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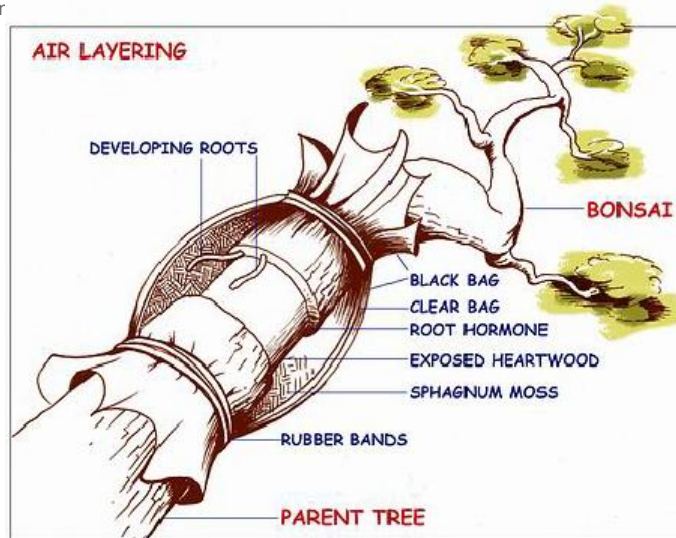
Air Layering

Bonsai can be propagated in a variety of ways. They can be grown from seed or cuttings, or one can buy material from nurseries. They can be dug out of the ground or extricated from cracks in drainpipes or old buildings. One of the most efficient ways of propagating bonsai is through a process called layering.

Layering is similar to taking cuttings from a parent tree, but layering is a technique whereby roots are encouraged to grow on potential bonsai material while it is still attached to the parent tree. Then, when the bonsai is finally removed it already has a viable root system in place.

There are two main types of layering, Air Layering and Ground Layering. Air layering is carried out on material that is above the ground. Ground layering makes use of roots or possibly a low branch that is buried in the ground. I will write about ground layering in a future article.

In layering, a ring of bark is removed to expose the heartwood below. The width of the strip is normally about the same as the thickness of the branch. Rooting hormone is then rubbed on the underside of the top edge of the strip. This is where the new roots will develop. Damp Sphagnum Moss (or compost) is then pressed firmly around the entire strip. This should then be covered by clear plastic. Clingwrap will work very well for this. The clear plastic is then covered by a second layer of black plastic. Roots develop best in the dark. After a suitable length of time one can then remove the black plastic to check on root development without removing the clear plastic and disturbing the fine root hairs. It can take a couple of seasons for the roots to develop, but one of the advantages of this method is that one can still shape and prune the bonsai while it is still attached to the parent tree. Once the roots have developed enough for the bonsai to survive on its own it can be removed and repotted, in fairly deep soil at first. At this point it is important NOT to attempt to remove the moss around the new roots, you will just succeed in damaging them very quickly.



So, why does Air Layering work so well? In simple language, the bonsai will still get water and nutrients from the parent tree via the upward moving tubes (Xylem) in the heartwood. The sap and energy-rich food that has been manufactured by the bonsai's leaves will move downward via the Phloem in the bark, but will stop and build up at the point of the air layering. The sap build-up will eventually cause new roots to develop around the base of the new bonsai and will also cause the base to thicken forming an attractive Nebari (surface roots and lower trunk).

I have read that air layering with Junipers requires a slightly different approach. Instead of exposing a ring of heartwood, it is suggested that the Tourniquet method be used. Take a thin but strong piece of wire. Wrap this around the branch and twist it to tighten it until it bites quite deeply into the cambium. Snip the ends of the wire because it will remain until the bonsai is removed. Small vertical cuts are then made around the base of the bonsai just above the wire. The new roots will emerge from these small cuts so position them with consideration for the final tree design. Now you can wrap the whole lot with moss and plastic. Junipers can take up to five years to develop new roots.

As you can imagine it is important to keep the moss moist and you may have to water it periodically by running water down the inside of the clear plastic so make provision for this when securing the plastic. Use elastic bands or something similar. You may have to replace the moss every season, but do it very carefully and DON'T disturb the roots.

Lastly, the correct time to carry out this procedure is mid to late spring once the first set of leaves has hardened, so by the time you read this article it should be just the right time to begin. Have fun!