A.F.P.S.G. ISSN 0811-5354

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

AUSTRALIAN FOOD PLANT STUDY GROUP

REPRINT OF NEWSLETTERS 1 & 2

(originally published 1983 - 1984)

CONTENTS

AUSTRALIAN HERBS by Carol Newton-Smith

Exploring into Australian herbs presents many of the challenges and even a few of the dangers that would have faced our pioneer ancestors. Professor Webb calls it "Eat, die or learn science" (Webb 1973), a comment that invariably comes to mind when some previously untried item of food is put to the lips.

A lot of plants used by the Aborigines are definitely survival foods - "eatable but not worth eating" is how the eminent botanist J. D. Hooker described them. There has been opportunity for selection and breeding which might have led to varieties worth cultivating, but food plants from other regions are so far advanced it probably hardly seemed worth while. However a few plants give real pleasure and others give an unusual and uniquely Australian flavour to food.

Aborigines as well as using plants as a high percentage of their diet also appear to have had an intimate knowledge of many physiologically active plants. Australian Phytochemical research has been largely based on aboriginal usage and has received international acclaim (Webb 1969).

It must be stressed that this research is in a field where ethical responsibilities are implied. Some of the plants included may in some form be toxic to humans. Indications will be given where the author has personally tried the plants, however please be careful :

1. **Identification** : Make sure you have the correct plant - near enough is not good enough. Cribb 1974 (p.18) gives simple tests for some toxic substances for use when trying an unknown specimen.

2. **Preparation** : Read any method of preparation very carefully. The aborigines found how to use for food some species which are extremely poisonous. These included the fruit of the cycad palms (Macrozamia and Cycas) which were roasted, pounded and soaked before eating. It is assumed knowledge of these methods was brought with the aboriginal immigrants from Asia and they largely concern tropical vegetation.

3. **Conservation** : Regulations designed for the protection of the flora should always be observed. Even where no regulations are in force, there should be no unreasonable destruction of plants; take a small amount from several trees rather than stripping one.

The investigation in the main will centre on Aboriginal use of plants. However our colonial pioneers were ingenious in many ways in substituting other flora for traditional uses. They had to. There is a revival of interest particularly of medicinal interest and any modern usage will be indicated.

The investigation of Australian flora is not straight forward for a variety of reasons:

1. **Communication** : Apart from language barriers with the aboriginal population there is also a lot of secrecy and superstition connected with native remedies. Additionally the aborigines regard the white man as having insufficient respect for the environment and are obviously unwilling to impart important information to unsuitable people. Farnsworth 1966 points out that as civilization spreads into primitive areas, the first aspect of primitive culture likely to be lost is the use of plants and medicine. It is not necessarily because the remedies are ineffective. As D. Levitt 1979 asks, why do we buy bread when we can make it? Because it is so much easier. Similarly it's much easier for an aborigine to take a pill than to go into the bush, find the plant, prepare it and maybe wait for the preparation to be ready.

2. **Bureaucracy** : There have been many government-sponsored surveys and a lot of information about many aspects of Aboriginal life has been collected and is stored in government departmental files. Much may be forgotten and its presence not even suspected by the people working in these departments. Very little has actually been published. The Cribbs books (1974, 1981a & 1981b) are very welcome publications. However their work is centred in Queensland, so further work remains to be done in the other states.

3. **Identification** : There has been a problem of a lack of Floras which describe every plant in detail and people interested in plants used have had difficulty in identifying the plants.

EDITORIALS

[From Newsletter Number One] As a start to our research I enclose a copy of some lecture notes. The plants were selected on the basis of being readily available in Victoria and are no attempt at a comprehensive list. As I mention in the notes, many plants are eatable but not worth eating. We need to sort out the ones that are worth eating either for their delicious flavour (e.g. Lillypilly) or because their properties make experiments as to how we can eat them worthwhile (e.g. Melaleuca alternifolia).

I propose to establish a special card index of information gained by the study group. A lot of the cultivation and propagation information is already available from the S.G.A.P. publications. I suggest we concentrate on uses. Perhaps as a start each member could make a list of:

(a) What plants you are growing (i.e. food plants), &

(b) How you have used them.

As basic references on the subject I suggest you buy or borrow the three books by Dr. and Mrs. Cribb mentioned in the reference list.

As you can see we have a widespread membership. Looking forward to hearing from you all.

[From Newsletter Number Two] The response to Newsletter Number One was overwhelming and the advent of Newsletter Number Two has been held up by the necessity of condensing all the information that arrived. Rodney Barker was kind enough to come over and assist me and we decided on producing the information that follows. Several points arose from our discussions:

(1) It is most valuable to our research to have as much information as possible about the plants being used. When sending in information please give if possible:

(a) Exact botanical name;

(b) Detailed description of part used e.g. size, colour, texture;

(c) Cultivation - easy or difficult, shade or sun, type of soil; &

(d) Propagation.

(2) Exact recipes of how people have used the various plants would be of value.

(3) It is apparent that in some genus there is considerable variation in the quality of fruit e.g. Eugenia and Billardiera.

There are obvious possibilities for selective breeding. Is anyone interested or does anyone know of any experiments being carried out? Apparently Santalum acuminatum is being experimented with in South Australia by CSIRO (see **Australian Plants** March 1st 1978, Vol. 9, p. 316 - 318).

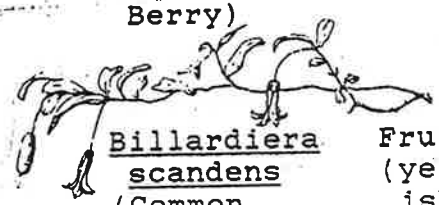
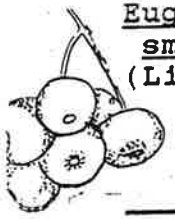
(4) There is an obvious need for someone to establish a seedbank. Would someone be interested in doing this?

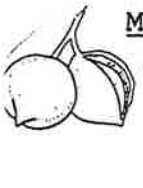
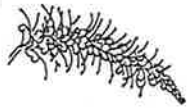
Happy researching,
Carol Newton-Smith

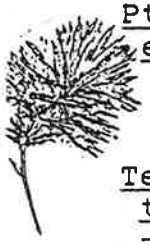
PLEASE CONTRIBUTE !

NAME	PART USED	METHOD	CULTIVATION	PROPAGATION	SIZE	REFERENCE	NOTES
Acacia (Wattle) 	Flowers	Cooked e.g. Pikelets Scones Pancake filling	There is an Acacia suit most situations.	Scarified seed	Variable	Cribb 1974 p. 161	See recipes section later in this newsletter.
	Gum	Suck raw or soak for a few hours in water and eat jelly. Some gums are bitter.				Cribb 1974 p. 184	
	Seeds	Approximately 12 different species eaten - some were roasted first.				Cribb 1974 p. 78 Reid 1977 pp 79-89	N.B. Check method of preparation before using seeds.
Anguillaria dioica (Early Nancy) 	Bulb	Aborigines ate them raw.	Full sun or part shade. Needs ample water in spring and summer.	Seed	0.25m x 0.1m Low	Cribb 1974 p. 146	now known as Wurmbea dioica.
Apium prostratum (Sea Celery)	Leaves	Fresh or cooked.	Full sun and well drained soil. Ideal coastal plant.	Seed or Division	0.25m x 1 - 2m Low.	Cribb 1974 p. 116	Used by Captain Cook as anti-scorbatic.
Astelia alpina (Pineapple Grass)	Fruit (red berries)	Raw - sweet	Full sun or part shade.	Division or seed	0.2m x 0.3m Low	Maiden 1889 p. 8	Attractive silver foliage.

NAME	PART USED	METHOD	CULTIVATION	PROPAGATION	SIZE	REFERENCE	NOTES
Astelia alpina (continued)	Leaves	Bases chewed.	As above.			Cribb 1974 p. 69	
Astroloma humifusum (Native Cranberry)	Fruit	Raw or used for jams or jellies.	Well drained. Dappled shade to full sun.	Cuttings	0.3m x 1.0m. Low	Cribb 1974 p. 22	
Atriplex cineraria (Coast Saltbush)	Young shoots	Cooked as a green vegetable.	Full or partial sun. Ideal coastal plant.	Seed or cuttings	1.5m x 2.5m. Medium	Cribb 1974 p. 105	Not recommended raw.
Atriplex nummularia (Old-man Saltbush)	Seeds	Ground into flour, mixed with water and cooked in coals.	Full sun preferred, but very adaptable.	Seed or cuttings (no mist)	3m x 3m. Medium	Oates 1979 p. 12	Acts as a fire retardant.
Backhousia myrtifolia	Leaves	Oil contains up to 80% elemicin - gives nutmeg flavour. Suggested as a commercial source.	Full sun or shade.	Seed or cuttings (slow)	5m x 3m. Small tree	Cribb 1981a p. 17	Try using leaves for flavouring.

NAME	PART USED	METHOD	CULTIVATION	PROPAGATION	SIZE	REFERENCE	NOTES
Billardiera cymosa (Sweet Apple Berry)	Fruit (red)	Raw - flavour varies - worth experimenting.	Sun with well-drained soil. Hardy.	Seed or cuttings	Climber	Cribb 1974 p. 62	Number of different flower colours available.
 Billardiera scandens (Common Apple Berry)	Fruit (yellow-ish green)	Raw.	Hardy and adaptable. Prefers good drainage.	Seed (slow) or cuttings	Trailing plant	Cribb 1974 p. 62	Makes a good ground cover.
Brachyloma depressum	Fruit	Makes an excellent jelly with a rich claret colour.	Dappled shade and light soil.	Cuttings	1m x 1m Medium	Cribb 1974 p. 23	
 Bulbine bulbosa (Native Leek)	Tuber	Aborigines ate the "bulb".	Full sun to light shade. Well drained soil.	Seed or division	0.3m x 0.2m Low	Cribb 1974 p. 147	Common name suggests an interesting flavour.
Enchylaena tomentosa (Barrier Saltbush)	Fruit (red or yellow)	Raw - sweet and succulent.	Full sun. Good coastal plant.	Cuttings or seed	0.5m x 1m Spreading	Cribb 1974 p. 30	Can be used as a ground cover.
 Eugenia smithii (Lillypilly)	Fruit	Raw or cooked as a jam. Try different trees - variable flavour, some very good.	Well composted soil.	Seed	12m Tree	Cribb 1974 p. 30	Now Acmena smithii. See jam & jelly recipes in newsletter.

NAME	PART USED	METHOD	CULTIVATION	PROPAGATION	SIZE	REFERENCE	NOTES
 Hibiscus spp.	Leaves and flower	Raw or cooked. Pleasant acid taste.	Mostly sunny situations, and frost-tender.	Seed or cuttings	Shrubs or small trees	Cribb 1974 p. 107 Uni of Qld Botany Club 1980	Cribb says "Any hibiscus is almost certainly safe to eat."
 Macadamia integrifolia 	Nuts	Australia's best known edible species.	Well composted soil.	Seed. Cuttings grafted to maintain quality.	To 20m Tall tree	Cribb 1974 p. 89	See later in the news-letter for recipes.
Melaleuca alternifolia	Leaves	Nutmeg flavour. Used in biscuits and cakes.	Very hardy, but needs moisture. Tolerates poor drainage.	Seed or cuttings	6m x 4m Large tree	Day 1979 p. 37	High germic-idal value and not at all toxic.
Melaleuca hypericifolia	Leaves	Flavouring for barbeque - citron flavour.	Hardy. Low frost risk.	Seed	4m x 3m Tall	Conservat-ion League	Melaleuca is worth invest-igating: low toxicity and antibacterial
 Mentha dimenica	Leaves	Flavour drinks.	Moist situ-ation. Sun or partial shade.	Division or currings	0.1m Spreading	Wrigley 1979 p. 85	Fragrant leaves also dry well.

NAME	PART USED	METHOD	CULTIVATION	PROPAGATION	SIZE	REFERENCE	NOTES
 Persoonia pinifolia	Fruit (yellow)	Raw. Small amount of sweet flash.	Hardy in sunny, well drained position.	Seed or cuttings (difficult)	4m x 3m	Cribb 1981 p. 194	Fruits contain a stable active anti-bacteria principle, active-agains Salmonella typhi.
 Ptilotus exaltatus	Leaves	Excellent salad herb.	Sunny, well drained position.	Seed (difficult)	0.6m	Gardner p. 39	
Tetragonia tetragoni -oides (Botany Bay Greens) 	Leaves	Green vegetable, salads and sandwiches.	Sunny, well drained posit- ion. Resistant to salt spray.	Cuttings or seed	0.1m Spreading	Cribb 1974 p. 131 Hall 1976 p. 74	Leaves are very high in natural-sodiu which is one of the "youth elements" of diet. Refer to recipes in the news- letter. Used in China and Japan for stomach cancer.
 Wahlenbergia spp. (Australian Bluebell)	Flowers (blue)	Salads - add at the last minute.	Full sun or part shade. Well drained.	Division or cuttings	0.1m Low	Cribb 1974 p. 163	

FRAGRANT AUSTRALIAN HERBS

There are some superb fragrant flowers and leaves amongst our Australian plants and there is more reason than just pleasure in surrounding ourselves with them.

In the 19th century in France it was found that the people who worked in the perfumery factories were remarkably free of respiratory disorders. Researchers found that fragrant plant oils were capable of destroying a wide variety of pathogenic organisms.

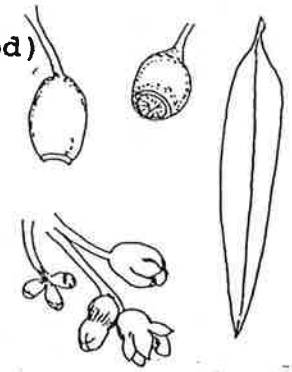
In more recent years Tea Tree oil (from Melaleuca alternifolia) has been found to have a very strong germicidal action and unlike many antiseptics is not at all toxic.

It seems to be very good sense to incorporate fragrant plants in our gardens. An extra bonus can be obtained by drying the leaves and flowers and bringing the fragrance indoors.

Fragrance is a very personal thing and it is a good idea to experiment with scents that appeal to you. There is a list of perfumed flowers and foliage plants in Rodger Elliot's excellent **Encyclopedia of Australian Plants** Vol. 1 (1980 p. 303, 304).The Society for Growing Australian Plants has produced a book **Perfumed and Aromatic Plants of Australia** (1979).

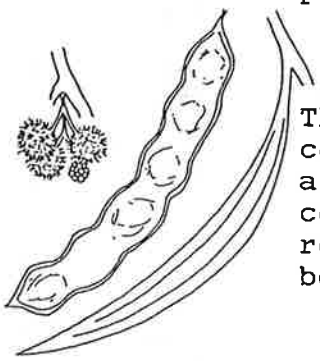
Not all perfumed material retains its scent on drying. Most plants when dried will not retain their fragrance more than about twelve months from when they are picked. The reason that pot pourris or fragrant mixtures last a lot longer is because they contain a substance called a fixative. A fixative has an oil with a low evaporative point which tends to fix onto other more volatile oils and make them evaporate very much more slowly. Research has been underway for a few years on an Australian fixative. There are three very interesting possibilities now - all trees :

Santalum spicatum (Australian Sandalwood)



Related to the true sandalwood which has a long standing reputation as a good fixative.

However Santalum spicatum grows natually in the arid interior of Australia and it is difficult to propagate as it is a partial root parasite.



Acacia pendula (Weeping Myall)

The timber apparently contains a strong violet odour. The most common fixative in traditional pot pourris is Orris root which also has a violet odour. Perhaps they have similar chemical constituents. The violet odour of Acacia pendula continues to be released for several years and was used to make small ornamental boxes.

Ceratopetalum apetalum (N.S.W. Coachwood)

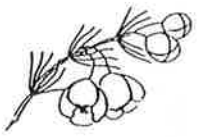
The Coachwood tree is another timber tree but far more easily grown than Acacia pendula. It can grow up to 25 m tall and is easily propagated from seed. The timber is extensively used in cabinet work and it is excellent for the mechanical lathe.

The sawdust has excellent fixative properties. The timber contains a substance called coumarin. Coumarin is a white crystalline substance with an odour reminiscent of new-mown hay. It seems to blend particularly well in the Australian pot pourris.

BORONIA

by Carol NEWTON-SMITH

"I love the sweet Boronia's bloom,
Which scorns adversity's decree.
While others choose a richer loam,
On humble fare it smiles like thee."
'RUSTICUS' of Darlinghurst.



Boronias are amongst the most aromatic members of the Rutaceae, a family of plants that is generally fragrant. Other family members include Citrus aurantium (Orange), Citrus limon (Lemon), Eriostemon (Wax flowers) and Ruta graveolens (Rue). Rue is a herb native to Southern Europe and was formerly extensively grown for its aromatic and medicinal qualities.

Boronia is a genus representing about 95 aromatic species from all over Australia. One of thes species, Boronia megastigma, has an established reputation in the perfume industry; Boronia lanuginosa was used medicinally by the aborigines of Western Australia and Boronia rosmarinifolia has importance in the beekeeping world. However, there is potential for the use of many more of the Boronias as aromatic plants. They represent an exciting family to research for pleasant fragrances.

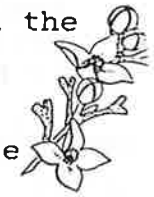
CULTIVATION As Boronias occur mostly in sandy heathland and dry sclerophyll forests with dappled shade and where the leaf litter is thick, the requirements when cultivating are, therefore :

1. Good drainage.
2. Light shade preferable.
3. A heavy mulch of leaf litter or sandstone slabs.

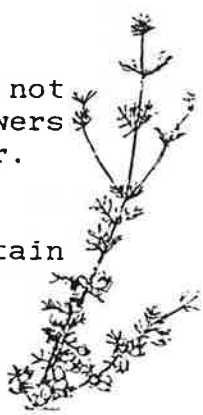
Because of their confined and shallow root system Boronias seem to grow quite happily in pots. Ample drainage will ensure a long life.

PROPAGATION Most Boronias will strike readily from cuttings of firm young growth. Some species will benefit from the application of root promoting hormones and the use of bottom heat of about 25° C. Many of the western species will also grow easily from seed, but the species from the eastern states have proved more difficult. Pre-sowing treatment of soaking seed in boiling water for 10 - 24 hours has proved beneficial for some species.

USES As members of the Rutaceae it would be expected that all Boronias would have aromatic foliage. However, it should be remembered that because a plant is aromatic it is not necessarily pleasant and that pleasure in fragrance is a very personal matter. The following table indicates comments on Boronias mentioned in some of the articles and books contained in the "Further Reading" section:



Boronia anemonifolia	Foliage has an unpleasant odour.
" citriodora	Foliage considered to have a citron or rose fragrance.
" deanii	Foliage has a faint, sweetish turpentine smell.
" denticulata	Foliage fragrant.
" floribunda	Foliage and flowers fragrant.
" fraseri	Foliage has an acid fragrance.
" heterophylla	Foliage and flowers fragrant. Leaves do not retain fragrance on drying but flowers do retain fragrance and pink colour.
" lanuginosa	Foliage has a pungent odour.
" ledifolia	Foliage has an unpleasant odour.
" megastigma	Flowers and leaves fragrant and both retain fragrance on drying.
" mollis	Foliage has unpleasant odour.
" muelleri	Foliage and flowers are perfumed.



Boronia	pinnata	Foliage is balsamic and flowers are sweetly perfumed.
"	purdieana	Flowers are heavily scented.
"	rivularis	Foliage and flowers have a sarsparilla odour.
"	safrolifera	Foliafe has a safrole odour.
"	serrulata	Flowers have an excellent fragrance and retain their pink colour on drying.
"	thujona	Foliage has an unpleasant odour.

PERFUME Boronia megastigma (Brown Boronia) has the distinction of being the only native plant being commercially exploited for perfume in Australia. When the Boronia megastigma is in flower in early Spring in the south-west of Western Australia, the air is impregnated with the perfume. However, the strength of the perfume is such that it affects the olfactory nerves and after the initial impact the fragrance is often undetectable. The oil is extremely volatile.

Brown Boronia is extracted with petroleum ether. As they are gathered the blooma are placed directly into drums of ether which acts as both a preservative and as a solvent for the volatile oil. The drumw are transported to the factory where the solution is concentrated and the solvent removed to leave a greenish mass - the 'concrete', which is further refined to produce the 'absolute' for the perfume industry. This 'absolute' is used both in Western Australia and for export overseas.

As well as being used in perfume manufacture, Boronia oil is used to add fragrance to soaps and bath oils. Triad produce a 'Boronia Bath Oil' which is recommended as an addition to the bath as a remedy for 'nausea and headaches'. Triad suggest that a few drops of oil be added under the running hot water. You may then enjoy a soak for fifteen minutes in your fragrant bath. When you emerge slap yourself dry with your bare hands rather than towelling yourself. Shower lovers are recommended to add a few drops to their hands after showering and to slap it over their bodies.

Other Boronias have been investigated for commercial exploitation but were not considered viable. Boronia citriodora from Tasmania is a plant with considerable potential. Despite its name, the experts consider it to have a very fine rose odour!

DYEMAKING The Handweavers and Spinners Guild of Victoria have obtained varying shades of yellow in wool using the leaves of Boronia megastigma as dye material. The shade of yellow depends on the mordant used:

Alum - lemon; **Iron** - gold; and **Copper** - yellow.

MEDICINAL The use of Boronia megastigma bath oil to relieve nausea and headaches has already been mentioned under 'Perfume'. The Aborigines of Western Australia used a different Boronia, Boronia lanuginosa. D. Levitt in **Plants and People** describes how it was used:

1. "For aches and pains the leaves were rubbed on the affected part of the body.

2. To treat colds the leaves were crushed in the hands, soaked in hot water and then rubbed on the chest. The hot liquid was poured over the head and body.

3. For headaches the leaves were crushed in the hands and the vapour inhaled."

BEEKEEPING Boronia rosmarinifolia is a rather sparse small shrub of coastal and sub-coastal southern Queensland and northern N.S.W. The plant is, however, a major source of pollen in Spring and is important to beekeepers.

Kurrajong brew

By LESLEY ZOLIN

Anyone for a Kurrajong brew?

It's a dark brown, aromatic liquid made from Kurrajong seeds. Its flavour is reminiscent of *Mocha* or "long black" *Espresso* coffee — depending on how well the seeds are roasted before brewing.

In fact, once you've tasted Kurrajong, you won't be surprised that early settlers in this country, including that inveterate taster and nibbler Ludwig Leichhardt used it as a coffee substitute.

The tree

The Kurrajong *(Brachychiton populneum)* was mentioned in *Earth Garden 18* by Ian Currie as a well-known fodder tree. In our part of the world (East Gippsland, Victoria) huge old specimens are often seen growing around homesteads and in home paddocks. They all have that "neatly-trimmed" look of trees which have been nibbled as far as the bovine neck can stretch.

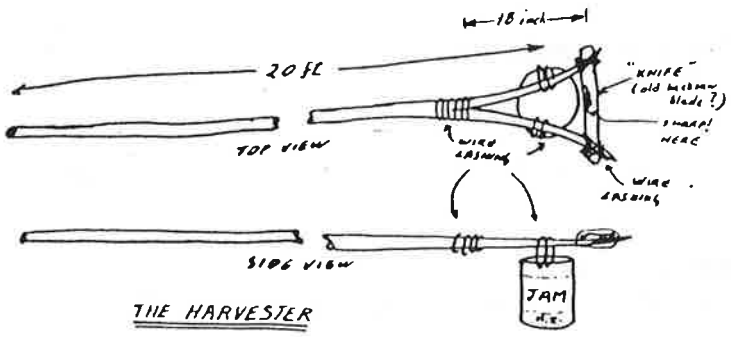
We've heard of horses having branches fed to them and our own poddy lamb was enthusiastic about the leaves given to him. In the cities the Kurrajong is often found as a large ornamental tree in parks or older gardens.

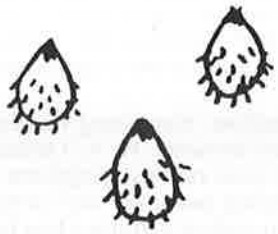
The botanists A. B. and J. W. Cribb in *Wild Food in Australia* (see review) describe the tree as having "a round, even trunk, a little like that of the related bottle tree but without the enormous swelling of that species. Its leaves with a long tapering point are sometimes three-lobed".

So far we have found five trees growing among the stringybarks and boxes on our land and many more along the creeks in the area. They seem to thrive amongst granite rocks and definitely seem to do best near water.

The trunks are *very* even, smooth and light grey in young trees. It is a little difficult to believe that they really are natives. Leaves may be long and pointed, short, fat and pointed, three-lobed, or halfway between pointed and three-lobed (all on the one branchlet).

In summer (December) the trees carry clusters of creamy-grey bells with splotches of red all over the deep cream interiors. By late May these have been replaced by thick green seed pods, which later turn dark brown and leathery. Finally the pods split open to reveal bright yellow seeds.





SEEDS WITH HUSKS

Harvesting

Check your local trees regularly from mid-May onwards. When about a third of the pods have turned colour, collect lots of containers (the first time, we used our jumpers, with knots tied in sleeves and necks) and set aside half a day for harvesting.

If you wait until the pods have turned hard and opened, you may find that the birds have got there first. Cockatoos, rosellas and choughs love them ... *and currawongs are very fond of Kurrajongs.*

Like most trees, Kurrajongs seem to have the best fruit at the very top. Luckily, pods are carried right at the end of branches and quite often weigh the branches down.

Unless you own the latest in anti-gravity belts, though, you might need an aid to getting at the pods. You can use a long sapling, split at one end (which tends to tear the branches), or with a knife lashed to it. You may prefer to carry a "harvester" similar to the one that Mario has sketched. The knife is used to cut the stem and the pods fall neatly into the jam-tin. This design is a variation of time-honoured methods of filching the juiciest apples from the tops of the neighbours' trees — you may have had your own schoolboy version.

Once the pods are collected they are tied in long bundles (if you have collected bunches) or put into sacks, strung across your bicycle and wheeled home.

Removing the seeds

WARNING: Kurrajong seeds come in little, hairy jackets. The hairs are very stiff and act a bit like fibreglass threads — if you get them in your fingers they may take days to get out. They itch!

Split the *brown* pods with a blunt knife or stick and scrape the seeds out into a pile. If you have collected green or unripe pods, leave them in the air for a few days (out of reach of birds) and they will ripen. Pods don't seem to mulch down quickly, but they make a fair addition (in small piles) to winter fires.

Husking

To get the seeds out of their hairy jackets, either rub them between two pieces of wood or rub lightly with leather gloves. If you choose a fine day with a slight breeze this can be done outside, where the wind will

blow the husks away. Any excess bits of husk and hair can be winnowed by picking up handfuls or cupfuls of seed and husk and pouring them back on to the table (or bench, or tarp, or ground) until the husks and hairs are removed.

You now have a pile of tear-drop shaped yellow seeds which will probably still be a little damp. Store them in a cloth bag or something which will let the air circulate until you need them for roasting. Drying can be speeded up by leaving the seeds in the sun for a few hours — but keep a wary eye open for those birds.

Roasting

Like coffee, Kurrajong needs roasting before it is ground and brewed. H. A. Lindsay in *The Bushman's Handbook* (see review) suggests roasting in a very hot covered frying pan over the camp fire, a method used for roasting coffee in quite a few households.

If you use a frying pan, stir constantly and be prepared for clouds of blue smoke before the seeds reach the required rich brown "doneness".

We use a *covered ball roaster,* ideal over a campfire or on a wood stove with the cooking ring removed. A small handful of seeds is placed inside the ball, leaving lots of room for movement of the seeds. The ball end of the roaster is placed over the coals or rested inside the cooking ring of the stove and the whole roaster is moved constantly from side-to-side (rotating motion) while the seeds roast. The long handles allow this to be done without burning your hands.

Time needed for roasting depends on the heat of the fire and the number of seeds. After some time the seeds will begin exploding inside the ball. From then on check the progress of the roast at fairly frequent intervals. The first tiny poppings usually indicate a light buff colour. When popping becomes more frequent and rich blue smoke starts leaking from the joint in the roaster, the seeds are probably reaching a satisfying brownness.

Colour in Kurrajong seems to denote flavour in much the same way as colour in coffee, so roast your seeds to about the same colour as your preferred coffee roast.

ANOTHER WARNING: When you open the roaster to check on doneness, let it cool a little first and beware of jumping seeds — a couple just may explode out.

Don't let the talk of explosions put you off though. They are really only tiny ones compared with say, popping corn. The coffee-roaster makes a lovely corn-popper, too!

After the seeds are roasted, tip them out on to a sheet of paper and spread out a bit to let them cool down. They may then be stored in a glass jar, or ground up immediately for a cup of Kurrajong.

Grinding

The seeds may be ground in any coffee-grinder on a coarse setting. They are soft compared with coffee and tend to clog on finer settings. We have also used a mortar and pestle with quite good results.

Brewing

A. B. and J. W. Cribb suggest light roasting and brief boiling, with a little more material than you would normally use for coffee. I used a heaped dessertspoon of Kurrajong grounds for each cup.

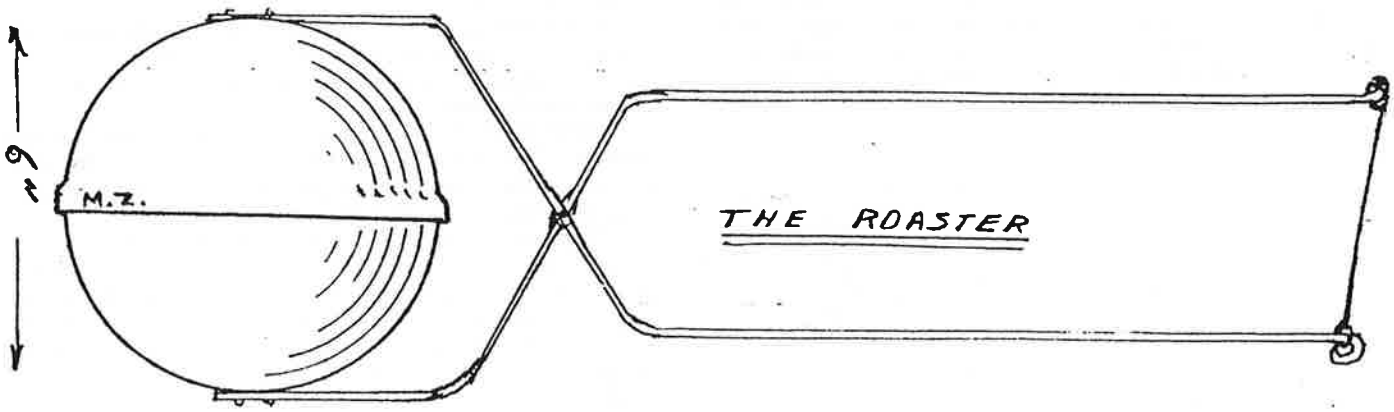
Put the grounds in the pot, cover with boiling water, bring to the boil again, then let stand for a few minutes before pouring. Obviously you need a heat-proof coffee pot or a saucepan. A strainer is useful, unless you relish gritty drinks. We drink ours black with no sugar, but visitors have tried with both or either sugar and milk and have pronounced favourable verdicts.

Other uses

The Aborigines in this area supposedly ground the Kurrajong seeds with water and roasted them into small cakes. Leichhardt is reported as finding them to "eat well and appear to be very nourishing".

H. A. Lindsay suggests grinding the parched seeds between two stones and then either moulding them into flat cakes and baking, or boiling, as porridge. We have eaten raw seeds and found them pleasant and palatable, but my one attempt at "grinding-then-baking-and-boiling" (not both at once) was a failure. I roasted rather than parched the seeds and the resulting concoctions were a gritty coffee-tasting cake and a thick, groundy coffee.

We haven't tried again, but other *Earth Gardeners* may like to. Whether you like the Kurrajong cake and porridge or not, the "coffee substitute" is highly recommended.



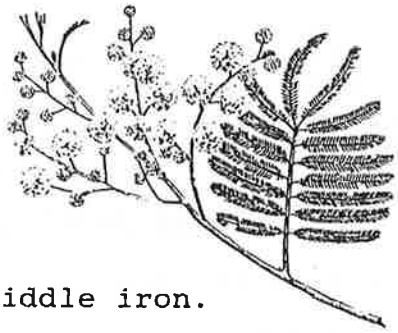
BALL-TYPE COFFEE ROASTERS

Black sheet iron — $5.
Copper — $20.

NOT AVAILABLE ANY MORE

Roast your own Kurrajong with ball-type coffee roasters from Metl-Craft Pty Ltd, PO Box 31, Swifts Creek Victoria, 3896.

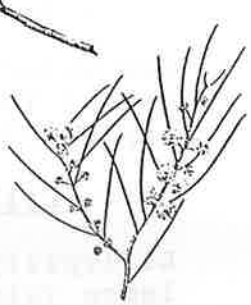
RECIPES



Wattle Pikelets (C.N.S.)

2 eggs
1/2 cup milk
1 cup wattle flowers
1 cup S.R. flour
4 tbsp. sugar

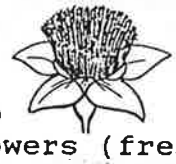
Drop in spoonfuls onto an electric frypan or griddle iron.



Wattle Fritters (Barbara Taylor, Aukland Herb Society)

Wattle blossoms
100g. plain flour
1/2 tsp. salt
4 tbsp. water
4 tbsp. rum or brandy
25 g. melted butter
2 tbsp. beer
2 egg whites, stiffly beaten

Cut off stalk from wattle flowers, sprinkle with sugar and soak in spirits for 30 minutes. Place flour, salt and melted butter in a basin and mix. Add beer and warm water, mixing gently. When ready to use, fold in egg whites and add liquid drained from flowers. Dip flowers in batter and fry in deep oil. Drain and sprinkle with sugar. Serve immediately.

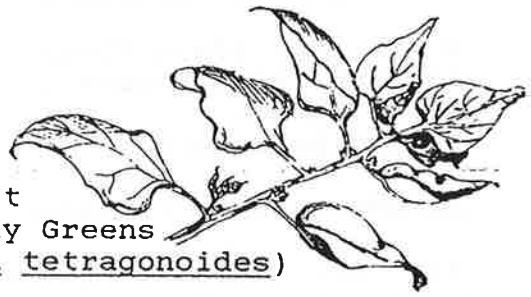


Backhousia Flower Anzacs (M. Hutchinson)

1 cup plain wholemeal flour
1 cup rolled oats
1/2 cup sugar (preferably raw)
1/2 cup dessicated coconut
2 tbsp. boiling water
1 tbsp. Golden Syrup
1 cup Backhousia flowers (fresh or dried)
125 g. butter (preferably unsalted)
1 1/2 tsp. bicarbonate of soda

Mix together flour, oats, sugar and coconut. Melt the syrup and butter together. Dissolve bicarbonate of soda in boiling water, and stir into syrup. Add to dry ingredients and stir until partly mixed. Add Backhousia flowers and blend gently until completely mixed. Rest mixture for 2 to 3 minutes.

Heap teaspoons of mixture onto greased trays (allow for spreading). Bake i a moderate oven for 20 minutes. Remove from oven on to a cooling rack. Store in an airtight container.



Botany Bay Bread (C.N.S.)

250 g. bacon pieces
1 tbsp. baking powder
2 eggs
1/3 cup milk
2 cups flour
1 tsp. salt
1 1/2 cups yoghurt
2 tbsp. Botany Bay Greens (Tetragonia tetragonoides)

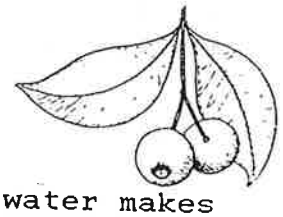
Cook the bacon and drain off excess fat. Cool and mix with dry ingredients. Beat together the eggs, milk, and yoghurt. Mix into dry ingredients to make a smooth batter. Spoon into a well-greased loaf tin. Bake in an oven at 190° C for 35 - 40 minutes. Cool for 10 minutes.

Coprosma Cookies (C.N.S.)

1 cup wholemeal flour
125 g. butter
1/2 cup sugar
1 tbsp. water
1 cup white flour
1 cup Coprosma quadrifida berries
1 egg

Rub the butter into the flours, and add the Coprosma berries. Add the sugar

and mix. Beat the egg and water together, and add to the dry mix to bind it. Form the mixture into a roll and wrap in plastic. Place in fridge (or freezer) until needed. Cut into slices and bake in moderate oven for 10 - 15 minutes.

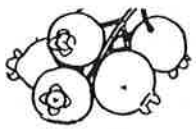


Lillypilly Jelly (Mrs. Cribb of Brisbane, Qld.)

Lillypilly berries
sugar

Add water to just below the level of fruit in pan (too much water makes result insipid). Bring to boil and simmer for one hour. Strain as for apple jelly. Add cup for cup sugar to juice and cool until it jells.

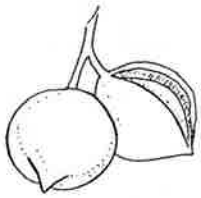
Lillypilly Jam (Mrs. McGarry of Como West, N.S.W.)



Lillypilly berries
lemon juice
sugar
water

Any amount of Lillypilly, wash well and remove flower tops and seeds. Place in saucepan and cover sparingly with water. Bring to boil, and simmer until berries are very tender (about 1 1/2 hours). Remove from stove and measure by cupfuls into jam pan. Bring to boil, then to each cup of fruit add 1 cup of sugar and juice of half a lemon. Boil briskly until it gels when tested in a saucer. Bottle while hot in warmed jars. Cover when cold.

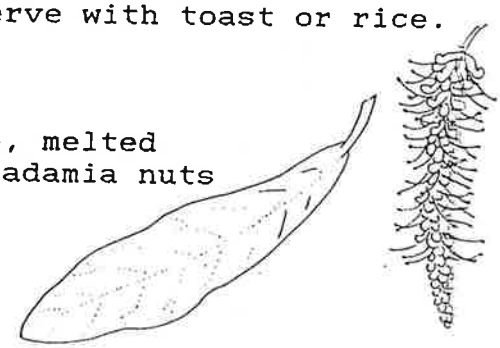
Macadamia Nut Creamed Chicken



1 tin sliced mushrooms
1 cup chicken broth
1/3 cup butter
5 tbsp. plain flour
1 tsp. paprika
1 cup milk
1/2 cup chopped macadamia nuts
2 cups diced cooked chicken

Drain liquid from mushrooms and add enough chicken broth to make 1 cup. Melt butter in saucepan. Blend in flour, salt and paprika. Gradually add mushroom-chicken liquid and milk. Cook until mixture thickens and comes to the boil, stir in chicken and nuts and reheat. Serve with toast or rice.

Macadamia Munchies

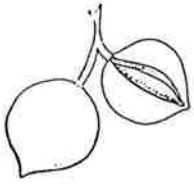


2 1/2 cups plain flour
1/2 tsp. bicarbonate of soda
1 cup butter
2 cups brown sugar
2 squares chocolate, melted
1/2 cup chopped macadamia nuts
1/2 cup coconut
2 eggs

Macadamia nuts in large pieces for topping

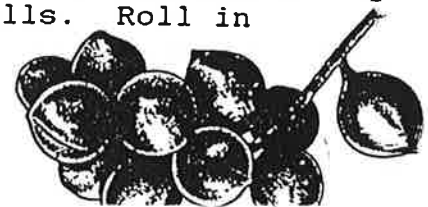
Sift dry ingredients. Cream butter and sugar, add eggs gradually, beating well. Add melted chocolate, then dry ingredients and nuts and coconut. Drop mixture in spoonfuls onto greased baking sheets. Put a piece of macadamia nut on each. Bake at 350 C for 8 - 10 minutes.

Macadamia Nut Whisky Marvels



1 cup biscuit crumbs
2 tbsp. cocoa
1 1/2 tbsp. white corn syrup
1 cup chopped macadamia nuts
1/2 cup whisky or orange juice
1 cup sifted icing sugar

Combine crumbs, nuts and cocoa, blend whisky and corn syrup and add to dry ingredients. Blend thoroughly and form into 1 inch balls. Roll in powdered sugar and refrigerate.



MEMBERS REPORTS

(1) Russell Starr (South Australia)

Passiflora cinnabarina . . . Plant less than 2 years old and is yet to flower so I am yet to try the fruit. Caution must be exercised with passionfruit as most parts contain cyanide. Only the ripe fruit should be tested. I have no authenticated evidence that the fruit of this species are safe so I would be interested to hear from other members on this.

(H. Meek - "I enjoy it (the fruit), but I think it is an acquired taste. It is much more frost-tolerant than the exotic species.")

(R. Barker - "Very dry, too many seeds and far too little flesh; funny after-taste. My mother likes them.")

Hardenbergia violacea . . . . .Tried to use for making tea but was very "rough". I may have made it too strong.

(Which part was used i.e. leaves or flowers, and when? - **Ed.**)

Davidsonia pruriens . . . Had 5 plants of 3 years old but all died this last summer. I have eaten fruit fresh and after stewing with sugar. Very acidic but high potential due to the high flesh to seed ratio of fruit. Would be grateful if anyone could send some seed to me to try again - the seeds are best sent in moist peat moss.

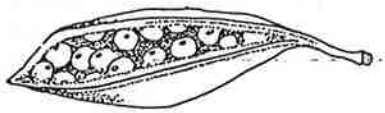
Podocarpus elatus . . . Plant less than 1 year old. I have eaten the fruit raw and they are pleasant although gelatinous and I had to fight the ants to get the ripest fruit.

Prostanthera sieberi. . . Have only just planted so have yet to try. (Which part is edible ? - **Ed.**)

Pittosporum phillyreoides . . . Seeds are surrounded by a very bitter and sticky pulp and are best left to the emus. Cribb and Cribb (1974) also mention an edible gum but I have not had the heart to damage such beautiful trees in order to extract the gum to try.

Brachychiton populneum . . . I have eaten the raw seeds of both this and B. acerifolium. I would be interested if anyone in this group has a copy of **Earth Garden 22/23** as I am led to believe that it contains a recipe for making Kurrajong coffee.

(See copy enclosed - **Ed.**)



(2) Heather Meek (N.S.W.)

Reports that she and her husband are at present cultivating 87 different species with edible parts which form part of their arbotetum which contains approaching 1000 species of Australian plants with horticultural value as a cutting and seed reservoir for propagation practices in their nursery - their bread and butter operation.

Eugenia coolminianum (syn. E. cyanocarpa) Blue Lillypilly . . To date, the fruit from these trees growing in Pambula have provided us with the most palatable and greatest quantity of fruit from any Australian plant to process. It is delicious to eat raw, stewed, preserved as jelly and as jam. My family rated it as one of the best home-made jams in the cupboard.

A word of advice though, the fruit of Eugenia is often infested with a little caterpillar which attacks the seeds. To avoid this pest ending up in your mouth we split the fruit by hand and flip out the seeds, thus identifying the ones with caterpillars and allowing the exclusion of them. (I cook up the infested fruit thoroughly and when cooled, toss it to the poultry. They also eat the fruit fresh.) The job of de-seeding is not as bad as it sounds because the fruit are a good size, crisp and the seeds are free of the flesh.

The uninfested seeds from the fruit we de-seeded germinated so well that we still have about 100 young trees, about 30 cms or more high for sale in the nursery.

(3) Jim Hill (N.S.W.)

Diploglottis diphyllostegia . . . Jim sent a sample of the jelly made from the fruit:

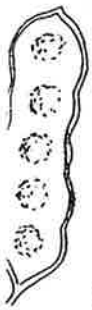
Diploglottis Jelly

Place fleshy part of fruit containing seeds in a pan, cover with water and bring to the boil. Boil for 30 minutes, strain through a cloth and place the juice with an equal volume of sugar in pan. Boil for 15 minutes till it jells then bottle.

The finished product has a sharp taste but is quite good on toast or bread.

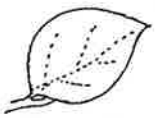
(My tasters comments were: "Tart, excellent for breakfast." and "Reminiscent of Rosella." - **Ed.**)

(4) Rodney Barker (Victoria)



Acacia spp. . . . I have tried making fritters from the flowers of these. Although it is quite easy to gather many flowers I didn't find the end result all that wonderful, but will have another go later in the year.

(Which Acacia did you use? I find A. podalyriifolia and A. cardiophylla are the tastiest - **Ed.**)



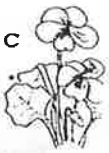
Billardiera cymosa/scandens . . . I have 2 Billardiera, neither of which seem to match up with the usual description of B. scandens. One has small yellow brown berries full of seeds; these berries can be eaten 1 or 2 at a time for an interesting, aromatic flavour - might make an interesting jam or sauce component. The other has a larger, purple berry which is hollow (with a few seeds) and a very thin, somewhat dry fleshy layer and doesn't taste at all pleasant.

Eustrephus latifolius . . . Hasn't fruited yet, and as it is quite small after several years growth) I am unwilling to examine the roots to see if any can be harvested. I bought the plant from Heather Meek where it was reported that both root and berry were edible raw, the root having an especially good flavour, reminiscent of macadamia.

Mentha australis . . . Very nice minty herb as easy to propagate as any exotic mint. Flavour is like Corsican mint. We use it for salads and as a mouth freshener (just when passing). Goes well in pots and can tolerate fairly dry conditions (I usually forget to water it). I also have some growing wild at Kangaroo Ground which has larger leaves.

Solanum aviculare . . . Whoever claimed this as edible had no taste buds. It is the most bitter fruit imaginable. Yuk!

Tetragonia tetragonioides . . . A wonderful green vegetable. Steamed a couple of minutes only, it has an average sort of vegie taste, but a sweet aftertaste suggesting honey. We have grown and used a lot of it. The ducks also love it and they almost ate it out. It is more difficult to grow from cuttings than it looks. As a foodstuff its main drawbacks are the tough stems and seeds (at the appropriate time) and its tendency to form a thick mat, allowing predators to hide. Growing it up the middle of a cylinder of netting seems to be a good way of overcoming the last of these drawbacks.



Viola hederacea and V. betonicifolia . . . As the flowers of the exotic violets are edible, I've tried these and suffered no ill effects. Perhaps they could be used as salad ingredients.

Wahlenbergia sp. . . . Following "Newsletter 1" I have tried putting petals from these in salads. Not really all that exciting compared to the exotics available e.g. nasturtium, calendula, hibiscus, etc.

Rodney would appreciate seeds of Pleiogynium timorense (Burdekin Plum) and Davidsonia pruriens (Ooray, Davidson's Plum). He offers Eugenia (Syzygium) seedlings and seed and cutting material of Tetragonia tetragonoides. Rodney would also be interested in co-operating with others in a breeding programme.

(5) Carol Newton-Smith (Victoria)

Coprosma quadrifida . . . The fruits (January, Dandenong Hills) very pleasant raw and also added an interesting flavour to biscuits [see recipe for Coprosma Cookies]. The bush apparently propagates easily.

OTHER ITEMS OF INTEREST

Plant Craft Cottage, Royal Botanic Gardens, Melbourne.
Fred Leishman is a Voluntary Guide with the Plant Craft Cottage and has produced some notes on a walk around the Botanic Gardens on the subject of "Plant Resources used by the Aborigines". If anyone is coming to Melbourne at any time it would be well worthwhile getting a guide to take them on this particular walk.

[Incidentally, the Plant Craft Cottage library holds a copy of a rare book, called **The Language of Australian Flowers** (London) 1876. Written in Hobart anonymously, it is at least as interesting as those produced for European plants. Examples of the "flowery" references include for Boronias :

Crimson Flowered Boronia (Boronia pinnata).....You are my divinity
Port Jackson Rock Rose (Boronia serrulata).....Steadfast affection.

– RB]

Elwyn Watkins has sent me a copy of an essay she did for Deakin University on "Cultural and Environmental Influences on Aboriginal Food Technology". There is only a small section of relevance to food plants but apart from the Cribbs, her main source of information was R.B. Smyth **The Aborigines of Victoria, with notes relating to the habits of the natives of other parts of Australia and Tasmania** Robertson (Melbourne) 1878, Vol. 1.

Probably worth further investigation.

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