

A Bonsai Close Up on Phoenix Grafting-----

by Pauline F. Muth (copyright 1996, revised 2002)

The incredible age depicted by venerable old trees surviving the decades showing the scars of age in jin and shari has fascinated all of us. Driftwood styled bonsai depicts the essence of antiquity. But alas, finding the material needed to create one for our collections is difficult at best. Buying such a masterpiece can tax the wallet or be totally beyond our means. One solution is the creation of a phoenix graft. Just as the mythical phoenix bird rises from the ashes of death, a masterpiece bonsai can be created by combining a younger living tree with a beautiful piece of driftwood.

The driftwood may come from a once loved bonsai, now in permanent dormancy or from a beautiful piece of wood found in the mountains, along a stream or the ocean. Look for pieces with interesting natural lines. The piece may be modified with careful sculptural techniques, but the lines must be natural and artistically appealing. The living tree will be attached to the back and /or sides so select wood that has a pleasing front. The living material should have a flexible trunk and branches to facilitate bending it to the shape of the driftwood. Ideally, the driftwood and living material are of the same species. Acceptable results can be achieved, however, if both appear similar.

Many species have been used for this treatment. Among those often used are:

apricot	cypress	cotoneaster
azalea	Chinese	dwarf
birch	juniper	honeysuckle
cedars	common	hawthorn
cherry	juniper	hornbeam

firethorne
jasmine
oak
pines
pomegranate

quince
rhododen-
drons
rosemary
(difficult)

willows (great for
beginners)
wisteria

This technique should be done in early spring just as dormancy is breaking. The plant will have the best chance of survival when given the longest period of time to grow and recover from "surgery" before winter dormancy.

The Technique

1. Prepare the piece of driftwood and make any design modification desired.
 - Using a wire brush, and perhaps a soap solution, carefully scrub the driftwood clean. Remember to work with the grain as you scrub. Be careful to eliminate any pockets that will hold water later and lead to rot. Remove any remains of bark.
 - Using a hand or motorized carving tool, make design modifications as desired.
 - You may wish to carve a groove into the back of the trunk marking the line to which the living trunk will be applied later. This procedure often allows the resulting graft to look more natural than those applied to a flat surface.
 - Treat the clean wood with a good wood preservative like Thompson's Water Sealant. You may wish to bleach the wood using lime sulfur before using the sealant.
 - Form an anchor for the driftwood by attaching a wire support as a base. Wrap chicken wire around this if the base is very large. (I have also used fiberglass cloth and fiberglass for this part with smaller trees that are not

top heavy.) Cover this wire base with plastic body filler or hydraulic cement to act as a counter weight to the driftwood and the living tree. Consider the shape and size of the eventual pot as you do this. Brush the filler up onto the trunk being careful not to go above the proposed soil line. This will protect the base of the driftwood from soil line rot.

- When the filler is dry, drill at least 1/4inch diameter holes through it to allow for water drainage and the future growth of roots through the base.

2. Prepare the plant material.

- Remove the plant material from its pot and clean some of the soil from the roots. Wrap the root ball to keep the roots moist.
- Using a very sharp knife, cut away a small section of the trunk's bark and cambium layer on the side to be attached to the drift wood. This must run in a line from the trunk base to the upper most point where the trunk will be attached. This will allow the future callus to form attached to the driftwood.
- Trim any unneeded branches from the tree.

3. Attach the tree to the driftwood.

- Place the tree along the driftwood and attach it using one or more of these techniques: (Remember it is vital to attach the trunk securely without air spaces. The exposed part of the trunk is placed against the driftwood.)

▽ Use black-root-over rock tape to attach the trunk by winding it around the tree and driftwood. (I prefer this because the tape holds evenly, stretches with time and does not degrade for several years.)

▽ Strap the tree to the driftwood using raffia that has been soaked in water.

- ▽ Wind commercial packaging material around the trunk that was first protected by bits of soft sponge.
- ▽ Use plastic cable fasteners to attach the tree. (I find this method is only good for positioning. Scarring results from using these straps as the main securing agent.)
- ▽ Use tiny brass screws to attach the tree trunk first. The tree eventually grows over these screws. Then secure with your choice of wrapping.
- If the method you used left parts of the cut trunk exposed to the air, apply grafting wax to each side of the trunk line to prevent drying out and insect and fungal infestations.

4. Pot the phoenix graft.

- Soak the root ball in a Superthrive or other transplanting solution.
- Prepare the pot with wires, drainage screening and a coarse drainage bonsai soil mix. At this stage it should be generously potted.
- Plant the tree making sure the spread the roots over the base of the driftwood support. Use a compost heavy bonsai soil mix with good drainage properties. Wire the base and roots in well. Dust the roots with rooting hormone to promote new root growth.

5. Grow the tree on.

- The resulting tree should be grown in sunlight for several seasons using a regular fertilizer and watering schedule.
- Some trimming may be done, but vigorous growth is needed to promote the growth of the trunk into the driftwood.
- Watch for scar damage. The black tape method usually prevents this from occurring.

- After at least three years the taping can be carefully removed.

6. Style the tree.

- The graft will become more secure with age, but at first be careful of placing stress on it when wiring it.
- Repot as needed taking care not to destroy roots that have passed through the holes in the driftwood's artificial base.

7. Enjoy!

Comments and suggests are always appreciated. Send your experiences to

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