

REPOTTING



TRADITIONAL JAPANESE METHOD AS
TAUGHT BY
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PRESENTED BY
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INTRODUCTION



- There are many techniques and methods taught; just pick up any bonsai book or look on the internet.
- I will share what I have learned from teachers Kathy Shaner and Peter Tea.
- Spend a few minutes to ask yourself why you are repotting – this will guide decisions about soil composition and container.
- ‘Peter Tea’s Repotting Handout’

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- The reason we replot is to manipulate how the Bonsai grows.
- All techniques in Bonsai are developed to direct the growth of the tree so we can then turn them into Bonsai.
- Here are some reasons as to why I would replot a tree.
 - 1. The tree is in a mix that is too wet
 - 2. The tree is in a mix that is too dry
 - 3. The tree is so root bound that the health of the tree starts to decline
 - 4. To slow the growth of a tree (trees that are too strong)
 - 5. To accelerate the growth of a tree (trees that are weak)
 - 6. To develop the root spread and root system
 - 7. To get the tree into a mix that is manageable by the owner
 - 8. To change the planting angle of the tree
 - 9. To place in larger pot for tree health
- Just like the other techniques we apply to our Bonsai, always consider the species and health of the tree and vary your degree of root pruning.

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- **As you're repotting, you should also ask yourself these questions.**
 - *Did we continue the development of roots?*
 - *Did we get the tree in the ideal position?*
 - *Is the tree firmly tied to the pot?*
 - *Is the soil mix we're using going to cause the tree to grow too fast or too slow?*
 - *Is there enough or too much room for the roots to grow?*
 - *Is this an appropriate pot for the tree?*

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- **When to Repot**
- The best time to repot is December through February. Start with deciduous trees first then conifers.
- Once the trees have been repotted, make sure to protect them if there are sudden hard freezes during the Winter.
- **Repotting Interval**
 - **Deciduous**
 - ✦ Developing: 2-3 years
 - ✦ Refinement: 1-2 years
 - **Conifer**
 - ✦ Developing: 2-3 years
 - ✦ Refinement: 3-5 years
 - **Broadleaf Evergreen**
 - ✦ Developing: 2-3 years
 - ✦ Refinement: 1-2 years

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- **Repotting Early vs. Later**

- Due to our mild Winters, it can make a difference repotting in December vs February.
- It all comes down to how fast you want the Bonsai to grow.
- Repotting in December generally yields a strong Spring push whereas repotting in February slows down the Spring push.
- The difference is not huge but can be enough to affect how refined trees continue to develop.

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• **Soil Mixtures Peter Tea Uses**

○ **Conifers:**

- ✦ Fast growth mix: 33% Akadama, 33% Pumice, 33% Lava
- ✦ Average growth mix: 40% Akadama, 30% Pumice, 30% Lava
- ✦ Slow growth mix: 50% Akadama, 25% Pumice, 25% Lava

○ **Deciduous:**

- ✦ Fast growth mix: 33% Akadama, 33% Pumice, 33% Lava
- ✦ Average growth mix: 50% Akadama, 25% Pumice, 25% Lava
- ✦ Slow growth mix: 75 % Akadama, 12.5% Pumice, 12.5% Lava

○ **Broadleaf Evergreens:**

- ✦ Can use either Conifer mix or Deciduous mix. Dependent on species of plant material.



- **Soil Sizes and Container Sizes**

- Soil sizes can change how much water it holds. Smaller soil has more surface area in a given container and surface tension of water plays a larger roll.
- Generally small trees uses smaller soil and larger trees uses medium size soil.
- When creating your soil mix, keep the sizes of the individual components as consistent as possible. Large particles have a tendency to work their way up towards the top and small soil tends to work it's way down.
- Use a sifter to sift the soil to size and remove the dust.
- The size of the container also plays a role in how much water is retained.
- Large containers have larger surface areas and tend to hold water longer.
- Very small containers don't hold much water at all.
- Think about the size of the container, the soil mixture you're planning on using and make the adjustments needed to get just the right amount of water retention.



● **Pros and Cons of Level Soil vs. Mounted Soil**

○ **Mounted Soil Surface**

- ✦ **Pros:** Makes the Bonsai look like its been growing in the container for a long time. This helps add age to the Bonsai.
- ✦ **Cons:** Soil tends to wash away when watering. Maintaining a healthy root spread is more difficult.

○ **Level Soil Surface**

- ✦ **Pros:** Ideal of maximum root health and easier to water.
- ✦ **Cons:** One element of showing age is not utilized

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- **Tools and Materials for Repotting**

- Bonsai Container
- Soil
- Screen
- Root scissors
- Root hook
- Root rake
- Root cutter
- Root sickle
- Chopsticks
- Pliers
- Wire cutter
- Small brush
- Screws
- Battery powered drill/driver

- **A Few Other Things from Renee's List**

- #2 Aluminum Wire
- Spray bottle with H₂O
- Spray bottle with 70% alcohol for cleaning tools between trees

SOIL



- **Soil Components**
 - **Akadama** – naturally occurring clay-like mineral from Japan
 - **Lava** – solidified molten igneous rock from volcanoes
 - **Pumice** – blasted into air from volcanoes, softer texture
 - **Hyuga** – a type of pumice, used for drainage layer



GET ORGANIZED

- **Prepare soil:** Sift and mix soil components
- **Organize tools**
- **Prepare pot:** Clean, cover holes with mesh, insert wire





- **Repotting Steps:**

- **Raw trees:**

- 1. Cut tie downs wires
- 2. Use a root sickle to cut the sides of the container
- 3. Remove the tree out of the container
- 4. Find the root spread by raking the top soil
- 5. Lay the tree on its side and rake the bottom of the soil ball
- 6. Bring the tree upright and lightly rake the sides
- 7. Bare root if the tree allows it. If not, bare root a small section
- 8. Prepare the container with screen and tie down wire
- 9. Add drainage layer of soil if needed
- 10. Add small amount of Bonsai soil into container

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- **Repotting Steps Continued:**
 - 11. Place tree on top of soil and slightly work the tree down into the soil
 - 12. Make required adjustments in side to side lean, front to back lean, offset and soil level.
 - 13. Add a small amount of Bonsai soil and work into roots
 - 14. Tie root mass down with tie down wires
 - 15. Add more soil and work into roots with chopstick. Keep filling soil to the desired level
 - 16. Water the tree till the water runs out the bottom of the container. Keep watering till the water runs out clear.
- **Refined Bonsai:**
 - Same as above except reverse **steps 4 and steps 5**

GET THE TREE READY

- Remove from current pot
- Prepare roots (this is one of the most important things you will do for developing your tree)
- Follow steps #4 - #16 in Peter Tea's handout.



Post Repot Care

- Protect tree from strong sun and wind. Place in protected area for several weeks.
- Do not fertilize for several weeks. (See Peter Tea's "Fertilizing Made Easy")
- Return tree to normal growing conditions.

