to fuel further growth. When the fungus has enough in storage and the weather is right, then it fruits.

Mycorrhizal systems provide fungus-root systems for transformation of nutrients from soil to plants.

Carbohydrates from the plant are transferred to the fungus, while soil nutrients are transferred from fungus to plant. This relationship is essential in low nutrient soils that are common in Australia. In mycorrhizal systems, networks of the finer fungal hyphae radiate out from plant roots. This greater exploration plus using enzymes to take up soil-bound nutrients is more efficient than the roots alone.

Eucalypts are believed to have 1,000 associated mycorrhizal fungi. Acacias do not produce the same quality timber as Eucalypts and so have not been studied to the same extent, however they would have similar need for mycorrhizal fungi.

Acacias and Craft

The following is a photograph of a jumper recently knitted by Sue Guymer for an APS friend with a newly born baby boy. It features a wattle, and the photo is taken with a background of the lovely foliage of *Acacia cognata*.



The Smell of Acacia Roots

Some time ago, Jeff Irons in the UK asked a question re the smell of acacia roots. His question was:

“When young seedling acacias are being transplanted the root disturbance causes many of them to emit a vile smell. It is always the same and *Paraserianthes lophantha* has the same smell. Has anyone ever analysed it to find out the chemical identity? What is the purpose? To deter root predators?”

My understanding is that this question had never been satisfactorily answered. More recently, and quite independently of Jeff’s query, Esther Brueggemeier raised the same question in a conversation with her. Interestingly, rather than talking about a vile smell, Esther stated that she loves the smell (to the extent that she “almost gets high on the stuff”).

It is an interesting question and we thought it worthy of some further investigation, so we referred it to a number of experts.

Alan Gray from the Tasmanian Herbarium suggests that the smell probably arises from the activities of the nitrifying root bacteria nodules that are common to most leguminous plants. He often tells folks that are dealing with Acacias, ie transplanting from pots or potting them up from seed, that the presence of that characteristic pong is a very good indication of the health of the plant, ie if it's on the nose then your plant is probably nice and healthy. As to the chemistry of the smell, he can't enlighten us. He does note that the characteristic smell is more or less an Acacia or close relative (eg *Paraserianthes lophantha*) feature and in his experience doesn't seem to occur, or not nearly as strongly on other legumes, native or exotic. He suggests that the chemicals may be a combination of nitrogen and sulphur and that moisture assists with its production or generation.

Another botanist (who asked not to be named) advised that it is an “intriguing question” but was unable to provide any immediate response as to the chemical identity of the smell. He noted that a number of Mimosaceae are known to produce sulphurous compounds in the leaves or other plant parts. He also wondered whether it is related to cyanide production (fairly common in mimosoids).

We also referred the question to a horticulturist working for a plant research organization (who also asked not to be named in the Newsletter). His view was that the smell would relate to the root bacteria (he noted that a lot of bacteria do smell). In relation to the question as to whether the purpose of the smell is to deter root predators, he did not go along with this - he believes the smell is a secondary outcome of another process taking place, and it does not have any primary purpose such as deterral of root predators.

It does appear that Jeff’s question is not a straightforward one, especially that part relating to the chemical identity of the smell.

There may now also be an ancillary question, and that is how it can be that Esther finds the smell a real turn on, whereas pong seems the most common response from others – but we think this question might be beyond the scope of this Newsletter.

Whilst on the subject of root smells, Alan Gray has noted that another plant which has a strong root smell that may be due to special bacteria is the *Callitris*. This, however, is a very fragrant smell, a bit like cinnamon or other spice and makes potting them a pleasure.

More Smells – Acacia seeds

In talking to a number of people regarding the question of the smell of Acacia roots, the matter of the smell of crushed seeds was also mentioned on three occasions.

One individual recounted his time as a typical young boy at school when he and his mates used to think it great fun to crush the seeds of *Paraserianthes lophantha* and spit on them to wet them. Following this a strong pong would arise and they would then surreptitiously throw them under the teacher's chair and anxiously wait for his (or her) nose to start wrinkling as the pong took hold.

This person notes that in later, more mature years, he has noticed that Acacia seeds react in much the same way, although not as strongly.

Another individual also recalled that when he was young he also used to wet and crush *Paraserianthes lophantha* seeds to produce a "rotten egg" smell.

And a third individual also recalled school days when apparently the done thing was to crush seeds of *Acacia howittii*, moisten them, and then use your imagination as to where to throw them.

I think my school education must have been lacking because I was never introduced to the games that one could play with *Paraserianthes* or Acacia seeds. I only recall spending one year in a class room next to the Chemistry laboratory, and being frequently engulfed with a rotten egg smell (which I am sure we were told was related to sulphur).

I am sure they were not doing experiments on Acacia seeds in the Chemistry laboratory, but is the same chemical involved?

Letter to the Editor

Doug White lives at Longwood, about 140km north of Melbourne. He has kindly written about some of the acacias he is growing.

"I've been thinking about Acacias. They aren't my main interest, banksias are, but I've become more interested in drought resistant plants and that of course includes many Acacias (actually I think that many species of *Calothamnus* are splendidly drought resistant, and I've got a few growing).

On Acacias, this garden has been in existence for about 5 years. It's granite country, many rocky outcrops, otherwise sandy or gravelly soil. Very well drained. Rainfall is generally quite high, about 27" (675mm) but last year almost no rain from 1 August to end of year. I have only roof rainfall collected in tanks for household and garden use.

I began with fairly well known garden Acacias: *acinacea*, *beckleri*, *baileyana*, *cognata* 'Limelight', *covenyi*, *elata*, *glaucoptera*, *howittii*, *decurrrens*, *leprosa* 'Scarlet Blaze', *pyncnantha*, *prominens*, *retinodes*, *subulata* (my favourite wattle, perhaps), *spectabilis*, *verniciiflua*, *implexa* (naturally occurring), and *vestita*. In the drought, I lost *drummondii* and *myrtifolia*, and *howittii* barely made it.

As the spring began to dry, I planted *guinetii* and *williamsonii* which have done well. I put in seed of some others and planted these out in January (we got a mid month rain): *gracilifolia*, *murrayana*, *redolens*, *paradoxa*, *pentadenia*, *victoriae* and *merinthophora* are all doing well. More experimentally, *crassiuscula* and *everistii* are starting off well, although it is a bit early to say. *A. pinguifolia* is not yet succeeding. *Acacia chrysella* and *A. camptoclada* are too small yet and are still in pots as is something else – I either didn't label something properly or a seed packet had mixed seeds.

So you can see my total "experimental" work is only with 3 or 4 species and maybe that's all been done before. I have plenty of space in my garden still, and could try more."

Some Wattles for the Garden

In August last year, APS Maroondah Inc. and the National Herbarium of Victoria co-hosted a Conference known as the F J C Rogers Biennial Seminar on the subject of Australian wattles (acacia2006 - Knowing and Growing Australian Wattles), attended by about 250 APS members from around Australia including members of the Acacia Study Group, as well as Australian and overseas botanists.

As part of the Conference, selected acacia species were propagated in forestry tubes by the Friends of the Royal Botanic Gardens Cranbourne, for sale to Conference attendees. An initial list of about 300 species was compiled – from the descriptions in the Flora of Australia Volume 11 and the Encyclopaedia of Australian Plants (Elliot and Jones) on the basis of novelty, size, flowering season

outside the July to September period, good to excellent horticultural features and suitability for cultivation in small gardens in SE Australia. These were mainly dwarf, small and medium sized wattles that were not commonly available through nursery outlets.

Of these, about 100 species were listed in seed banks of the Acacia Study Group, APS Maroondah, APS Victoria and Nindethana Seed Service. Over 80 species were ordered, and 74 supplied and propagated (some propagating material was also donated by some individuals). After some failures during propagation, and elimination of 1 – 2 species with weed potential, 64 species were offered for sale. To facilitate selection, participants were provided with a table of cultivation notes for these species. This table is reproduced on pages 9 and 10 with the permission of APS Maroondah.

We believe it may be of interest to monitor the success (or otherwise) of the plants sold at the Seminar once planted out in gardens. Any reports from people who purchased plants at the Seminar would be very much appreciated (and will be included in future Newsletters).

Note: Seminar attendees were warned that some species being sold could have the potential to become weeds, and care should be exercised especially if being planted near bushland areas. These species included *A. baileyana*, *A. boormanii*, *A. montana*, *A. murrayana*, *A. triquetra*, *A. victoriae* and *A. wilhelmiana*.

Some of the species that did not germinate were *A. brachyclada*, *A. coriacea*, *A. empelioclada*, *A. hadrophylla*, *A. lasiocarpa* var. *sedifolia*, *A. oxyclada*, *A. tetraptera* and *A. hamiltoniana*.

Some Web References

The following web references, relating to last year's Acacia Seminar, may be of interest.

Guest speaker at the Seminar Dinner was Ian Campbell MA who is the grand son of Archibald James Campbell. In the early part of the 20th century, A J Campbell popularized the wattle as Australia's national symbol, and his 1921 publication *Golden Wattle – Our National Emblem* is recognized as an important contribution in the history of Australian natural history writing. Ian Campbell's talk at the Seminar was titled "Yellow-haired September". He has subsequently written an article based on the talk he gave at the Seminar and this can be viewed on line at:

<http://www.lib.latrobe.edu.au/AHR/archive/Issue-February-2007/EcoCampbell.htm>

One of the papers presented at the Seminar was by Dr Wolf-Achim Roland of Solingen, Germany, on the subject

Australian Acacias in Europe. Dr Roland's paper can be viewed on his web site, at:

www.acacia-world.net (click on the Europe tab)

One day of the Seminar was a Scientific Day. Dr Dan Murphy from the Royal Botanic Gardens Melbourne has written a summary of this day which was published in the September 2006 newsletter of the Australian Systematic Botany Society. This newsletter can be downloaded from:

www.anbg.gov.au/asbs/newsletter/index.html

Some Administrative Matters

This newsletter has been sent by post or email to members' addresses as recorded when the previous newsletter was prepared. No doubt some of these addresses will have changed since then, and we will need to update our membership file. We would very much appreciate it if you could assist by advising any corrections to the details that we have recorded for you.

It would also help us if you could return the renewal form included with this newsletter (where necessary). That renewal form covers membership for the year commencing 1 July 2007. We are planning to issue 3 or 4 newsletters each year.

Any letters, comments, questions, feedback etc will be greatly appreciated. And for any members who may have attended last year's Seminar, *acacia2006*, and purchased plants at the Seminar, your feedback on how well or otherwise those plants are progressing would be much appreciated.

Note, the annual membership fee is as follows:
\$5 (newsletter sent by email)
\$8 (hardcopy of newsletter posted in Australia)
\$12 (hardcopy of newsletter posted overseas)

Subscriptions may be sent to:
ASGAP Acacia Study Group Leader
Esther Brueggemeier
28 Staton Crescent
Westlake, Victoria 3337

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 Esther by email (wildaboutwattle@iprimus.com.au)

List of Species Propagated for Sale at acacia2006 – Knowing and Growing Australian Wattles

Species	Size and Habit	Foliage	Flowers	Situation
aculeatissima	0.2-1.5 x 1-2	5-12 x 0.5-1 mm pungent	pale-bright yellow balls Jun-Nov	part sun, dry, clay, well-dr.
aestivalis	2-3.5 x 1-2 m upright	3-10 x 0.5 cm	golden balls Dec-Mar	full/part sun, dry, well-drained
alcockii	2-3 x 2-3 m	6-9 x 0.8-8 cm	large pale yellow balls Dec-Feb	full/part sun, dry, well-drained, coastal
aneura	4-10 x 2-6 m open	3-7.5 cm, narrow	golden rods Jun-Oct &c	full sun, arid
argyrophylla	3-4 x 4-6 m dense	2-4.5 x 1-1.5 cm	golden balls Aug-Nov	full/part sun, warm, lime-tol.
aspera	1-2 x 2-3 m	1-3 x 0.5 cm resinous, hairy	cream to yellow balls Jul-Nov	full/part sun, dry, v. well-drained
assimilis	0.3-1.5 x 0.5-2.5 m	5-8 x 0.1cm hooked apex	yellow balls May-Sep	full/part sun, dry well-drained
baileyana dwarf	1.5 x 1.5 m	bipinnate	yellow racemes Jul-Aug	full/part sun, dry, heavy to light.
boormanii Mt Typo variant	3-5 x 2-5 m	3-6 x 0.2-0.5 cm	bright yellow racemes Jul-Oct fragr	part/full sun, wet, well-drained
calamifolia (or euthycarpa?)	2-3 x 2-4 m semi-weeping	5-20 x 0.2 cm hooked	golden balls Jul-Nov	full/part sun, dry, wet, well-drained
calantha	2-3 x 1-2 m	7-15 x 0.1 cm	bright yellow balls Jul-Sep	full sun, dry, well-drained
camptoclada	1-1.6 x 1-3 m	0.6 -1.5 x 0.2-0.4 cm	bright yellow balls Aug-Oct	full sun, dry, well-drained
chamaeleon	2-3 x 2-3 m	6-21 x 0.1-1.2 cm hooked	golden balls, all year deep golden racemes Jul-Sep	full/part sun, well-drained
chinchillensis	0.5-2 x 1-2 m	3-8 x 2-3 cm bipinnate	yellow balls Oct-Nov	full/part sun, well-drained
cochlearis	1-2 x 1-2 m dense	2-5-5 x 0.5 cm	large yellow balls Dec-May &c	full/part sun, well-drained
complanata	2-6 x 2-4 m zig-zagged	5-10 x 1-3.5 cm	deep yellow balls Apr-Aug, &c	full/part sun
conferta	2-4 x 2-4 m	1-2 x 0.3 cm recurved, pungent	golden balls May-Jul	full/part sun, dry heavy soils
curvata	1-1.5 x 1-2 m	1.5 x 1 cm, triangular, pungent	short golden rods Jul-Oct	full/part sun, well-drained
delphina	0.5-2 x 0.5-1 m	5-7 x 4-5 cm prickly	large golden rods Sep-Nov	full/part sun, v. well-drained
denticulosa	2-4 x 2-3 m upright	0.6-1 cm round, wavy	yellow balls Mar-Dec	part sun, well-drained
dictyoneura	2-3 x 2-3 m	bipinnate 3-4 pairs of pinnae	golden rods Jul-Oct	part sun, well-drained
drummondii ssp elegans 'Grossus'	2-3 x 2-3 m dense, vigorous	1-2 x 0.2 cm, blue-green	yellow balls, May-Oct	full/part sun, dry well-drained
ericifolia	1 x 1-2 m, hairy	5-8 x 1-2 cm ashy, falcate	cream balls Apr-Jul, &c	full sun, well drained
excelsa	10-25 x 5-15 m	2.5-10 x 0.2 cm curved	yellow balls Jun-Nov &c.	full sun, dry, well-drained
filifolia	1-3 x 2-3 m	2-11 x 0.1-0.5 cm	large light golden balls Jun-Jul	full/part sun, wet, swampy
flagelliformis	0.5-2 x 0.5-1.5 m	6-8 x 0.2-0.3 cm	bright yellow racemes Jun-Dec	full/part sun, moist well-drained
flocktoniae	2-4 x 1-2 m	bipinnate 1.5 cm	white balls Dec-Mar	part sun, well-drained
gilbertii	1-2 x 1-2 m	7-15 x 1-1.2 cm	bright yellow Nov-Feb	full, well-drained
gladiiformis	1-4 x 0.5-1.5 upright	6-12 x 0.4 mm	yellow balls Jul-Aug	full sun, dry, well-drained
handonis	1-2 x 1-2 m	1.5-3.5 x 1-2.5 cm grey-green	large lemon balls Jul-Dec, &c	full sun, dry, well-drained, acidic
heterochroa ssp heterochroa	0.5-2 x 0.6-2 m	1-5 x 0.2-0.8 cm triang, pungent	yellow balls Jul-Sep	full sun, dry, well-drained, acidic
inaequiloba	0.3-1.5 x 0.6-2 m	10-25 x 0.2 cm	deep yellow spikes Mar-Aug &c	full/part sun, dry, well-drained
jibberdingensis	3-5 x 3-4 m			

List of Species Propagated for Sale at acacia2006 – Knowing and Growing Australian Wattles (cont)

Species	Size and Habit	Foliage	Flowers	Situation
lachnophylla (syn cometes)	0.2-0.8 x 0.5-0.8 m	10-20 x 0.7-1 mm	golden balls, Oct-Nov	full/part sun, well-drained
lanigera	0.3-2 x 1-3 m	2-7 0.7-1 cm	bright yellow balls May-Oct	full/part sun, well-drained
laracina var laracina	0.3-1 x 1-2 m	1.5-5 x 0.07-0.17 cm pungent	cream balls Oct-Nov	full/part sun, dry, well-drained
lateritcola	0.5-2 x 1-2 m	pinnate/bipinnate	cream-light yellow balls May-Oct	full/part sun, well-drained
leptoclada	1-2 x 0.5-2.5 m	bipinnate	bright yellow racemes Sep-Nov	part sun, well-drained
masliniana	1-3 x 1-3 m minni-ritchie bk	5-13.5 x 0.2 cm pungent	golden balls Jul-Sep	full/part sun, moist-wet, saline
montana	2-4 x 2-5 m	1-4 x 0.4-0.6 cm	bright yellow balls Aug-Nov	full/part sun, dry, well-drained, lime-tol
murrayana	2-6 x 2-7 m pink-white bark	6-20 x 0.5-0.7 cm	bright yellow racemes Aug-Oct	full sun, arid, hot, lime-tolerant
myrtifolia Hat Head NSW prost.	0.2-0.3 x 2 m	2-4 x 1-1.5 cm	cream-pale yellow balls Jul-Oct	full/part sun, coastal, well-drained
obovata	0.3-0.6 x 0.3-0.6 m	1.5-5 x 1-2.5 cm undulate	white to p.yellow balls Mar-Sep	full/part sun, dry, well-drained
patagiata	0.5-2.5 x 1-3 m	2.5-5.5 x 0.3-0.8 cm incurved	golden balls Jul-Sep	full sun, wet, saline,
pentadenia	3-4 x 3-4 m	8-12 x 6-10 cm bipinnate	p.yell. scented racemes Sep-Nov	part/(full) sun moist, well-drained
phasmoides	2-4 x 1.5-3 m open	5-10 x 0.1-0.2 cm	light yellow rods Aug-Oct	full/part sun, dry v. well-drained
phlebopetala	0.4-1.5 x 1-2 m	0.5-1 x 0.5-1.1 cm triangular	pale yellow balls Jun-Jul Dec-Feb	full/part sun, dry, well-drained
ptychoclada	1-2 x 0.5-1 m	5-11 x 0.1 cm pungent	pale yellow balls Jan-Apr	full/part sun, wet, swampy
sessilis	0.5-1 x 1 m	7-25 x 0.6-1.3 mm, pungent	golden racemes Jul-Oct	full/part sun, dry, well-drained
sessilispica	2-4 x 2-3 m open	6-15 x 0.1 cm	bright yellow spikes Aug-Nov	full/part sun, dry, v. well-drained
spinescens	0.5-2 x 1-2 m spiny	leafless	golden balls Jul-Nov	full/part sun, dry, well-drained
squamata	0.15-0.6 x 0.1-1 m	2-7 x 0.1-0.2 cm	golden racemes Jul-Sep	full/part sun, dry, well-drained
subflexuosa	0.3-1 x 0.3-1 m	3.5-7 x 0.1-0.2 cm curved	golden balls Aug-Sep	full/part sun, dry, v. well-drained
teretifolia	0.5-1 x 1-2 m	2-4 x 0.2 cm pungent	yellow balls, Jun-Nov	full/part sun, well-drained
tindaleae	1-2 x 0.5-1.5 m, hairy	0.6-1.3 x 0.1 cm grey-green	deep golden balls Aug-Sep	full/part sun, well-drained
trigonophylla	1-2.5 x 1-2 m	1-4 x 0.1-0.3 cm decurrent, pungent	golden balls Oct-Nov	part sun, dry, well-drained
triptera	1-3 x 1-5 m	2-3 cm decurrent, falcate, pungent	short golden rods Sep-Dec	full sun, dry, well-drained heavy soil
triquetra	1.5 x 2 m	10-25 x 2-6 mm	golden balls Sep-Oct	full sun, wet/dry lime tol.
truncata	1-3 x 1-3 m	0.9-2.5 x 0.5-1.3 cm obtriangular	pale yellow balls Jun-Sep	full/part sun, well-drained, dry, lime-tol.
uncifera	1-2 x 1-2 m	3-5 x 1-1.5 cm falcate, hooked	bright yellow balls Jun - Sep	full sun, well-drained
uncinata	2-4 x 1-2 m	1-3 x 0.5-1 cm undulate	bright yellow balls Oct-Feb &c	full/part sun, well-drained
victoriae	3-12 x 4-6 m, spiny	2-5 x 0.2-0.8 cm	cream-pale yellow balls Aug-Sep	full/part sun, dry, well-drained
wattsiana	1.5-3 x 2-3 m, dense	3-7 x 0.5-1.2 cm	yellow racemes, Sep-Dec	full/part sun, well-drained, lime-tol.
wilhelmiana	1-3 x 1-3 m hairy sticky	1-3 x 0.1-0.4 cm, hooked	pale yellow gold balls Aug - Dec	full/part sun, well-drained, lime-tol.