

# APAB—N

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Study Group

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## Questions and Answers

**Editor.**

### *Banksia as Bonsai: Banksia integrifolia*

#### INTRODUCTION

There are currently 76 known and identified species of Banksia, most of which are located in Western Australia. Eighteen Banksias are found in the eastern half of Australia or in tropical Australia.

Banksias are related to the Protea family of Africa, with which they share many similarities. Banksias are an evergreen tree or shrub, although prostrate plants also exist. They have usually either a single trunk with an irregular outline or a multi-trunk shrubby appearance.

Banksias have a variety of the shapes and sizes, but are usually tough and leathery. The leaves may grow alternately or in whorls.

Flowers are also variable but are usually numerous on a spike that becomes woody. Flowers set at the end of new growth and take some time to mature. Not all flowers become seed as there are just too many on each spike.

Some 36 species are fire-tolerant: having thick bark and/or a woody base or lignotuber. These Banksias take heavy pruning or defoliation quite well.

The fire-sensitive Banksias are thin-barked and suitable only with lighter pruning.

Banksias have evolved to thrive in poor soils but can survive in better soils if the drainage is good. They can survive in poor soils through the development of special roots called proteoid roots. These are described later in the article.

## HINTS FOR GROWING NURSERY STOCK

First try whatever Banksias already grow in or near your area , and remember the large-leafed, tree-type Banksias will probably be the best as bonsai. The large-leafed (up to 6"/150 mm) varieties will be vigorous but with the correct techniques in the size will reduce dramatically.

I have grown *Banksia ericifolia* (Heath Banksia), *B. paludosa* (Swamp Banksia), *B. marginata* (Silver Banksia), *B. serrata* (All Unmanned Banksia) and *B. integrifolia* (Coast Banksia). All Western Australian Banksias, even those grafted, have died in my location.

Banksias can be grown easily from seed but must be potted up and on quickly; all this pot up to the next size pot. Do not over pot! The soil should not be too fine or too coarse and should drain freely. They will fill the pot quickly with very fine roots and need extra watering once well established.

Fertilise generously with Native Osmocote in the potting mix and liquid feed every week or two (except winter) with a mild liquid fertiliser like Maxicrop, Nitrosol, Charlie Carp etc.

Use fertilisers at full recommended strength unless sick or new to your collection. You may need to build up to a heavy fertilising regime.

Banksias are very hungry and thirsty as potted nursery stock so please look after their needs.

Do not pot-on a Banksia at any stage if it is wobbly in the pot. If its looks skinny, weak and wobbly, then just lightly trim it and put it back.

If the tree is fat, but unstable or wobbly, then check rootage and soil ball for root eating Curl Grubs. Remove grubs and root-prune hard, lightly trim foliage, pot back into same or larger pot and put in the shade for 3-4 weeks.

At every stage, give your Banksia a light to medium-hard foliage trim to encourage compact growth and smaller leaves. Grow in full sun to help keep growth healthy and compact as well.

Do not sit in water unless you are trying to grow a tree on quickly, and definitely not in winter. Banksia can be prone to root rot and die back.

### ***Banksia as Bonsai***

*B. marginata*, *B. serrata* and *B. integrifolia* all make good bonsai, but my experiences with *B. integrifolia* are the most extensive and it is my personal favourite. I will write on *B. marginata* and *B. serrata* at a later time once I have experimented more with them.



*Banksia integrifolia* by Grant Bowie, Canberra Bonsai Society Show, Oct. 2002.

Photo: R. Hnatiuk

## **Banksia integrifolia Coast Banksia**

*B. integrifolia* grows in many locations in the wild from the coast to the mountains. It can be 25 m high or a windswept specimen on an exposed headland.

Its leaves are large, long and smooth edged, but as a bonsai, the leaves can be small, blunt and toothed. This is because the constant trimming forces the tree to put out a juvenile form of leaf that is most suitable for bonsai. The leaf is still strong and vigorous and not deformed or delicate in any way.

The frequent potting, fertilising and trimming gives us a very quick growing thick trunk tree that can bud back on old wood very well.

If you live in Sydney or further north, you may be able to pot –on nursery stock every six months or so to achieve quick growth. If you live in Canberra or cold areas of Melbourne or Sydney, you may need to allow more time in each pot size. Pot in early summer to avoid excessive new growth going into winter; its soft new foliage can be badly damaged by frost.

My reason for avoiding potting in winter<sup>4</sup> and early spring is that the tree just sits and sulks until the warmer weather comes along so there is no advantage; in fact by sitting in a larger pot in wet conditions for 3-6 months may encourage root rot, die back etc.

As a bonsai, the *B. integrifolia* is also very quick growing and is usually my waterweed. That is, it is usually the first tree to droop if it is in a very fresh growth.

I usually repot my bonsai Banksia about every 12-18 months but rather than doing a heavy prune on top and bottom, I often just slip-pot it into a larger pot. This is very useful in mid summer as you can avoid excessive dry outs by just putting it into a larger

pot after lightly tip pruning and teasing out the roots lightly. Always fertilise well at each pot change, ie Osmocote and liquid mild fertiliser.

After 4-5 years, the tree will have grown larger and natured enormously and at this point you could do a heavy root prune and heavy top prune and move down into a much smaller pot. This will emphasize its beautiful trunk, branches and leaves.

Then, follow the process of moving to larger pots each year again.

I mentioned proteoid roots earlier and will now add a few points. In pot culture, if your Banksia is not potted and fertilised regularly, it will of course become pot bound and hungry and thirsty. It may at this point put out roots that enable it to scavenge even the smallest amount of food etc through these super-fine roots. If, however, at this stage you were to heavily fertilise the plant it may take up too much fertiliser and die.

So I suggest at repot time you remove any proteoid roots you may see (They might look like a mycorrhiza fungus, which they are not) and start with mild, but regular fertilise including Native Osmocote in the potting mix and Maxi Crop as a liquid feed.

My potting mix would include a course to large sand or fine gravel to aid drainage, but fine enough for the very fine Azalea-like roots. Typically 50% sand/gravel or more mixed with a standard potting mix (no peat). The mix doesn't need to stay sopping wet, its better to water more frequently than risk root rot etc.

As a young bonsai, the *B. integrifolia* will have a smooth grey-green trunk but with age it will be grey but rough and furrowed. One of my *B. integrifolia* has always had a rough and now corky bark whereas all the ones I have raised from seed have been smooth bark. This may be a function of age (approx. 33 years old) but I intend to strike cuttings off that tree this year.

Branching and structure on the *B. integrifolia* happens very quickly and can also be lost quickly. The tree is very apically dominant so it must be kept very short at the top. A pointy apex is right out of the question. You must develop a rounded, multi-point apex that will help slow down growth. Sometimes you may trim the top 2-3 times as often as lower down and if you don't, you may lose ramification or even entire branches.

Luckily however, it buds back freely on old branches, trunk and around any removed branches. So if you lose structure, you can easily restore or dramatically change its appearance in a short time.

Trim strong vertical growth back hard, but allow sideways growth to elongate and thicken. *B. integrifolia* will take light wiring but I only ever wire heavily in an emergency (artistic emergency?). If you wire downwards, the branch will immediately lose vigour whereas a branch nearby could double or triple its size if growing horizontally or lightly upwards.

If you must, for artistic reasons wire a branch down, then at least wire the tip up and allow it to grow freely and then cut back hard later. Wire will also mark very quickly if your tree is growing quickly.

Keep lots of branches as this helps build up a quick canopy and diffuses the growth over more growing tips. Keep pinching very frequently.

Another trick to maintain an outline is to trim the apex back to a 2<sup>nd</sup> or 3<sup>rd</sup> leaf or leaf whorl and then, after it has re-budded and grown on, cut it back to the original 1<sup>st</sup> or 2<sup>nd</sup> bud; thereby making it do it all again.

Also at the very vigorous tips, there is a series of little ear-like structures that can grow buds if trimmed back to this point. They are in fact a false leaf that protects the bud while it grows. This is useful as it allows us to trim much more compactly than you would first imagine.

Mature *B. integrifolia* grows mostly in a whorled structure of 4-5 leaves but this system breaks down under heavy pinching. It can be alternate, opposite, alternate sets of 2 or 3, or whorled on 2+3 type structure. It makes no difference to the trimming regime; just keep pinching frequently and to outside or down facing buds if you have the choice.

Even if where you pinch it throws out 4 or 5 branches, we will eventually simplify it to 2 or 3 branchlets.

If you are trying to force lots of new buds on old wood, then do not repot at the same time. It re-buds quicker left alone. Also, make sure it is well fertilised and in a sunny spot. Place on a turntable or turn each day to encourage growth all over.

The *Banksia integrifolia* will look good in any style of bonsai, from upright styles to cascade, even in fairly formal Japanese mode.

It is a most adaptable *Banksia* that I am sure you will get lots of pleasure from.

Grant Bowie

*Oz Bonsai Images*

**Editor**

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