

Pauline Muth's Presentation Notes Yama Ki's September 2007 Meeting

Perfecting the basic styles of bonsai
Bonsai is an art form
BUT
without sound horticulture,
you can not develop the best tree possible.



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Basics to keep in mind that make bonsai work:

❖ An Idea medium is needed for optimum growth

- Matches the needs of the species including pH
 - Size of the tree matters and changes the size of medium particles in the pot
- Can not be too rich or too poor in nutrients
- Allows for maximum aeration.....avoid compacting
- Holds moisture at the needed levels
 - 25% of total volume is moisture for ideal growing for many species
 - 50% of total volume when freshly watered
- Is changed frequently enough for health
 - Repotting provide both new loose medium and room for root growth
- Clay components will determine
 - how nutrients are stored and released to the tree
 - release some nutrients to the tree themselves (ions of H, Na, K, Mg and ammonium)
 - store and release water to the tree
- Organic components (leaf mold, bark, well rotted manures)
 - Provide home for needed bacteria
 - Decomposed organics are used by the tree and thus leave spaces
 - Help regulate soil temperature
- Sharp sands or gravels
 - Keep the spaces in the medium for good circulation of air and water
 - Sharp edges promote good root growth

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Watering

- Water components effect pH and thus absorption of nutrients
- Need to maintain moisture levels at 25% MOSTLY
- Over watering or over drying are both detrimental to roots
- Over watering kills mycorrhiza

❖ The right pot or container

- Esthetics aside, provide the needed amount of medium
- Allows for maximum drainage
- Keeps the medium at an acceptable temperature
- Balances the tree

❖ Knowledge of tree growth

- Trees chemically direct growth by the use of hormones called auxins
- The primary function of leaves is photosynthesis and the tree will direct its energies to place leaves in the best position for this process
- Leaf size will be determined by nutrients and light
- Selection of the best time for transplanting , wiring, pruning and trimming will be determined by knowing the species life cycles
- Grafting can achieve better branch placement
- Proper techniques used in removing branches

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Optimum light for photosynthesis correctly placed

- The tree is grown in the ideal light situation for growth
- The plants branches and leaves are positioned for best exposure

❖ Temperatures that allow for both root and foliage mass growth

- Adjust temperature of the pot...therefore the soil
- Do transplanting when night temperatures enable root growth

❖ Balanced fertilizers and minerals

- Must be available at ideal levels consistently during the growing season
- Can be toxic if over concentrated
- Provide both macro and micronutrients
 - Macro: C, O, H, K, P, Ca, S, Mg
 - Micro: Fe, B, Zn, Mn, Cu, Mo, Co, Cl
- Provide mycorrhizae as needed by the species so that the tree can make the best use of the nutrients provided

❖ Ideal branch and trunk structure

- Branch placement is not just artistic but must take photosynthesis needs into account
- Strong apex growth is dominant
- Development of branches by extra growth
- Use of sacrifice and modesty branches

❖ Perfected wiring and shaping techniques

❖ Timely pruning and trimming

❖ Choosing the right species for the style

❖ Choosing the right basic material for the style

- Consider the material you start with carefully
- Make sure there is more than enough to work with to create the design

❖ Respecting seasonal changes

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Developing the 5 basic styles

Chokkan...formal upright

- ✚ Single trunk
- ✚ Branch place with rule of thirds
- ✚ Well placed surface roots
 - Some species allow us to rearrange the roots
 - Some species allow root splitting
 - Some species allow grafting of roots
- ✚ Straight upright structure that tapers
 - Shows the natural development of aged tree
 - Can use sacrifice branch at base to develop taper
 - Can reselect the apex to develop taper
 - Apex branches will dominate
 - Can graft suitable branches
 - Can use a jin as the apex if eventual growth does not dwarf it
- ✚ Even exposure to sunlight
 - For growth
 - By placement of branches for photosynthesis
- ✚ Well spaced branches showing properly aged growth
- ✚ Well positioned branches that show the effects of age & weather



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Shakan...Slanting

- Single trunk straight or curved
- Slants at any angle but 90 degrees
- Branches create the balance
- The surface roots are placed to show the counterbalance that would result from the stresses that made the tree slant
 - Under roots may even buckle
 - Opposite to the slant , the roots must be strong to support the tree and stabilize the trunk
 - Do not create artificial looking surface roots



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Moyogi.....informal upright

- Single curved trunk that shows motion and taper
- Well positioned surface roots
- Branches placed on outside of curves
- Well spaced branches showing properly aged growth



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Kengi ...full cascade and **Han Kengi**....Semi cascade

- ✦ The main trunk falls or cascades over the side of the pot
- ✦ Requires an excellent root ball
- ✦ Roots are often compressed under the fall of the trunk
- ✦ Need to trick the tree into healthy growth
- ✦ Develop the first branches and/or the moyogi top well to create depth

