

# ACQUIRING MATERIAL – by Jonathan Cain

## 1. Introduction

If you are a novice, stick to the tried and tested species. These species are typical to what grows naturally in and around your gardens, parks and pavements. These will be species that tolerate and thrive in your climatic environment. Many novices make the mistake by trying to grow trees from outside their natural environment, such as Baobabs and figs, with disappointing results. Many trees offered to the market and as seeds, do not make good bonsai, and may prove to be a waste of time or an enormous amount of frustration. For example, the leaf does not reduce easily, such as the English Oak, or the tree has a lot of die back such as the Fever Tree or Paper Bark or the intermodal space does not allow for compact growth such as the Jacaranda or the cold winter will kill a tropical tree, such as a fig. So use your general knowledge. If Baobab does not grow in your area, do not attempt it as a novice. Go to the bonsai shows, from Spring to December and look and see what trees are in abundance on show. These are the trees that you as a novice should be attempting.

The **cheapest** place to acquire material is out of a garden or the wild.

The next **cheapest** and easiest place is though a commercial nursery, where the nursery has not identified the potential of a tree for bonsai, because it has been damaged and may be considered as inferior or waste. Some nurseries do recognise damaged and different trees, but usually have no knowledge on bonsai principles, put the tree in a pot and quadruple the price. When buying your bonsai from a nursery, enquire whether they offer training or whether they can point you in the direction of a club or workshop. Perhaps they may be affiliated to an accredited bonsai club/group/association. This may indicate their level of knowledge and expertise.

The **best** place to start is through someone who knows what they are doing, such as clubs, groups, and Specialist Nurseries and individuals.

**Good established** Bonsai should have the following 5 items labelled or identified with the tree and if it does not or you cannot get a satisfactory answer let the alarm bells ring.

1. The common name eg Wild fig.
2. The scientific name eg *Ficus natalensis*. (NOTE : CAPITAL First letter (F) followed by all lower case)
3. The bonsai style eg informal upright
4. The age of the tree eg "8 years" or better "Year 1999"
5. The age of the bonsai eg "7 years" or better "Year 2000"



## 2. Purchasing from a plant nursery.

The **easiest** place to acquire material for a novice and even for established growers, is from a commercial or wholesale nurseries. This includes bonsai nurseries, or nurseries that have some knowledge on suitable trees for training into bonsai. You will require some knowledge as to identify a worthwhile specimen, but many times your eye will pick up an outstanding characteristic from the surrounding trees, that will attract you. In choosing an interesting plant, concentrate on what the tree has to offer rather than what one would like to make

of it. Start by looking for a plant with an interesting trunk with the following characteristics.

1. Look for a thick base or foot. This gives your design good taper, giving the impression of strength and stability.
2. Look for low growing, multiple branches. In a basic design is easier to start with a plant with many low branches. This enables you to choose the branches required for the basic design of your tree and then eliminate the rest. The lowest branches should also be the thickest.
3. Surface roots, is also a plus factor in design. Try not to choose trees with **one** fat root but rather trees with multiple evenly spaced roots. Also try not to choose trees where one can see under the root, unless your style is specifically an exposed root style.
4. Trunks that look aged will have the characteristics of flaking bark, such as Acacia, or deep fissures, such as Buddleja.
5. Movement always creates interest, but be aware of reverse taper that often comes with twisted trunks.



Movement

### 3. Trees removed from Gardens and the Wild.

It is generally accepted that most of the finest bonsai masterpieces seen, started out as old specimens collected from the wild or from gardens. The problem is that finding suitable areas from where to collect, and obtaining the necessary permission to enter the area, is not easy. Should you be fortunate enough to be able to collect from the wild there are a number of factors to bear in mind.

1. The best time to collect is when the tree is dormant, just before it begins to bud in the new growing season. July, August and September is the best times for collecting in South Africa.
2. When you find a tree, study it carefully to ensure that it has the potential to be come a good bonsai with proper care and training. As when purchasing from a nursery look for the same characteristics. Do not in your excitement take out the first tree you see.
3. This is briefly how to remove a tree. Dig a trench around the base and try to remove it, with as large a root ball as possible. Do not rush this step. If the area is too rocky and removal will result in the loss of too much root which is needed to support the tree, rather leave it alone and look for something else. This is better than having the tree die on you later. After removing the tree, replace the soil in the hole and replace with the branches removed. There is a remote chance that a branch may grow roots. Try to leave the area looking as undisturbed as possible. Cleanly cut off all split and damaged roots. Wrap the root ball in hessian or a plastic bag and water the roots. As the balance between root and crown has been now been disturbed, remove all foliage. This action also removes

all pests on the leaves. Get the tree home as soon as you can. Place it in water until rising sap is seen in the wounds. Seal the wounds and plant it into a large training pot and keep it in the shade and well watered for as long as it takes for the tree to recover and send out new shoots – sometimes 3 years!! Only start styling and refining the shape once the tree is established and growing well.

### COLLECTING CODE

- Obtain permission, preferably in advance.
- Follow instructions from those in the know. Ask questions.
- Always regard access as a privilege and respect it with good behaviour. You want to be invited back!
- Explain your interests and intentions.
- Seek local knowledge. You may need permission from a tribal chief.
- Remember to shut gates and leave no litter.
- Keep any excavation or hammering to a minimum; if possible collect from areas where the impact will be least noticeable, then fill holes.
- Keep collecting to a minimum. Aim for QUALITY NOT QUANTITY.
- Do not dig up species that cannot be identified.
- Do not remove protected species.
- Do not remove species that will not survive in your climatic conditions.
- Restrict collecting to areas where there is a plentiful supply.
- Avoid disturbances to wildlife. Plants and animals may inadvertently be displaced or destroyed through careless action.
- Be cautious whenever stones are lifted in areas that can be a habitat for dangerous species.
- Research the likelihood of encountering poisonous snakes, scorpions, spiders, etc. Take all reasonable precautions.
- Take precautions in mosquito and tick infested areas. Light coloured long pants show up insects. Spray your pants with insecticide.
- On coasts consult tide tables and the coastguard about tides and local hazards such as unstable cliffs.
- When working in the mountains or remote areas follow normal wilderness practices. When working in desert areas follow sensible precautions such as traveling in four wheel drive vehicles preferably with a companion vehicle. Carry ample water. and include emergency rations.
- Never collect from environmentally, ecological or geologically sensitive areas such as caves, geological and game reserves etc.
- Do not take risks on loose cliffs. They can collapse without warning. Take care not to dislodge rocks, as there may be other below.
- Take care not to undermine fences. Walls, bridges or any other structures.

## 4. Growing via Vegetative Propagation

By taking a cutting one exploits a plants ability to regenerate.

Creating new plants from cuttings will be a clone of the parent plant, which is especially desirable in bonsai.

Roots will develop after wounding the tree. It is important to know your species as some species generate from roots, like figs and elms. Others take easily from cuttings like elm, juniper, maple, fig and with others rather stick to seed, such as acacia.

### TYPES OF CUTTINGS

Cuttings can be taken from the stem, leaves or roots.

a. Softwood cuttings are the first growth in spring. They have the highest rooting potential but are also the most vulnerable to rot, wilting and dying.

b. Greenwood cuttings and semi hardwood cuttings are cuttings that are usually firmer and are starting to change colour. Most cutting can be taken with a heel.

c. Hardwood cuttings are old wood but are slower to root. They are more robust. One can root a three year old cutting in a few months thus creating a good bonsai very quickly as opposed to growing a seed for three years.

d. Leaf Cuttings. Some plants like lonisera and portlacura can grow from leaves.

e. Root Cuttings can be used by some plants being elms, serissa, ficus. These cuttings are often desirable, giving lots of movement, but also may give reverse taper.

### METHODS OF CUTTINGS

1. Nodal Cutting are severed on the stem just below the leaf node. The reason is the cells for growth are most concentrated in this area which will optimise root formation.

2. Wounding a cutting from a semi hardwood cutting is shaved at the base, exposing the cambium layer causing the cutting to heal and root quickly on the wound.

3. Heel Cuttings are taken by peeling the bark with the stem.



Heel Cutting

## 5. Growing by Seed.

The sale of “bonsai seeds” is misleading. There are no special seeds that create bonsai. A Bonsai is defined as the relationship between an **existing tree** and mankind, miniaturised in a pot, and styled and nurtured through human intervention utilising the lessons of Nature. A seed has yet to grow and may be a bonsai one day in the future - once germinated.

The packaging is often misleading and the beautiful bonsai picture that comes with the seed box is usually a bonsai of 25 years plus. Some species grow only from seed and certain seeds may take a long time, may rot and may prove to be a waste of time. If you want to learn about bonsai, buying a seedling plant is better and often cheaper.

If you want to try growing a bonsai from seed, however, make sure that you buy suitable tree seeds from a specialist grower. If you collect seed from the wild, it is better to collect it directly from the tree, than off the ground, as ground seed is often contaminated. Plump, healthy seeds produce the most vigorous new plants.



Wild Olive – fleshy fruit

Timing is extremely important as seeds that are picked that are too green will also not grow. Seeds, according to their habitats in the wild and moisture content, have different life spans. Some, especially fleshy seeds, die very quickly so have to be sown as soon as they ripen. Others particularly, dry seeds, like baobab can be

kept for many years. In the right conditions - being darkness, dryness and a

cool temperature below 4 deg C seeds can last up to 10 years.

Once again the success is always in understanding how plants species function in their natural environment in order to break their dormancy, and then providing a supportive environment for the seed and plant. Factors that break dormancy include temperature, moisture, air and light. The absorption of water is most important. Before a dried seed can begin to grow it must be rehydrated so that water can reach the embryo. Water will cause this and the seed will increase in size. Then a rise in temperature starts the germination. Some seeds will germinate at 2 deg C, but usually 25 deg C is best.



Seed In A Pod

Some seeds contain a water proof layer that has to be broken. The term **Scarification** is the physical degrading of the seed coat. This coating needs to be

broken and can be achieved through

various methods. **Stratification** or cool chilling is the subjecting of seeds to a temperature change in damp vermiculite, perlite, sand, etc in the bottom of a fridge of about 2-4 deg C, for a period of 3 - 20 weeks, simulating the seeds winter rest period, then sowing them in spring. This is preferable for maples, elms and pines.

**Abrasion** is a form of scarification by using sandpaper, an emery board or grindstone to removing the seed coat (testa). The outer fleshy layer may first have to be removed by soaking the seed in water for a few days. Larger nut seeds will need to be cracked such as oak or nicking is the removal of a section of the seed coat with a sharp knife. This is common for Baobab.

Heat treatment involves methods of baking seeds in a microwave for 2 minutes. I prefer to apply hot (70 deg cel) to boiling water and soak the seed overnight until the seed swells. This is best for the acacias.

Smoke Treatment involves using the chemicals in smoke to break seed dormancy which is required in Proteas and Fynbos.

### Procedure.

Plant the seed in commercial seedling compost, pure vermiculite or any other seed culture. Water and mist it every day in the growing season to keep the soil damp. Keep the seed tray in a shaded area. When the young seed has been growing for about two to six months, carefully lift out the tray, shorten the tap root ensuring

that there are enough feeder roots and very lightly trim the outside of the tiny new roots by a third. Replant the seedling and keep it moist. Repot it the following year and trim the roots again. If necessary, trim the foliage by a third. In the tree's third year, repeat the above procedure. Lightly wire or cage wire the tree and then plant it out in the garden to encourage heavier growth over the next three or four years. Remove the wire after four weeks if the tree is thickening up. Rewire the tree during the following summer for another four weeks. Depending on the species, full training will start in the third year.

As mentioned before, it is often better to buy a growing seedling.