

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTSACACIA STUDY GROUP NEWSLETTER No. 84August 2002

Dear members

Wattle Day is almost with us again and a new Wattle Day Celebration Committee has been formed in the hope that this day can again become an important one in Australia's calendar. The committee is headed by Tim Morrow in Victoria. No action is expected, however, until next year. Unfortunately for the people in the northern half of Australia our peak flowering period is usually at the end of July/early August and a September 1st celebration is out of step with nature. By mid August most of our spring flowering wattles have finished flowering or are at their peak.

Wattle Day was first celebrated in Sydney, Adelaide and Melbourne on 1st of September 1910 and became important in the early years of this century with an Australian Wattle Day League organizing activities which included crowning a 'Wattle Queen', planting and fund raising for charities. Its observance gradually died out and interest has only revived in the last fifteen years or so. Those of us who have the time and enthusiasm could perhaps help to revive interest in acacias in our local area with activities such as those outlined by Bonnie Addison-Smith in her letter below. Unfortunately in some rural areas a limited knowledge of the huge range of acacias ensures that the name 'acacia' is associated with 'pest' – an undesirable plant which causes problems by regrowing after clearing.

The current dry continues to bite with the real crunch coming soon with the hot weather. At Kingaroy the drought is the worst for almost 100 years. If you are in a similar situation it would be very helpful if you could keep records of how plants cope. Some of my plants are on the way out and in future I will have to decide if that species is worth growing again now that I know it will need watering in very dry periods. *A.holosericia* is one of these. On the other hand some species are looking good and flowering though not as well as usual. *A. cardiophylla*, *havilandiorum*, *subulata* and *wilhelmiana* are all in flower at present and many other species are carrying buds. It would help growers in future if we could supply lists of plants that cope with drought in different soil types and climates. In some cases we may be at odds with present publications. *A.leiocalyx* is said to be very drought resistant but local plants at Boobie are looking very stressed and buds aborted early. *A.adunca* is said to be only moderately drought resistant but mine are covered in buds and coping well. Please let me know how your plants are coping so we can put this information together.

Field Day

The field day at Leon's attracted a small but enthusiastic group who were treated to the sight of a large number of acacias which we had not seen in the flesh before. Leon provided a list of the acacias on his property so we were able to mark the ones that impressed us to the degree that we wish to grow them for ourselves. In my case this was far too large a number. It was also very useful to share ideas and experiences. A membership list is included in this newsletter and even though we are a scattered group there may be some one close enough to you for meetings like this to take place.

From member's letters

Bonnie Addison –Smith at Junabee in SE Qld is a member of the Warwick Branch of SGAP

Members of the Warwick Branch celebrate Wattle Day each year by growing acacias and giving them out from a stand in front of the Warwick Town Hall, on the nearest Saturday to August 1st.

The date was chosen, not only because of remembrance of past Wattle Day Celebrations in Queensland but also to coincide with the best local flowering time. We manage to give away from 300 – 500 plants each year trying to provide local species and suitable garden plants not usually available from garden shops

June Rogers from Horsham, NSW

The addition of the colour plates is most helpful, as they helped me to identify the rust fungus gall infesting quite a few of my wattles. *Ac.rigens* which grew naturally, is particularly bad and in some cases it killed the shrubs – others look awful and are to be cut down in the hope that they shoot again. *Ac.acinacea*, natural to the area, (but not on my block) planted and self sown were very bad so I cut them right down and so far the new growth is free from galls. *Ac.saligna* (or *salicifolia*) planted and self sown were affected to a lesser degree. It is a horrible looking “disease” and really disfiguring to the plant. I’m enclosing some leaves of *Ac.iteaphylla* with some “disease” which is also spoiling the look of them.

Our area is going through our sixth year with low rainfall – what falls is minimal and so far apart between falls that very little benefit is derived.

My late husband, Fred Rogers, who wrote the ‘Field Guide to Vic. Acacias’, was very passionate about acacias and as our block of 37 acres has varied soil types he was able to indulge himself. Since his death 6 years ago quite a lot of wattles have died, due perhaps to the weather and their age, so I am embarking on a re-planting programme. Of course, the survival of any plants produced will once again be dependant on the weather, as though I have channel water from the dam that also could be curtailed.

The phyllodes of A.iteaphylla which June sent were infected with a rust fungus which does not form galls. The infection took the form of many, rounded, slightly raised, rust coloured spots on the leaves. Under magnification some of these areas had burst and rust coloured spores were being released. The fungus requires moist conditions for its spores to spread and germinate so the infection is probably not recent but has been held in check by the plant until recently. Now with the stress of prolonged drought the fungus has gained the upper hand.

Marion Simmons at Legana, Tasmania

Acacia macradenia: A little story about this one. We grew a plant from seed years ago and had it growing slowly in the garden for about 15/20 years. We waited patiently for it to flower but it never did. I thought that the reason for its not flowering may have been because it was too far south of its natural range. I have heard of other species that either do not flower or flower very poorly presumably because of this factor.

However we do have in particular one wonderful Queensland Acacia in the garden and that is *Acacia semilunata*. Its fully in bud at the moment and each year has a wonderful display of flowers.

A.macradenia in SE Qld may flower profusely but survives on average only 5 to 10 years.

Bob O’Neill at Wandin Vic

In reply to Hazel Kelley’s request for suggestions as to planting times for acacia seed.

Planting times of acacias to me would be related to the climate and soil conditions that apply to each garden, or even parts of each garden. Spring planting here usually requires only one watering and is the preferred time to plant. Red soil areas of the garden permit planting at all times of the

year, whereas in the heavier areas of the garden late autumn or winter planting may well result in wet feet and resultant losses.

Ideally, seed planting should be in line to have the young plants ready for the opportune time to plant, this probably being some 4 or 5 months down the track. To my way of thinking, the time of seed planting would tend to vary, depending on your time of planting out into your garden. By the use of bottom heat I have been successful in germinating and raising acacia seedlings at any time of the year, though clearly in my area spring and early summer would lead to easier propagation.

Seedling growth rates here vary greatly. Those adapted better to our climate move away rapidly and are ready for planting in a matter of perhaps 3-4 months after germination. Other species may well take twice that time or longer before being able to face the outside world with a fair chance to survive. Some 6 month old seedlings are planted out and over 40cm tall while other species are still in their tubes till next spring at one third the height. In short, I have found warm weather is the preferred season to achieve easier germination but all seasons are possible.

I have planted out perhaps 40 acacias during this autumn. A couple have turned up their toes, perhaps because the plants were a little on the small size, but the remainder have gone very well. The season has been warm and dryish till the last week

The 2-3 year old plants are generally growing very well. Those that were not able to adapt have already failed and the remainder generally have responded to fertile soil and warm moist soil conditions. Individual plants are failing slowly. In some cases this is the result of insect damage, in other cases I suspect that it is a case of the plants getting their roots down into wetter subsoil and don't like it. The rapid growth has led to some plants being prone to wind damage.

The predominantly acacia area is now taking shape. The 200 or so plants of perhaps 100 species displays such a variation of size, foliage, colour and growth habit that it is now a feature that attracts much attention, from an interested comment to being quite stunned. I do comment that that what I have is merely 10% of what is out there in the wild.

Brendon Stahl and I have made our swaps which indicated that individuals can team together to maximise results. Our climates are relatively similar but our soils quite different. Specifically some plants will fare much better in the lighter soils that may be found on Brendon's property, but generally I would suspect that results will be often fairly similar.

Help!

Jeff Irons has a query from a member of the Australasian Plant Society in England of which he is a member. Does anyone have information on the use of acacias in medicine, especially homeopathy?

ACACIA SEED RAISING

by

Ron Nicholson

This is how I tackle Acacia seeds germination, perhaps worth a try if anyone is not completely satisfied with their current method. I wish to add that this article was requested, not offered as I don't feel competent or experienced enough to tell anybody how to raise seedlings. For known fresh seeds, I obtain close to 100% success. Old seeds from the seed bank is what this is about, and how I went about their germination follows.

The method I use and have used now for about five years varies a bit from other recent published methods. My results are consistently good and as such, I have no reason to change. I use it for seeds as fine as Eucalypts. I am a novice gardener, only having taken up the challenge since retiring.

My impatience was the motivator for the method (not knowing what was happening), coupled with my very limited success when seeds were sown conventionally. This is mainly due to my inability to judge and maintain the correct moisture requirements for germination for the particular seeds in question, or the vagaries of the rule of thumb method for planting depth.

I have observed considerable differences in the thickness of Acacia seed coats even within the same seed pod. This fact can be seen by the number of seeds that germinate but cannot fight their way out of the seed coat using my method. For commercial purposes hot water is the cheapest and easiest method, they are unconcerned if a number of seeds are rendered unviable due to excess heat.

The first step is the removal of the floaters, then I use a fine three-cornered saw sharpening file to abrade the seed coat opposite the embryo. The seed is soaked in cold water for 24 hours. All seeds in this batch swelled.

Seeds are then placed on moist cotton make-up removing pads (Dove brand, presumed sterile), not covered and placed in an air tight compartmentalised lidded plastic box (each section containing one seed type only). These boxes are then placed under a black plastic container excluding light completely. Seeds are inspected daily for germination.

Germination for me is when the radical shows through the seed coat. Upon germination, I immediately (same day) transfer them into square 4 x 4 x 6.5 mm black plastic pots in a styrofoam tray using my own brew of potting mix.

The process is aborted if no germination has occurred in two weeks from the time the seed plumped up. If some have germinated, I would only persevere with those that didn't for a further three days. My reasoning right or wrong for this time frame is, in my case, I am looking for vigour in the plant and I feel if it starts life with somewhat tardy germination (all seeds are in the same environment), it's not worth my time coaxing it along.

Planting mix for me is important. I have consistently better results using a brew based on compost in comparison to a purchased sterile potting mix, with the addition of fertiliser. The compost I use has evolved from as much diversity of materials as is available at the time. All materials go through a shredder at least once, or depending on the material, as many times as required to get plenty of surface area.

In respect of compost, I have better results in making it as a "one-off". I do not add to the heap as material becomes available. I also prefer to make the heap in the open using a ring of sheep wire lined with small chicken mesh. I turn the heap usually three times in three weeks.

By then, the heap has started decomposition and the heat is down to only warm. After six months, the heap is passed through a ¼ inch sieve and made evenly moist, then transferred to a lidded 200 litre drum. This is then given a further six months to stabilise, lifting the lid at monthly intervals for a day for some fresh air to circulate.

On mixing the brew for the seedlings, it is made moist and kept moist for the minimum of one month prior to use. This, for me, provides good moisture retention and fairly even moisture distribution when the plants required watering. The pH is, if necessary adjusted to 6.5 using lime or veterinary sulphur (it's cheaper).

My Acacia potting mix consists of one part compost, one part aged hard wood sawdust, one part aged shredded pine bark, and one part soil. Aged in this case is a minimum of 12 months spread out in the elements and watered if it looks like drying out.

Soil used for Acacias is from around a variety of plants that have produced nitrogen nodules including the roots with nodules adhering.

In all instances of planting out Acacias, the best performers have been those that have already set nitrogen nodules in the pot. I am still looking for the right bacteria to set this in motion for all the Acacia seeds acquired. The property being planted and the area around it has no indigenous Acacias and I am presuming the lack of performance is related to the absence of the right bacteria. I bulk at the idea of giving them fertiliser. I prefer to let nature be the provider.

The potted plants are placed in a waterproof shade structure giving 70% shade with orientation allowing two hours of unshaded morning and afternoon sun when day temperatures are below 30 degrees C, afternoon sun is shaded when temperature exceeds 30 degrees C. This is achieved by adjusting the heights of two shade cloth blinds. The design of the structure allows plenty of air circulation. The area is protected from strong wind.

This sounds elaborate but it is only a man-made structure trying to duplicate the conditions self-sown seedlings experience growing under native trees.

Plants are potted up as required using the same mix with the exception of the loam which is replaced by an active loam taken from the vegetable garden. This may have on occasions received blood and bone fertiliser. No additional fertiliser is used at any stage in the potting mix.

I pay particular attention to ensure the young plants do not become pot bound. This can mean potting up four or five times before planting out.

All plants I consider not performing to expectation are ruthlessly culled. This, I feel pays dividends with survival when in the ground. My losses are mainly due to frost averaging 30 a year, occasionally going down to -8° C, and wildlife damage.

I am not living on the property being planted and want the plants as sturdy as possible before planting into a somewhat, by comparison, neglected environment.

References to water in the proceedings in all cases refers to rain water, not reticulated treated water, cos I'm a "bushy".

ASGAP Acacia Study Group Financial Balance Sheet 2001 – 2002

Income

Balance at 5-3-2001	\$772.22
Total income from fees and donations	491.30
Total	1337.34

Expenses

Postage, envelopes etc	102.00
Toner for laser printer	87.00
Photocopying (including colour)	260.00
'Wattle' Disc	100.00
Seed	26.00
Bank charges	9.30
Total	584.30

Bank balance at 30-6-2002 \$753.04

The balance at March 2001 has been somewhat depleted by June this year but in that period five newsletters were produced.

New Members

Welcome to new and rejoining members

Peter Reynolds 18 Myrene Av, Tamworth 2340
Bruce Skinner 31 Monaro Rd, Aberfoyle Park 5159
Harry Franz MS 652 Goomeri 4601
Stephen Shugg 6 Ferris St, Kambah 2902
Jeff Irons 74 Brimstage Rd, Weswall, Wirral, England
Gerard Cavatore 488 Chemin de Benat, Bormes les mimosas, France 83230

Gerard sent a magnificent catalogue with coloured illustrations and descriptions of 144 species and varieties of acacias which he has at his nursery in France. Most of these are Australian but two are from Africa and one from New Caledonia. Eleven varieties of *A.dealbata* are available. Of particular interest is a hybrid between *A.podalyriifolia* and *dealbata* which looks a beauty. What a shame that acacias are not appreciated in Australia to this degree.

Acacia aulacocarpa
and its allies in the Mackay region

*The information below is obtained from “Taxonomic Revision of the Salwoods:
Acacia aulacocarpa Cunn. Ex Benth. And its allies (Leguminosae:
Mimosoideae: section juliflorae)” by M. W McDonald and B. R Maslin, published
in Australian Systemic Botany, Vol 13, 2000 CSIRO Australia 2000.
The results of this revision were too late to be included in the newly published
Flora of Australia. Vols11A/B Mimosaceae, Acacia.*

Since *A. aulacocarpa* and *A. crassicarpa* were first described by Benthham in 1842, the taxonomic treatment of the group has had a somewhat confused history. However, the relationships of *A. crassicarpa* and the *A. aulacocarpa* group have now been defined by the studies undertaken by McDonald and Maslin. The revision covers seven close relatives that occur naturally in eastern and northern Australia, New Guinea and eastern Indonesia.

Characteristic features of the group include their moderately large, curved phyllodes with numerous, fine, closely parallel longitudinal nerves (except in *A. wetarensis*), their axillary flower spikes, and relatively large, oblong to narrowly oblong, flat or sometimes twisted, hard but brittle or woody, resinous pods which are transversely to longitudinally nerved. Five species in the group have pods that open along the dorsal suture, the same side as where the funicle joins the pod (the *A. aulacocarpa* sub- group) while the rest have pods that open along the ventral suture, the side opposite to where the funicles joins the pod (the *A. crassicarpa* subgroup).

All are listed below with their recommended common names, distribution notes, and the distinguishing features for those that occur in this district.

1. *A. aulacocarpa*, Golden-flowered Salwood, a relatively uncommon species with a discontinuous distribution in eastern Qld. from Windsor Tablelands to south of Brisbane including some continental islands, and from 2 locations near Grafton in NSW. Populations tend to be confined to creek banks or run-on sites near rock outcrops. This species has been recorded from Finch Hatton Gorge. Shrubs or small trees with blue-green canopy foliage, smooth bark becoming slightly longitudinally fissured on larger plants. Phyllodes usually sub-falcate, more-or-less straight on the lower margin and curved above, 5-12.5 cm long x 0.7-3.5 cm wide. Its bright golden flower spikes, usually 1-2 per axil, densely hairy ovaries and its narrowly oblong pods, 1.5-8 cm long x 0.8-1.5 cm wide, with prominent oblique to longitudinally oblique nerves are features that distinguish it from other species in the group.

2. *A. celsa*, Brown Salwood, a pioneer or canopy species in rainforest habitats in north-eastern Qld.. from south of Cooktown to eastern part of the Atherton Tablelands, also on the Paluma Range.

3. *A. crassicarpa*, Thick-podded Salwood, is most common on sandy, lowland, coastal or near-coastal sites in open forests or woodlands in New Guinea, north Qld. from Torres Strait Islands and Cape York to Townsville with southern outliers from the Burdekin River, Whitsunday Island and the Slade Point Reserve. (I collected a flowering specimen, No.725, from Slade Point in June 1992, before the Reserve was gazetted, and a fruiting specimen, No.912, in December the following year.) Usually trees with deeply furrowed hard, dark bark and grey-green canopy foliage. Phyllodes 8-27 cm long x 1-4.5 cm wide, usually lanceolate-falcate, curved along both margins and tapered gradually towards the apex and the long narrow swollen base. Flower spikes light golden to pale

yellow, 26 per axil, ovaries densely hairy on upper half. Pods broad, 2-4.5 cm wide flat woody with numerous crowded, not or slightly raised, transverse to transversely oblique nerves.

4a. *A. disparrima* subsp. *disparrima*, Southern Salwood, usually occurs on undulating or hilly terrain in woodland to forests and along disturbed roadsides mainly along coastal and near coastal areas from Mackay south to near Coffs Harbour in NSW. Shrubs or trees with hard bark becoming moderately fissured on larger trunks. Phyllodes 5-12 cm long x 0.4-3 cm wide, pale to dark grey-green, minor nerves mostly 4.5 per mm with distinct inter-nerve spaces 0.1-0.2.2 mm wide. Flower spikes perfumed, pale yellow to lemon yellow, 1-2 per axil. Ovary hairless. Pods hard but brittle, straight to moderately curved, 2.5-9 cm long x 1-2 cm wide, opening along the dorsal suture. Seeds with a creamy-grey to grey funicle/aril.

4b. *A. disparrima* subsp. *calidestris*, Dryland Salwood, occurs in north-eastern Queensland, primarily from Mt Carbine-Mt Molloy region south to Hervey Range west of Townsville, also in coastal areas north of Cooktown with a southern outlier about 150 km southwest of Bowen.

5. *A. lamprocarpa*, Western Salwood, occurs across northern Australia from the Kimberley region W.A to the Gulf of Carpentaria in NT and Qld.

6. *A. midgleyi*, Cape York Salwood, is an endemic species of the Cape York Peninsula.

7. *A. peregrina*, New Guinea Salwood, is an endemic species of New Guinea.

8. *A. wetarensis*, Wetar Salwood, is an endemic species of the Indonesian Island of Wetar.

In addition to the above there are four Queensland variants that await further study. One of these, *Acacia* sp. aff. *Midgleyi* 'Percy Isles'; only known from the Middle and South Percy Isles belongs to the *A. crassicarpa* subgroup and its closest relative is probably *A. midgleyi*. It is a small tree, usually with a wide-spreading crown, variable sized phyllodes with 46 minor nerves per mm (separated by a distinct inter-nerve space). Flower spikes pale yellow to lemon yellow, 2-3 per axil, ovary completely hair-less. Pods woody, seeds brown with a short whitish funicle/aril. (Specimens cited in the revision include 3 collected in 1989 by Batianoff, Champion, Thompson and Dillewaard. This was during our Percy Isles expedition an unforgettable 10 days spent exploring the botanical and scenic wonders of the Percy Isles.)

Terms:

aril: - an appendage on the outside of a seed formed by an expansion of the stalk of the ovule.

dorsal: - on the back of an organ, opposite of ventral

funicle: the stalk of an ovule.

phyllode: - a flattened petiole that functions as a leaf.

Irene Champion

(Reproduced from "The Graptophyllum", Newsletter of the Mackay Branch, No. 187 July/August 2002)

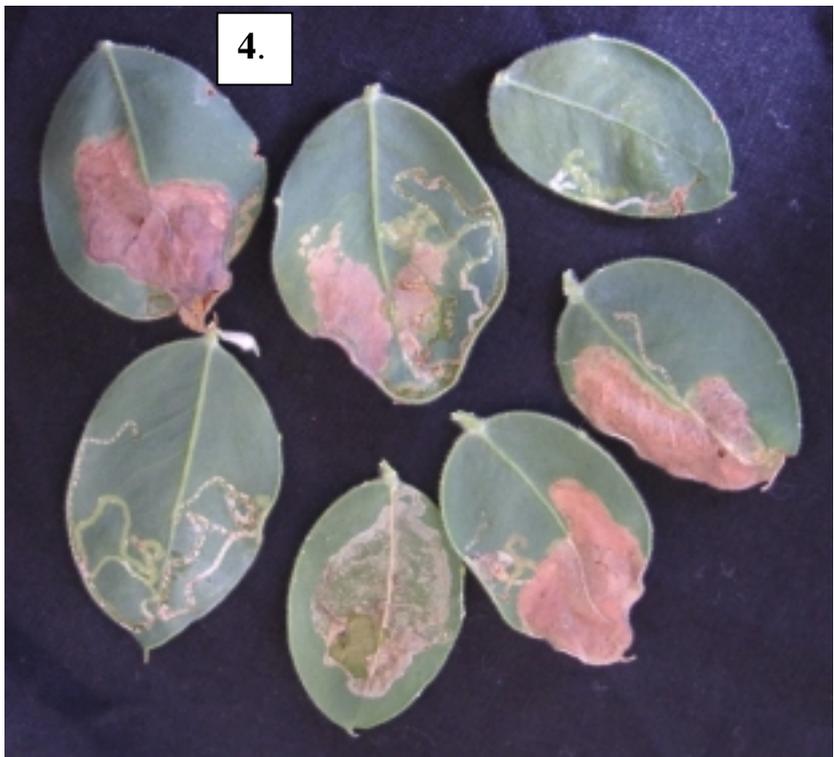
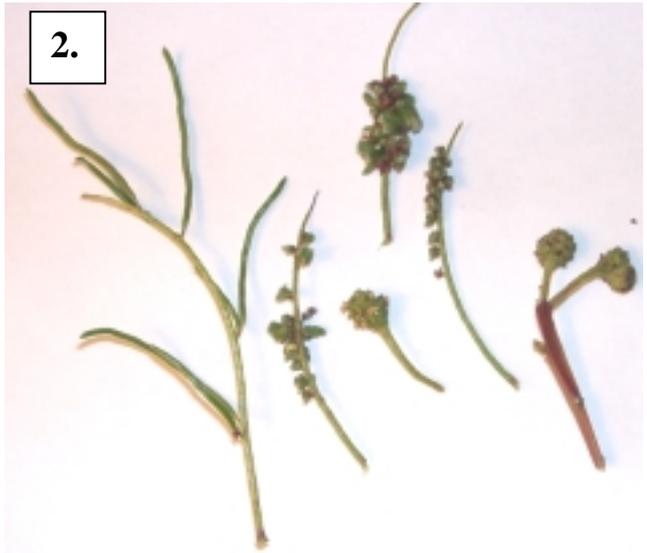
Seedling vigour

A few members have suggested that older seed may germinate but that the seedlings lack vigour and are difficult to grow on. I have some plants from old seed growing but do not recall the degree of difficulty I had in getting them to the stage where I could plant them out. Certainly in some cases

I have grown many seedlings to have only a couple of survivors (my conditions?). Fred Mazzaferri has agreed to trial a couple of species where both old (30years) and fresh seed is available. Any other takers? Comments on this would also be greatly appreciated.

Black and white photos

1. We often read about the large number of insects which utilise acacia flowers and this, not very good photo, gives some idea of the range. Half a dozen clumps of *A.podalyriifolia* flowers were shaken into a plastic container and methylated spirits was added. I have picked out one specimen of each type of insect or spider and they have been arranged in a circle 2.5cm in diameter. This gives some idea of how small the insects and spiders are. In some cases only one specimen was present eg one lacewing, in others eg some beetles, over 10 of each type was present. There were 11 types of beetles, 6 bugs, 5 wasps, 1 lacewing, 1 thrip, 2 caterpillars, 1 ant, 1 fly, 1 aphid, 1 psocid, 7 spiders and some larvae which I couldn't identify.
2. A sign of the drought and lowered resistance? Some plants of *A.leiocalyx* are setting very few seed pods. Most flowers are parasitised and producing galls instead of pods. The normally developing pods are on the left.
3. Seedlings of *A.podalyriifolia* attacked by leaf miners - in this case larvae of a very small moth, *Acrocercops plebeia*.
4. Close up of the leaves. The tiny flattened larva initially feeds in a tunnel but as it grows it hollows out large areas in the leaf and these eventually die leaving a brown blotch. In the meantime the larva leaves the leaf and pupates on the surface of the plant. The adult moth has narrow fringed wings. These larvae were in about 70% of the seedlings of *A.podalyriifolia* in a nursery making the seedling commercially unattractive. After the initial attack new, healthy leaves appeared but these are now mined presumably by the second generation of larvae. Unfortunately systemic pesticides must be used to prevent the cycles continuing in this situation. In smaller number of seedlings the larvae can be located and individually squashed. Large plants can look very unattractive with a heavy infestation but improving growing conditions may be the best treatment.
5. This is the watering bucket I use in the present weather. I thought it may be of interest to members in a similar situation to mine. Basically this is a bucket with a dripper tube fitted at the base. When some soils are dry it is difficult for water to penetrate and hosing or pouring on water is a waste of time. This bucket largely overcomes the problem by feeding the water slowly. The tip of the tube is placed at the base of the plant and the bucket filled. The bucket usually takes 30 minutes or more to empty depending on the length of the tube and it can then be moved to the next plant. By watering this way a check can be kept on exactly how much water a plant is receiving. The bucket can be refilled or a number of buckets placed on larger plants. One ten litre bucket of water will usually keep a well mulched seedling happy for a week in dry weather at Booie. I even use the buckets in Brisbane though we have reticulated water as I can then be sure the water is penetrating the soil. The disadvantages for me include the large number of buckets that have to be stored (I always plant lots of seedlings just before a dry spell) and the clogging of the tubes with the nests of wasps.
6. The 4mm tubing can be purchased in a variety of roll lengths.
7. A hot nail, of appropriate diameter, held in a pair of pliers is used to make a hole near the base of the bucket. This fitting is screwed in before the plastic has cooled.
8. The required length of tubing is pushed onto the other end of the fitting.



Seed Bank

An updated seed list is included with this newsletter. As you will see fresh seed of eight more species has been added. Thanks to Hazel Kelly for fresh seed of *A. decora* and *venulosa*. Rob Potter's seed testing results do not include the dates of the seed batches tested. He tested the oldest seed batch for each of those species but in some cases younger batches are available. If you order seed I'll let you know the status and date of the seed I send .

This year, with the current drought conditions, I doubt that I will have much seed set at Boonie so will not be able to add to the bank. If you are in a better situation please think about collecting for the seed bank. I will reimburse you for the cost of postage. Donations of any seed in any quantity are welcome. So many of even the common species in the bank have seed which is over 20 years old and even a small quantity will allow another member to grow that species. Seed from commercial sources is a last resort.

Does anyone have seed of *A. gunnii* they could donate? I have had a request for it that I am unable to fill even from commercial sources. Another species in demand is *A. flexifolia*.

Coloured plates

1. *A. chinchillensis* growing in the garden of Bev Leggett in suburban Brisbane. The soil is probably fill over clay but the position is well drained. This is a second generation cultivated plant and the parent was also grown in Brisbane.

This is a magnificent small acacia which grows to a maximum of 2m. It has small, silvery, bluish green, true leaves which give the plant a delicate appearance. Flowering is in spring.

It has a very limited distribution near Chinchilla and Tara which are on the western edge of south east Qld. It grows naturally in sandy soil in a low rainfall area so shows a high degree of adaptability to be growing so well in a much higher rainfall.

2. Close up of flowers and leaves of *A. chinchillensis*.

The following two species are growing at Leon Steinhardt's property west of Brisbane and were photographed at his Field Day. The soil here is infertile, sandy loam over clay varying in depth from 45 to 100mm. Below this is soft sandstone with a depth of about 2m to hard sandstone. Frost is rare.

3. *A. cretata*. This photo does not do credit to a really striking large shrub as flowering is not good in the severe dry Leon is experiencing. At this time of year it is usually covered with bright yellow flowers which contrast beautifully with the silvery phyllodes. This plant is about 7 to 8m tall which is the usual maximum.

It has a limited distribution with the focus at the Blackdown Tableland (a sandstone area) in central Queensland .

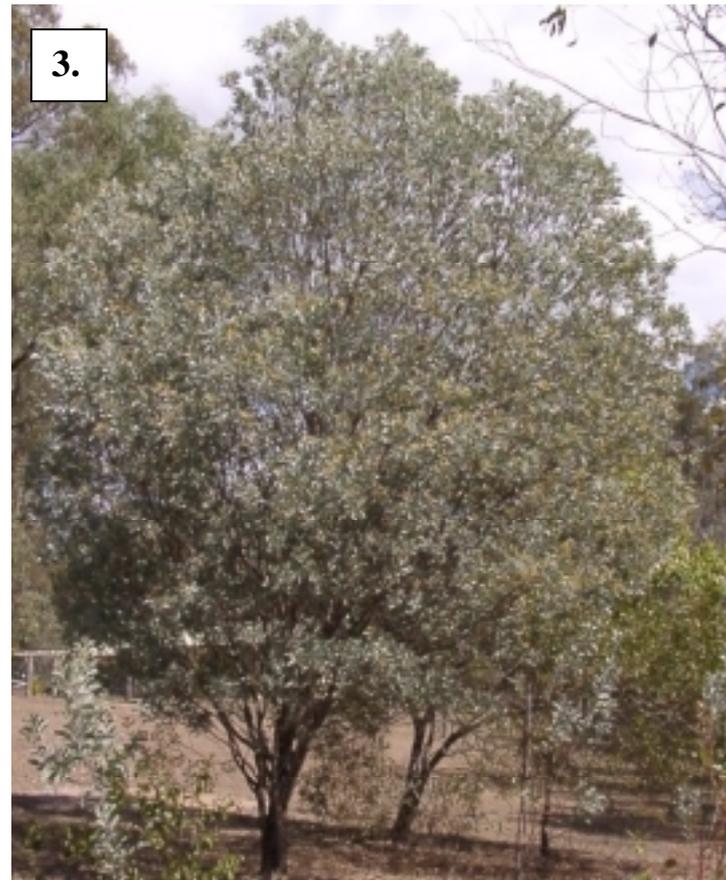
4. Close up of the flowers and phyllodes of *A. cretata*.

5. *A. hakeoides*. The parent plant which is about 2m high and not yet flowering is in the background with 1m high flowering suckers in the foreground.

This is a wide ranging species occurring in drier areas of all mainland states usually on sandy soil. It is rare in Qld occurring only in southern parts. The suckering seems to occur in areas of better rainfall only.

It may reach 5m in height, presumably in better soils, is showy in flower and very tough.

6. Close up of flowers and phyllodes of *A. hakeoides*.



ACACIA STUDY GROUP SEED LIST AUGUST 2002

18 packets maximum in each order (negotiable). Limit of 3 orders per member per year. Please include a 230 x 100mm stamped addressed envelope for orders of 12 or fewer packets where only a small number of seeds are required (6 or less per packet).

For orders of over 12 packets or where a larger number of seeds are required please include \$1.65 in stamps to cover the cost of a padded post bag and postage.

The numbers after the names indicate the year in which the seed was collected if it is known.

- | | | |
|----------------------------|---|-------------------------------------|
| acanthoclada pre 01 | <i>baxteri</i> pre 01 | <i>crassicarpa</i> 78 |
| acinacea | <i>beauverdiana</i> pre 01 | <i>crassiuscula</i> 79 |
| acradenia pre 83 | beckleri 82 | <i>crassuloides</i> pre 85 |
| aculeatissima 81 | betchei | cretata 85 |
| acuminata 78 | bidwillii 83 | cultriformis 01 |
| adsurgens 81 | biflora | <i>cupularis decora</i> pre 01 |
| adunca 83 | binata 80 | curranii |
| aestivalis 90 | binervata 83 | curvata 73 |
| aff beauverdiana | binervia 78 | curvinervia 81 |
| aff boormanii 84 | bivenosa pre 86 | cuthbertsonii 71 |
| aff coolgardiensis | blakei 86 | cyclops 78 |
| aff desertorum pre 79 | blakelyi | <i>cyperophylla</i> pre 00 |
| aff ericifolia Pre 85 | boormanii 91 | |
| aff longifolia pre 79 | brachybotrya pre 84 | dawsonii |
| aff microcarpa pre 73 | brachystachya | dealbata 80 |
| aff multispicata pre 89 | brevifolia 01 | deanei pre 83 |
| aff myrtifolia pre 85 | brassii 81 | debilis 78 |
| alata pre 77 | browniana 81 | declinata prostrate pre 90 |
| alcockii pre 01 | browniana v intermedia 80 | decora 01 |
| alleniana pre 01 | brunioides 87 | decurrans pre 81 |
| amblygona 81 | burkittii | <i>deficiens</i> pre 01 |
| amoena | burrowii 84 | deflexa pre 90 |
| ampliceps pre 83 | buxifolia 82 | delphina 79 |
| anaticeps 85 | bynoeana 84 | <i>demissa</i> pre 01 |
| anceps 82 | | dempsteri |
| ancistrocarpa 81 | caerulea (Buchan Blue) 90 | denticulosa 86 |
| andrewsii 01 | caesiella 84 | dentifera |
| aneura 71 | calamifolia pre 82 | dictyoneura pre 89 |
| aneura v macrocarpa pre 98 | calantha 87 | dictyophleba |
| angusta 84 | calyculata 87 | dielsii pre 85 |
| anthochaeta pre 94 | <i>campagei</i> pre 01 | diétrichiana 90 |
| aphylla 89 | <i>camptoclada</i> pre 01 | difficilis |
| <i>applanata</i> pre 01 | cana pre 89 | difformis pre 96 |
| aprepta 81 | cardiophylla 82 | dimidiata pre 01 |
| araneosa 90 | caroleae 84 | <i>diphylla</i> 01 |
| argyraea 85 | celestifolia | divergens 78 |
| argyrophylla 79 | cheelii 78 | dodonaefolia 71 |
| arida 82 | chinchillensis 91 | donaldsonii pre 84 |
| arrecta pre 90 | chisholmii 90 | doratoxylon 01 |
| ashbyae pre 82 | chrysellia pre 84 | drepanocarpa pre 80 |
| aspera 78 | chrysocephala 80 | drewiana 82 |
| assimilis 94 | cincinnata pre 81 | drummondii dwarf pre 79 |
| atkinsiana | citrinoviridis pre 81 | drummondii ssp affinis pre 83 |
| attenuata 85 | clunes-rossei pre 86 | drummondii ssp candolleana pre 84 |
| aulacocarpa 85 | cochlearis 83 | drummondii ssp drummondii pre 89 |
| <i>aulacophylla</i> pre 01 | cognata pre 84 | drummondii ssp elegans |
| auriculiformis 01 | colei pre 94 | drummondii ssp grossus pre 83 |
| ausfeldii 82 | colletioides | dunnii 85 |
| axillaris 92 | cometes | |
| | complanata 84 | elata |
| baeuerlenii 79 | concurrans 01 | elongata 78 |
| baileyana 98 | conferta 01 | empelioclada pre 82 |
| baileyana aurea | continua 82 | <i>enervia ssp explicata</i> pre 01 |
| baileyana prostrate 88 | coolgardiensis pre 94 | enterocarpa 83 |
| baileyana purpurea 99 | coriacea 90 | ephedroides pre 82 |
| bakeri | <i>coriacea var sericophylla</i> pre 01 | eremaea pre 81 |
| bancroftiorum 01 | covenyi pre 96 | eremophila pre 85 |
| barattensis | cowleana 82 | ericifolia |
| barrintonensis 79 | craspedocarpa 01 | erinacei pre 88 |
| | crassa | eriopoda pre 88 |

estrophiolata 93
 euthycarpa
 everistii pre 90
 excelsa pre 90
 exilis pre 82
 exocarpoides
 extensa 80

 falcata 01
 falciformis 84
 farinosa pre 84
 fasciculifera 85
 fauntleroyi 81
 filicifolia pre 86
 filifolia 81
 fimbriata 01
 flagelliformis pre 96
 flavescens 81
 flexifolia 78
 flocktoniae 78
 floribunda pre 82
 fragilis 84
 frigesens pre 96

gemina pre 01
 genistifolia 84
 georginae pre 87
 gilbertii pre 84
 gillii pre 83
 gittinsii 01
 gladiiformis 79
 glandulicarpa 83
 glaucescens 97
 glaucissima pre 96
 glaucocarpa 78
 glaucoptera 01
 gnidium 01
gonocarpa pre 01
 gonoclada
 gonophylla
 gordonii 91
 gracilifolia 82
 grandifolia 84
 granitica
 grasbyi pre 96
 gregori pre 83
 guinetii pre 82

 hadrophylla pre 96
 hakeoides 01
 halliana pre 96
 hamersleyensis pre 88
 hamiltoniana pre 01
 hammondii pre 86
 handonis 87
 harpophylla
 harveyi pre 80
 hastulata pre 96
 havilandiorum
 helicophylla 86
 hemignosta 81
 hemiteles pre 82
 hemsleyi 84
 heteroclita
 heteroneura
hexaneura pre 01
 hilliana pre 01
 holosericea 82
 holotricha 85
 horridula pre 84
 howittii pre 83
 hubbardiana pre 85
huegelii pre 01

 hyaloneura 72
hystrix pre 01

 idiomorpha pre 96
 imbricata 89
 implexa pre 82
 inaequilatera pre 80
 inaequiloba
 incurva pre 96
 inophloia 78
intricate pre 01
 irrorata
 iteaphylla 86
 ixiophylla 75
 ixodes 84

 jamesiana pre 81
 jennerae 80
 jensenii pre 01
 jibberdingensis pre 82
 johnsonii pre 01
 jonesii pre 85
 jucunda
 julifera pre 88
 juncifolia 01

 kempeana pre 81
 kettlewelliae 89
 kybeanensis pre 82

 laccata pre 84
 lanigera 84
 lanuginosa pre 81
 lasiocalyx 78
 lasiocarpa 84
 lateriticola pre 83
 latescens pre 83
 latipes 95
 latispala pre 86
 lauta 01
 lazaridis
 leichhardtii
 leiocalyx 01
 leioderma pre 83
 leiophylla pre 88
 leprosa 85
leptalea pre 01
 leptocarpa pre 97
 leptoclada 84
 leptoloba 81
 leptoneura pre 80
 leptopetala pre 80
 leptospermoides 83
 leptostachya pre 81
 leucoclada 78
 ligulata
 ligulata prostrate 79
 ligustrina
limbata pre 01
lineariifolia pre 01
 lineata 82
 linifolia pre 90
 linophylla pre 83
 littorea pre 80
 loderi 78
 longifolia pre 82
 longipedunculata
 longiphylloidea
 longispicata 81
 longissima
 longispinea
 loroloba 81
 loxophylla v nervosa

 luteola 80
 lysiphloia

 mabellae pre 82
 macdonelliensis
 macradenia 01
 maidenii pre 90
 maitlandii
 mangium 81
 maranoensis 86
marramamba pre 01
 maslinii pre 97
 mearnsii 85
 megacephala pre 79
megalantha pre 01
 meiosperma 87
 meisneri
 melanoxyton 02
 melliadora 87
 melvillei 85
 menzelii pre 89
 merinthophora pre 80
 merrallii pre 80
 microbotrya 75
 microcarpa 78
 mimula pre 90
 mitchellii
 moira v dasycarpa pre 82
 mollifolia 80
 montana 01
 monticola 85
 mooreana 75
 mountfordiae pre 83
 mucronata 74
 mucronata v longifolia 78
 muelleriana 01
 multisiliqua 87
 multispicata pre 82
 murrayana pre 84
 myrtifolia
 myrtifolia WA 80

 nematophylla
 neriifolia 81
 nervosa pre 80
 neurophylla
 neurophylla ssp erugata
 nigricans 90
 nitidula pre 89
 nodiflora v ferox pre 85
 notabilis pre 88
 nuperrima
 nuperrima v cassitera 87
 nysophylla 79

 obliquinervia pre 88
 obovata pre 80
obtecta pre 01
 obtusata 78
 obtusifolia
 oldfieldii pre 85
olsenii pre 94
 omalophylla pre 81
 oncinocarpa pre 90
 oncinophylla
 oraria pre 83
 orthocarpa pre 82
 oswaldii 90
 oxycedrus 80
 oxyclada pre 94

 pachyacra pre 84
 pachycarpa pre 90

palustris pre 97
 paniculate
 papyrocarpa 80
 paradoxa 01
 paraneura 01
 parramattensis
parvipinula 01
preissiana pre 01
 pataczekii 91
 patagiata pre 97
 pellita
 pendula 86
 pellita 01
 penninervis pre 84
 pentadenia pre 79
 perangusta
 peuce pre 84
 phlebocarpa 81
 phlebopetala 81
 pilligaensis 75
 pinguifolia 83
 platycarpa 80
 plectocarpa
 podalyriifolia 80
 polybotrya 01
 polyfolia 84
 polystachya
 prainii pre 90
 pravissima 73
 preissiana 01
 prominens 90
 pruinocarpa
 pruinosa
ptychoclada pre 01
 pubescens 79
 pubicosta pre 90
 pubifolia pre 85
 pulchella
 pulchella hairy form 83
 pulchella v glaberrima pre 83
 pulchella v goadbya pre 81
 pustula 82
 pycnantha pre 85
 pycnostachya 01
 pyrifolia 82

quadrilateralis pre 01
quadrilmarginea pre 01
quadrisulcata pre 01

 racospermoides
 ramulosa
 redolens 80
 redolens prostrate pre 96
 restiacea 91
 retinodes 84
 retivenia 85
 rhetinocarpa pre 90

 rhigiophylla pre 80
 rhodophloia pre 87
 riceana
 rigens pre 88
 rivalis 82
 rossei 81
 rostelifera pre 82
 rothii pre 90
 rotundifolia
 rubida 85
 rupicola 91
 ruppil pre 01

sabulosa pre 01
 saliciformis
 salicina pre 83
 saligna 89
 schinoides pre 82
 scirpifolia 78
 sclerophylla pre 89
 sclerophylla v lissophylla pre 81
 sclerophylla v teretiuscula pre 88
 sclerosperma pre 88
 semilunata 01
 semirigida 78
 sessilis pre 90
 sessilispica pre 85
 shirleyi
sibina pre 01
 siculiformis 79
 signata pre 81
 silvestris 71
 simsii pre 83
 sophorae 78
 sparsiflora pre 98
 spathulata
 spathulifolia pre 90
 spectabilis 01
sphacelata pre 01
 spinescens 89
 spondylophylla pre 88
 squamate pre 80
 steedmanii pre 82
 stenophylla 82
 stenoptera
 stereophylla
 stipuligera pre 89
 stowardii pre 98
 striatifolia 01
 strigosa 79
 stricta pre 83
 suaveolens 82
 subcaerulea 81
 subflexuosa pre 93
 subglaucasublanata 72
 subulate 82
 sulcata 80
synchronicia pre 01

 tanumbirinensis
 tenuissima 01
 teretifolia
 terminalis 72
 terminalis Katoomba type 79
 tetragonoca
 tetragonocarpa
 tetragonophylla
tetraptera pre 01
tindaleae pre 01
 torulosa 81
 trachycarpa
 trachyphloia
 translucens 82
 trigonophylla 83
 trinervata 79
 trineural
 triptera
 triptycha 79
triquetra pre 01
tropica pre 01
 truncata 79
 tumida pre 76
 tysonii

 ulicifolia 78
 ulicifolia v brownii 81
 ulicina 85
 umbellata 01
 uncifera
 uncinata 84
 uncinella
 urophylla

 validinervia
 varia v parviflora
 venulosa 01
 verniciflua 82
verricula pre 01
 verticillata 83
 vestita 83
 victoriae 01
 viscidula 72

wanyu pre 01
 wardellii 85
 wattiana 71
wickhamii pre 01
wildenowiana pre 01
 wilhelmiana 79
williamsoni pre 01

 xanthina 88
 xanthocarpa
 xiphophylla 81

Thanks to Marion Simmons for sorting out some of the unknowns

Current Financial Members

Bonnie Addison-Smith	972 Hermitage-Emu Vale Rd, Junabee, 4370
Eric Anderson	55 Nestor Ave, Bardon, 4065
Aust National Botanical Gardens	GPO Box 177, Canberra, 2601
Aust Plant Soc - MacArthur Group	1150 Werombi Rd, Werombi, 2570
Aust Plant Soc Blue Mountains Group	12 Grandview Ave, Seven Hills, 2147
Jeff Irons	Stonecourt 74 Brimstage Rd, Weswall, Wirral CH60 1XG ENGLAND
Pat Barry	22 Barfoot St, Brackenridge, 4017
Winifred Bennet	22 Echuca Rd, Greensborough, 3088
Jim Brooks	86 Taunton Street, Annerley, 4103
Gerard Cavatore	Bormes les Mimosas, France, 83230
R. Christey	39 Tagell Rd, East Ringwood, 3135
Bruce Clarke	'The Elms', Panmure, 3265
Len Coe	'Waratah', Booie Rd, Booie
Irene Cullen	7 Braddock St, Robertson, 4109
Henri De Bono	606 Ave Raymond Rolland, 83700, Saint Raphael France
Malle Eden	220 New Jerusalem Rd, Oakdale, 2570
Thais Eisen	86 Taunton Street, Annerley, 4103
Ken & Elizabeth Forbes	P.O. Box 208, Nowra, 2541
Harry Franz	MS 652, Goomeri, 4601
N. Alan F. Gibb	R.M.B. 1170, Milawa, 3678
Jan Glazebrook	87 Daintree Dr, Logan Village, 4207
Hazel Kelly	PO Box 20, Moonbi, 2353
Bruce Maslin	George Street, South Perth, 6151
Fred Mazzaferri	64 Roselea St, Shailer Park, 4128
Dr Max A McDowall	10 Russell St, Bulleen, 3105
Jean Merson	PO Box 1127, Bairnsdale, 3875
Margaret Moir	RMB 261A, Margaret River, 6285
Lorna Murray	P.O. Box 571, Mt Ommaney, 4074
Ron Nicholson	MS 780, Kingaroy, 4610
Barry Nilsson	115 Pebbly Hill Rd, Maraylya, 2765
Bob & Dot O'Neill	49 Hunter Rd, Wandin, 3139
D.D. Parsloe	95 O'halloran Circuit, Kambah, ACT 2902
Rob Potter	21 Mingara Av, Stonyfell, 5066
Peter Reynolds	18 Myrene Av, Tamworth, 2340
June Rogers	RMB 5361, Horsham, 3401
Suzette Searle	23 Cackle St, O'Connor, ACT 2602
SGAP Brisbane Daytime Group	213 Loganview Rd, Logan Reserve, 4133
SGAP Geelong Inc	P.O. Box 2012, Geelong, 3220
SGAP Kingaroy Branch	P.O. Box 511, Kingaroy, 4610
Warren & Gloria Sheather	Bundarra Rd, Armidale, 2350
Stephen Shugg	6 Ferris St, Kamah ACT, 2902
John & Marion Simmons	PO Box 1148, Legana, 7277
Bruce Skinner	31 Monard Rd, Aberfoyle Park SA, 5159
Brendon Stahl	Deans Marsh, RSD Birregurra, 3242
Stan Webster	Anderson's Hill, via Mullumbimby, 2482