

S.G.A.P. ACACIA STUDY GROUP
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Dear Members

Plants in our garden are confused by the so far milder than usual winter conditions and many of the Acacias have started flowering a month or more ahead of their normal flowering time. It certainly looks good!

Now is the time of year to check your seed supplies and choose the species you would like to try this spring. I have ordered the following seed from the current seed lists:-

A. chrysellae
drummondii ssp *candolleana*
drummondii 'grossus'

A. horridula
humifusa
lazaridis

A. ligustrina
wanyu
willdenowiana

ADDITIONS

araneosa
bidwillii
megacephala ?
multisiliqua
subtilinervis

DELETIONS

gordonii
lanigera
lycopodiifolia
pataczekii
plicata
sparsiflora

Strangely, although *A. lanigera* occurs over a fairly wide area of Vic and NSW, its seed is not listed in the seed lists which I have to hand. So, surplus seeds of any of the deletions or those not already on the list are always welcome. Please state when and where the seed was collected and whether from bush or garden. My thanks to those members who forwarded seed to the bank.

NEW MEMBERS - Welcome

Mr Eric Anderson, PO Box 689, Rockhampton, Qld 4700
Mr Bruce Maslin, WA Herbarium, George St, South Perth, WA 6151
Mr M H R Hunt, Caves Rd, Wellington, NSW 2820

SUBSCRIPTIONS

I would like to again remind you that 1984 subscriptions for \$3 are due. Regretfully, this must be your last newsletter unless your sub is received before November. A red cross on your newsletter will indicate your financial standing. These comments do not apply to those members who have joined us in the last few months.

FINANCIAL REPORT to 30 JUNE 1984

Balance 30 Jun 1983	151.60	
Subscriptions & Donations	190.60	
Interest	<u>4.43</u>	346.63
<u>Expenses</u>		
Stationery	41.90	
Seeds	15.00	
Postage	89.00	
Printing	30.25	
Stamp Duty	<u>4.50</u>	<u>180.65</u>
		<u>\$165.98</u>

EXTINCT AND ENDANGERED PLANTS OF AUSTRALIA

Extracted from the above publication written by J. Leigh, R. Boden and J. Briggs, published by MacMillan, 1984.

About 113 species of Acacia were listed in the earlier "Rare and Threatened Australian Plants", including 8 classified as endangered and 2 presumed extinct.

Those Acacias listed and described in the present book are:-

<i>A. anomala</i>	<i>A. pinguifolia</i>
<i>aphylla</i>	<i>prismifolia</i>
<i>araneosa</i>	<i>pubescens</i>
<i>depressa</i>	<i>tayloriana</i>
<i>menzliei</i>	<i>vassalii</i>

One or two are well known, being grown in botanical and other gardens, while others are reportedly unknown in cultivation. All are under severe threat from many sources such as agriculture, road making, forestry etc. Two species from WA (*A. prismifolia* and *A. vassalii*) are listed as being extinct, not having been collected since 1933 and 1939 respectively.

CARE WHEN COLLECTING

Most of us are aware of the care we should take when collecting in the bush, but I think that these points which were made in the above publication could well be repeated.

We should –

1. Observe all local regulations and obtain "permits to collect".
2. Not collect entire plants but restrict collection to seeds, cuttings and offsets.
3. Limit the amount of material taken.
4. Record details of locality, altitude, vegetation, and soil types.
5. Note possible threats from any source such as road making, clearing etc and report observations to nearest conservation body or botanic garden.
6. Take photographs and a pressed flowering specimen of each species collected.

MELBOURNE WILDFLOWER SHOW – MAROONDAH GROUP

In response to my request in our last newsletter, Max McDowall has offered to help set up and man the Acacia display at the show. Thank you, Max. I hope that other members will offer their assistance too.

SGAP FOOTHILLS GROUP SPRING SHOW

A letter requesting our participation has been received from the above group. In place of the usual "test-tube" type specimen exhibit they envisage featuring the fact that SGAP as a society has Study Groups. Their own members will contribute specimen material to illustrate as many of the Study Groups and their work as possible. They ask if our members in or near Melbourne could supply additional specimens. Would members who are in a position to help please contact Mrs V Marburg, Secretary, PO Box 65, Boronia Vic 3155. Thank you.

AUSTRALIAN FLORA FOUNDATION

Several replies have been received to my request for suggestions of worthwhile study areas. These include:

- 1 (a) How best to break hard seeded species?
eg hot water – how hot for how long
acid – concentration, for how long
- (b) Which species have seeds which are not hard?
- (c) Longevity of all species but especially of soft coated seeds.

2. To consider the adaptability of native plants taking into account the great variation between the way some species readily and successfully adapt to greatly different soils and climatic conditions while others will only grow in a very narrow range of soil types and climatic conditions.

ACACIAS FROM 'LEAF CUTTINGS'

Frank Berner has tried some small leaved species (*A. acinacea*, *amoena*, *buxifolia*, *drummondii*, *imbricata*, *lanuginosa*, *rigens* and *truncata*), leaving a small section of branch 2-3mm long at the base of each leaf. He tried two methods, using coarse sand and peat moss with each.

Lot 1 was placed in a greenhouse and sprayed regularly with fine mist.

Lot 2 had soil dampened and then was covered with a bottle and placed in greenhouse.

All failed. Frank will try again in warmer weather when I am sure his results will be better.

MEMBERS' NOTES

Keith Ingram mentions that both he and Alex Floyd agree "that whereas it may be only a constituent of undisturbed Blue Mountains rainforests, once they are logged *Acacia melanoxyton* is the fastest of the tree flora to regenerate and coachwood the slowest, so that our rainforests on regeneration are no longer sassafras/coachwood dominated, but melanoxyton/sassafras". He asks "how come these rainforests weren't the latter in the first place?"

Betty Chandler is very pleased with her *Acacia alata* ssp. *alata* pale flowered though it is, it is densely foliated and very profusely flowered. The same ssp. does very well here in Tasmania.

David Fitzgerald of SA has restricted his growing to pot culture for the present. He has an *A. deanei* which is now in a 13" pot, it is 2.5m tall and in March was flowering beautifully which it had done for almost a year. Others to flower early were *A. havilandii*, *A. buxifolia*, *A. polybotrya*, *A. spectabilis*, *A. continua*, *A. stenoptera* and *A. spinescens* etc. The smaller ones seem quite happy in even 8" pots and flower and thrive well. David has an *A. melanoxyton* in a 13" pot which is around 2.5m tall but with no sign of flowers.

Lindsay Daniels of Biloela, Qld, writes that he has grown *A. melanoxyton* there. He finds that it is easy to grow in the early stages but is not drought tolerant though he thinks that if it were adequately watered it would grow there quite successfully.

Paul Brown from Townsville recommends *A. hilliana* as a satisfactory small shrub about 30cm tall for climates similar to his own. This plant flowers well for a long period. He mentions *A. monticola* too.

Allen Foster of Warners Bay, NSW, has been conducting seedling trials with Acacia placing all seeds in 90% coarse river sand and 10% peat. The control was exposed to the elements and the test lot were given bottom heat and light misting once a day. He tried 24 species planted in February, after 60 seconds in boiling water, soaked overnight and potted on into 38mm diameter tubes after germination. Soil mix 66% coarse river sand, 33% peat, 1% ?? Losses nil.

The germination times varied from:

Control	7-50 days with the exception of 4 species
Test	7-50 days with the exception of the same species

The percentage germination also varied from 10-75% for the control, 10-80% for the test. The conclusions Allen has drawn are "marginal percentage increase in test germination may not indicate the true difference between it and the control group as conditions under the control group were almost duplicated by the weather – low germination rates."

ACACIA DISTRIBUTION PROJECT

Paul Brown is taking part and has made an interesting comment which I feel should be noted by other members. One thing that struck Paul was how collectors have taken things for granted simply because a plant is very common in an area. To illustrate his point, he mentioned that he failed to lodge a specimen of *A. flavescens* that he collected at St. Lawrence in central Qld, as he was sure someone would have done so. This was not so. In the other instance

A. simsii was featured as a typical local plant at the State (Qld) conference in Mackay last year and in fact, everyone was given a small packet of seed. He found that it had not been officially recorded for that area!

ACACIA SLIDE LIBRARY

It is interesting to note that the Eucalyptus Study Group slide library is in almost constant demand and I have been overwhelmed by the receipt of four (4) slides, three from one member and one from a non member and an offer from another member. My sincere thanks to them for their support. Surely there are more than four spare slides out there waiting to be used in the cause of encouraging more people to grow Australian plants.

Slides received are 2 *A. alata*, 1 *A. sp.* from Esperance and 1 *A. islana* from Qld.

Please, let's have a bit more enthusiasm.

BOOKS ... BOOKS

You may be interested in these:

Flora of South-eastern Queensland Vol 1 by Stanley & Ross, Qld Govt 1983. There will be three volumes. Qld Acacias (140) are described with a few line illustrations of flowers, leaf and legume types. There is a comprehensive key, too.

Pilbara Coastal Flora, G. F. Craig, WA Department of Agriculture 1983. An interesting small local flora describing and illustrating among others, 9 species of Acacia; colour production.

Another local field guide, **Native Trees of ACT**, National Parks Assn of ACT, 1983. A key is included as well as short descriptions and clear line drawings of 14 Acacias of the area.

Australian Medicinal Plants, Lassak & McCarthy, Methuen 1983. 27 Acacia species are listed and described briefly with notes on their reported, but not necessarily endorsed uses.

REVEGETATION AT WEIPA

I read with great interest in the March Eucalyptus Study Group newsletter of the regeneration program and research which Comalco has undertaken since 1966 at Weipa. Once an area has been "mined out", it is then graded, contoured and generally prepared for planting. To date about half of the mined area has been restored to Open Forest similar to the natural forest. The Acacias used in the project are:

A. dimidiata, *A. leptocarpa*, *A. platycarpa*, *A. rothii*, *A. simsii* and *A. torulosa*.

NEWSPAPER CUTTINGS

Several members have forwarded me different newspaper cuttings for which I am most grateful.

From the Weekly Times, March 21, 1984 – "SAYING IT WITH FLOWERS CAN BE VERY COSTLY – For instance, organisers of an international flower show in New York recently insured a group of 50 yellow acacia flowers with Lloyds of London for over 1 million pounds."

Maybe we appreciate the value of Acacia in the Australian landscape and as a soil improver but I am sure that none of us would have placed such a price on their heads!

Headings such as "WATTLE MAY BLOSSOM AS A FOOD OF THE FUTURE", "WHEN IT COMES TO PROTEIN, OUR WATTLE IS A WINNER", and "ACACIAS HAVE POTENTIAL FOR OILSEED PRODUCTION" indicate a newly found interest in our favourite plant as a food source and I feel that we should all be aware of the research that is being undertaken at present and in the future.

One article in the University of Sydney News, June 1984 reports that “the seeds of Australia’s national flower, the Acacia (wattle) generally unknown as a food source, have considerable potential for breadmaking and oilseed production”.

The University’s Human Nutrition unit has been analysing bushfoods as eaten by Aboriginals and has found that seeds of nine of twelve edible species tested are “strikingly nutrient rich with higher energy, protein and fat contents than crops such as wheat, rice and some meats.”

The protein levels of the Acacias analysed range between 17-27% (the protein content of wheat is reported to be 11-12%). The Acacias named were *A. aneura*, *A. coriacea*, *A. dictyophleba*, *A. estrophiolata*, *A. kempeana*, *A. murrayana* and *A. tenuissima*.

Also it is thought that some of the Acacias analysed have a high proportion of polyunsaturated fats which could make them suitable for oilseed production. Acacia seeds also are very high in trace elements.

We are warned that not all Acacias are edible and that some are poisonous to humans and animals. The most palatable of those tested are *A. coriacea* and *A. tenuissima*. Seeds of *A. coriacea* taken at the immature green stage, then steamed from the pod and eaten are said to have a delicious flavour and to make it even better, a protein content of about 24%.

The study material has come mainly from northern Queensland, central and northern Australia, but collections are now coming forward from other states which will extend the range of food tested.

As we know, most Acacia seed stores very well and for a long time and was once a staple food of many inland tribes. It is known from early settlers’ descriptions that the Aboriginals stored up to 1000 kilograms of Acacia seeds in wooden containers high up in the trees.

The study also examined other native plants, seed and fruits which had been more or less ignored before in terms of their food value. Over 200 bushfoods were included in the study and many of these appear to be richer sources of nutrients than similar cultivated food plants.

It is ironical that some of the plants which are regarded rather derogatorily as “just scrub” by many people and are cleared away to grow crops, are richer sources of nutrients than the plants that replace them.

COLLECTION OF PLANT SPECIMENS

Jo Walker, Study Group Co-ordinator has sent me notes from an Eremophila S/G newsletter. The point is made that by making a herbarium specimen when we collect cutting material we can contribute valuable information on rarer species. Where few collections are known, additional ones may be quite significant. It enables positive identification and comparison with other forms to be made, and it enables us to show interested persons what the plant looks like and where it was collected, if necessary.

No matter how good you think your memory is, it will let you down in this game. Write down details on the spot.

a. Equipment: (1) small notebook (2) two pieces of 3-ply or similar (45x30cm) for a press (will take half folded newspaper) (3) two straps of cord to bind the press (4) plastic bags for individual cutting collection

b. How to Document –

1. Number each specimen collected.
2. Fill in locality of first of each collection made at a new site and note date. (Locality needs to be specific not just “Sandy Creek”, but “Sandy Creek, 7km west of Lyndoch SA” and its latitude and longitude if possible).
3. Write in name of plant if known. Write notes on species, where it grows and on what (soil type).
4. Wrap your cuttings in moist (not wet) paper, attach collection number, place in plastic bag and seal.
5. Collect two specimens of stem with flowers (and fruits if present) and place between sheets of newspaper. Put your collection number and initials on each specimen (eg AA 50).
6. Number all specimens from each locality separately (even though you collect two or more of the same group) and when you finish a locality draw two lines across the page.
7. When all specimens are placed in newspaper place a board on top and bottom of the papers and tie together with cords compressing specimens. Change papers once or twice or more and keep in airy conditions. A good dried specimen will remain green and flowers retain their colour.

When specimens are dry take a small piece of each and place in a scrap book or your collection book (we put in a piece when we first collect the specimen). Note its number and locality. Send the dried numbered material to the

herbarium in your state and write out all the details from your collectors book and forward with specimens to enable labels to be prepared for each specimen.

Marion Simmons

ACACIA STUDY GROUP NOTES

- handonis*
Qld Shrub to 3m; phyllodes very fine crowded, ± whorled 6-10mm long; flowers very bright yellow large globular spring flowering; Pods with raised, rough surface. Rare decorative species which would require hot dry conditions.
- harpophylla*
Qld, NSW Brigalow. Tree to 25m with deeply furrowed bark. Phyllodes falcate 10-25cm x 7-16mm with main veins; flowers medium yellow balls on short racemes, mainly July – September. Suckers freely; widespread, prefers clay soils.
- harveyi*
sw WA Slender shrub to small tree 4-5m. Phyllodes narrow-linear to 6-8cm x 1-3mm; flowers small globular on slender racemes, usually spring. Large pods to 15cm long. Useful for sandy soils near coast.
- havidandii*
NSW, Vic, SA Glabrous bushy shrub to 3m, very similar to *A. rigens*; phyllodes needle-like, brittle, 4-8cm x c.1mm wide; flowers bright yellow globular (May) August – November. Well drained sunny position; grows well in northern Tas; also suited to alkaline soils.
- helicophylla*
NT Sticky shrub to 4m; peeling bark; phyllodes twisted, oblong, 2-4 longitudinal nerves, 7-9cm x 2-3cm wide. Dense yellow spikes on sticky stalks, June – July. Pods ridged, conspicuous. Found in several sandstone areas in NT near waterfalls.
- hemignosta*
Across Nthn Aust Tree to 10m with light blue-green foliage; variable phyllodes slightly falcate 6-9cm x 9-19mm, 3 longitudinal nerves, reticulate veins; flowers globular, pale yellow usually in racemes, June – August. Pods flat, veined, winged 7-10cm x 1cm. Widespread, but not common; tropical species.
- hemiteles*
sw WA Shrubs rounded 1-2m x 2-3m; phyllodes narrow, one-nerved grey-green, 3-10cm x 4-6mm; flowers small globular bright yellow in short racemes, May – October. Common in loamy woodlands over large areas; requires warm, dry position.
- hemsleyi*
Across Nthn Aust Open shrub to 6m; phyllodes lanceolate 6-12cm x 4-9mm multiple nerves not joining, tip blunt somewhat oblique; flower spikes dense in pairs, occasionally panicles March – August flowering. Confined to stream beds and banks in gravelly sands; tropical species.
- heteroclita*
sw WA Bushy shrub to 2m approximately; young shoots silky-hairy; phyllodes variable linear 4-10cm x 2-9mm, 3 prominent nerves; flowers yellow globular, September-November flowering. Well-drained warm position; reported to withstand salt laden winds.
- holosericea*
Across Nthn Aust Silvery foliaged shrub or small tree to 5m; rough bark; variable, usually large silvery furry phyllodes 10-25cm x 1.5-9.5cm with 3 prominent nerves; flowers very bright yellow spikes in June-August; tangled bunches of coiled pods. Suitable for northern Australian areas.
- horridula*
sw WA Rigid understorey shrub to 1m tall; phyllodes elongated triangular sharp pointed 6-8mm x 1.5-2.5mm; flowers pale yellow globular, May-August. Well drained in sun or partial shade, suitable for coastal planting.
- howittii*
Vic Shrub to small tree to 8m; phyllodes usually sticky ovate-lanceolate 1.5-3cm x 4-10mm, usually 3 nerves; flowers pale yellow, globular in August-October. Hardy suitable for cool temperate areas; fast growing. Grows well in Tas; can be pruned hard.
- hubbardiana*
Sthn Qld Shrub to 2m; crowded phyllodes, triangular, sharp-pointed 4.5-9.5mm x 3-6mm, central nerve. Flowers pale globular in July-October. Found on coastal fringe in often poorly drained soils.
- hyaloneura*
Qld, NT Shrub to 3m tall; phyllodes lanceolate 6-11cm x 6-11mm, several parallel nerves; flowers in pale cream spikes in pairs, May-July. Not a common species; grows on shallow rocky soil in low eucalypt forest.

<i>imbricata</i> SA	Dense spreading willowy shrub to 2m; phyllodes linear-oblong 10-16mm x 1.5-2mm, crowded, 1-nerved, with oblique point; flowers bright yellow globular on slender stalks, July – September. Hardy species; grows well in northern Tas, needs well drained, sunny position.
<i>implexa</i> Qld, NSW, Vic	Tree to 8m or more; rough bark; phyllodes curved 7-18cm x 6-16mm, many longitudinal nerves; flowers large, cream globular in racemes, December-March. Pods in bunches red-brown, twisted. Fast growing, frost resistant.
<i>inaequilatera</i> WA, NT	Sturdy prickly shrub or gnarled small tree 2-5(8)m; corky bark; stipules spiny; phyllodes ±orbicular, grey-green, leathery, sharp pointed, one nerved and penni-veined; flowers large, yellow globular in long racemes on purple stalks; buds also deep purple. Shrub of arid areas; would require hot dry climate.
<i>inophloia</i> sw WA	Shrub 2-4m with minni ritchi fibrous bark; phyllodes fine, long round, resinous, hairy, 6-12cm with hooked point; flowers bright yellow ovoid or spikes, September-November. Needs a sunny position well drained position.
<i>irrorata</i> s Qld, NSW	Tree to 10m; new growth golden yellow; leaves bipinnate green; flowers pale yellow globular on hairy racemes, December-March sometimes earlier; pods black. Usually found near watercourses – fast growing.
<i>iteaphylla</i> SA	Shrub either upright or weeping to 5m; phyllodes blue-green, broad linear 5-14cm x 3-8mm, 1 nerve; flowers fragrant lemon-yellow balls in racemes, March-September; buds encased in bracts at first; pods covered with bloom, showy. Widely grown, tolerant of many climatic conditions.
<i>ixiophylla</i> Qld, NSW, WA	Flat-topped, spreading, resinous shrub 2-4m tall; phyllodes dark green, lanceolate, 2-4cm x 3-7mm many longitudinal nerves; flowers deep yellow balls, August-September; coiled pods. Found in deep sandy soils; needs good drainage in full sun.
<i>ixodes</i> Qld, NSW	Tall shrub or small tree to 5m, branchlets glutinous; phyllodes linear, 2.5-5cm x 2.5-5mm, raised mid-nerve, several glands one near tip; flowers bright yellow, globular, August-September. Found on sandy soils and would require warm well-drained conditions.
<i>jamesiana</i> WA	Spreading ±resinous shrubs or small trees 3-5m; phyllodes fine flat stiff (rhombic in cross section) 10-22cm x 1-2mm; flowers obloid; flowering sporadically July-November. Found in arid inland areas on sand dune country.
<i>jennerae</i> WA, NT, w NSW	Shrubs and small trees to 5m with reddish stems and branches; phyllodes glabrous lanceolate 4-15cm x 4-16mm mid-rib prominent; flowers yellow globular on racemes March-August flowering. Found in dry inland spinifex country; recently found on Far Western Plains, NSW.
<i>jibberdingensis</i> sw WA	Tall shrub with angular branchlets, 3-4m tall; phyllodes linear, thin, 11-20cm x c.2mm, 3-4 nerved, curved point; flowers bright yellow spikes, July – October. Needs well-drained sunny position – grown widely in eastern states.