

Permits, Knee Pads, & Haiku: Jim Doyle on Collecting Trees

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Jim Doyle started with pictures of Alpine Firs and Mountain Hemlocks in the Oregon-Washington border area. The higher he climbed, the more elevation, wind and poor soil shaped the character of trees he saw around him. At levels of about 7,000 feet, a diameter increase of 1/8 inch may represent 15 years of tree growth. Nature-styled trees such as literati limber pines and flagged firs and hemlocks are inspiration for his bonsai designs.

How tall would you guess this collectible pine that Jim spotted is?

(Answer: About 5 feet)

Know what your tree needs to thrive

Jim has a strong horticulture background and uses this to his advantage. He finds out as much as possible about how a plant grows in its environment, as this is often critical to helping it survive collection and development as a bonsai. For example, he showed close ups he had taken of alpine fir needles. From these he learned that unlike many conifers--which usually have only a single row of stomates--Alpine firs make up for poor root system conditions and a short growing season with parallel bands of stomates on their needles. [Stomates are microscopic portals that allow intake of CO₂ rich, moisture laden air and discharge of oxygen, critical functions for both photosynthesis and respiration. They are surrounded by two sausage shaped "guard cells" that open and close the stomates. These groups of cells are usually located on the bottom of leaves or needles where sun and wind are less likely to cause excessive evaporation through the stomates.]

The extra stomates on Alpine firs--and hemlocks, which have stomates both on the top and bottom of their needles--let Jim know that these trees need more than usual protection from the mid summer sun when grown at lower altitudes. They also told him that the trees take in more moisture through their needles than other trees with more

well developed root systems and fewer stomates, and that foliar feeding and regular needle washing would likely help the trees absorb nutrients and the stomates function better.

Getting Ready to Collect

Jim also showed pictures of some beautiful trees he wanted to collect but didn't because the plant didn't pass the "rock" test. If he finds a pine or other tree growing in a rock pocket or ledge, he will try to rock it back and forth. If it moves, it is likely collectible. If it doesn't, the roots are likely embedded in the rock too tightly or deeply to make collection and tree survival feasible.

Jim explained that in collecting, it's important to make sure you have permission to collect on public or private property. Often he will hike through areas and mark trees for collection at a later time. He may shovel around the root base to stimulate fine root development. This will enhance survival after collection. He may even begin some pruning and styling in the field a year or two before he takes a tree.

Knee pads are one of his favorite collecting accessories. After assessing whether the roots are removable, he gets down and checks the trunk of a tree below the soil line to see where the trunk ends and if it is in good shape. He learned this the hard way after digging out a tree only to find later that the trunk had been completely girdled below the soil line by hungry critters during the winter. He had put a lot of effort into collecting a tree that was doomed to die.

When a tree is in the ground, Jim works on making a root ball in preparation for extracting it. He makes shovel cuts in the ground at least 6 inches away from the trunk for every one inch of trunk diameter. He creates a tapering hole around the tree that allows him to eventually undercut the root mass. He wraps the root ball to protect it with material he can soak to keep the roots moist during transit.

Jim collects evergreens year round, but deciduous trees only when they are dormant and leafless. He showed how he reduced a collected hornbeam, effectively eliminating all the branches and leaving an interesting trunk. To stimulate development of roots, he uses Dyna-Grow K-L-N concentrate Root Growth Stimulator. To help develop new branches, he often slits the trunk and will wrap it entirely with sphagnum moss kept moist. He likes to use thread grafts to get branches placed where they are needed for the design he has in mind for the particular tree.

Carrying a Torch for Pines

Jim finished the evening by styling a pitch pine he collected with help from his daughter, Sarah, a graphic arts student who accompanied her father on this trip. Jim estimated the tree was perhaps 40-50 years old. He explained that this type of pine is one that can be pruned hard because it will bud back on old wood.

Jim bends a newly created jin with heat. He started by evaluating the surface roots, finding where the trunk actually began, whether a change of angle in the pot was appropriate, assessing the movement of the trunk and branch layout. Based on all these factors, he chose a front and began work on refining the literati shape the tree's natural growth suggested.

Styling the tree gave Jim an opportunity to share the three principles of design he discussed in his workshop the evening before:

- make the tree look taller by shortening it.
- make the tree look more powerful by bringing the tree branches closer to the trunk.
- make the tree look more natural through artificial means such as wiring, fertilizing, pruning, and grafts.

As part of his work, Jim demonstrated a technique for shaping jin by heating it to complement the design. He lit a propane blow torch and heated a newly stripped branch. The heat allowed him to radically bend the branch without breaking it or using wires. Jim said that the technique can also be used on older dead wood.

Jim's work collecting trees provides him with excellent bonsai materials and inspires him poetically. I am guessing that the following on his web site at <http://www.natureswaybonsai.com/> was written after a larch collecting trip.