REPOTTING techniques

Vianney Leduc

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Repotting

- A basic technique to perform regularly
- An easy to learn technique
- An opportunity to correct some root problems

Reason to perform repot

1- Esthetic

- Change pot
- Change tree inclination

Reasons to perform repot

2- The heath of the tree

- Water no longer drains well
- Not enough oxygen in the soil
- The roots developed since last repot are starting to choke themselves

Reasons to perform repot

3- Transfer a nursery tree into bonsai soil

- First important step in transforming a tree into a bonsai
- Replace nursery soil by bonsai soil
- Keep a portion of the original soil for coniferous to have mycorrhiza

Reasons to perform repot

4- To thicken up the trunk

- Replace current pot by a bigger one
- Provide more space for roots to grow which will in turn lead to more foliage growth
- This technique work on some species only (e.g. larch, Japanese black pine, Trident maples)

When to repot

The best time varies depending on species

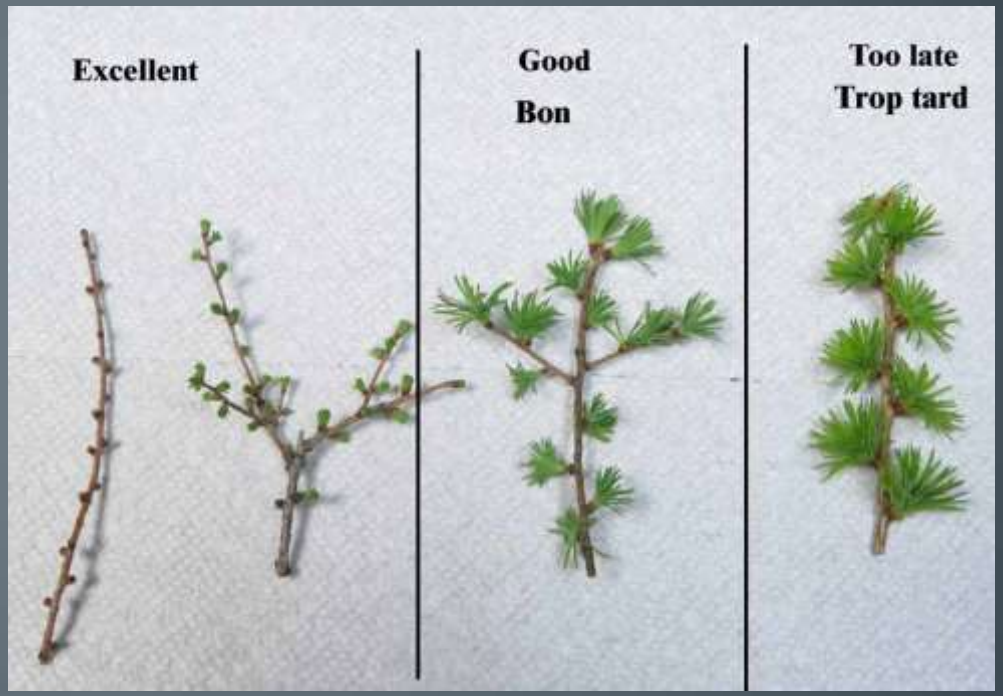
- **Tropical**
  - **Very flexible**
  - **Ideally in early summer**
  - **Can be done all year round**

- **Decidous leafy trees**
  - When buds are starting to grow
  - Can also be done in January or February if kept in cold room at 2-5 C

When to repot

Coniferous

- Early spring
- Second option: early September



Larches

- Ideally when the buds are starting to open
- Second option: when needles turn yellow

Differences between leafy trees and coniferous

There are some general differences to consider

- The amount of roots that can be pruned
- Doing bare root repot : OK on leafy tree and bad for coniferous
- The majority of coniferous depends on mycorrhiza
- Leaves of deciduous tree will transpire more while foliage of coniferous will not transpire as much
- Need to protect the nice bark of coniferous

Correcting surface roots

Before doing a repot, we should cut problematic surface roots

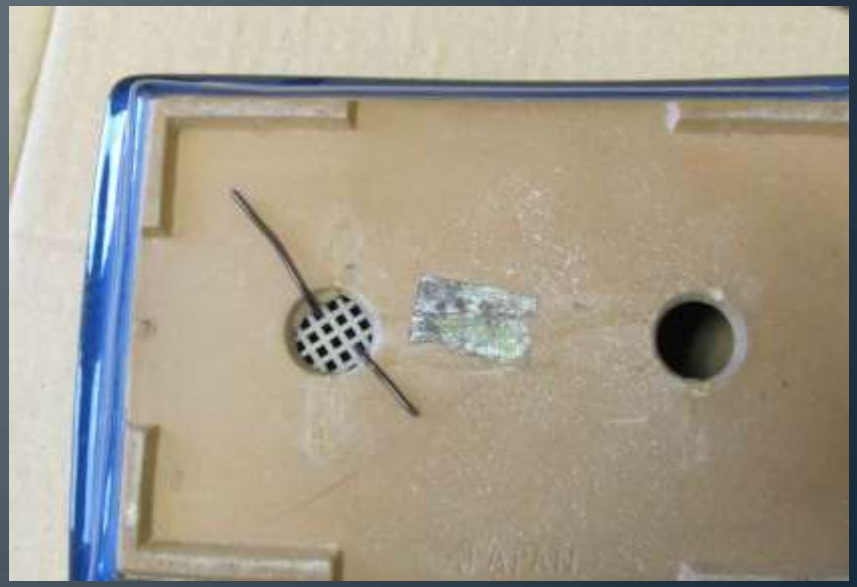
- Roots crossing each other
- Roots growing in a bad direction

Steps for repot

1- Pot preparation
2- Anchor the tree
3- Insert soil
4- Add final layer
5- Add moss

1- Pot preparation

- Place drainage screen on pot holes



1- Pot preparation

- Choose the area to anchor the tree
- Large trees will often needs 3 to 4 anchor wires
- Insert your anchor wires
- Use 2.5mm wire for small trees and 3mm - 3.5mm wire for large trees

1- Pot preparation

- Put a smaller layer of coarse soil at the bottom of the pot on drainage screen
- In large pot, place a layer of coarse gravel on the entire bottom of the pot
- Place first layer of bonsai soil
- Create a small mound in the center of where the tree will be sitting

2- Anchor the tree

- Move tree slightly back and forth on the mound in order to properly spread the soil directly below the tree
- Place anchor wired in the planned area (i.e. large roots, or other)
- Ensure that the tree is sitting in the proper position
- Twist the wires to anchor the tree

2- Anchor the tree

- On a nursery tree, we can anchor the original soil kept at the surface
- Another way is to insert a bamboo chopstick in the root ball

2- Anchor the tree

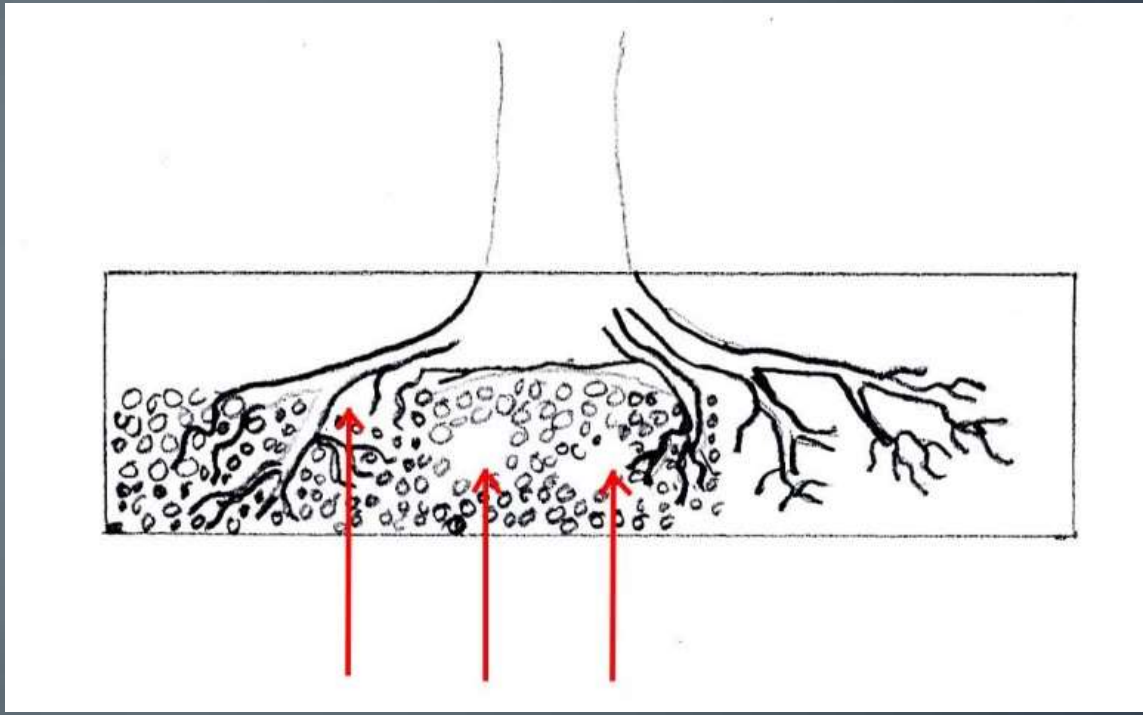
In some cases we have to insert screws at the base of the trunk

3- Insert soil

- It is important to insert soil in all areas between roots and avoid pockets of air
- The part below the base of the trunk is often forgotten

3- Insert soil

- Roots cannot grow in pockets of air
- The more pockets of air, the less space for fine roots to grow



Aftercare

The tree is now in intensive care!

1- Avoid sun between 9:00am et 5:00pm

2- Avoid the wind

3- Create a humid environment to reduce transpiration

4- Avoid frost

5- Avoid fertilization

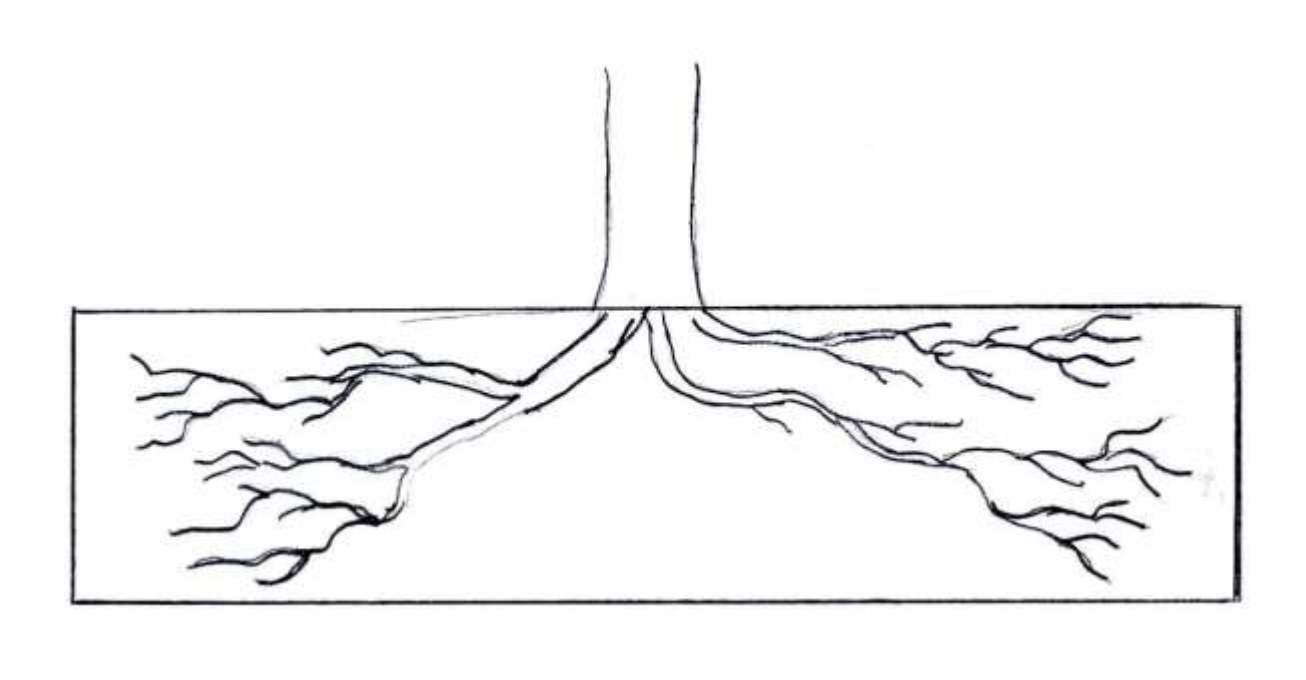
How to know when the tree has recovered

- The development of new roots can take between 2 and 6 weeks depending on species
- The tree will show that is has enough new roots when it start to push new growth
- Beware: some tree will have the buds which keep developing during the recovery phase but that does not mean that new roots have already developed and that you can start placing the tree in the sun: it is preferable to wait 3-4 weeks

Dealing with collected trees

Repotting old collected trees that has gained strength

- The traditional approach was to spread the roots and provide plenty of space for them to grow
- This method leads to using large wooden boxes and the reduction of roots is done very slowly over many repots

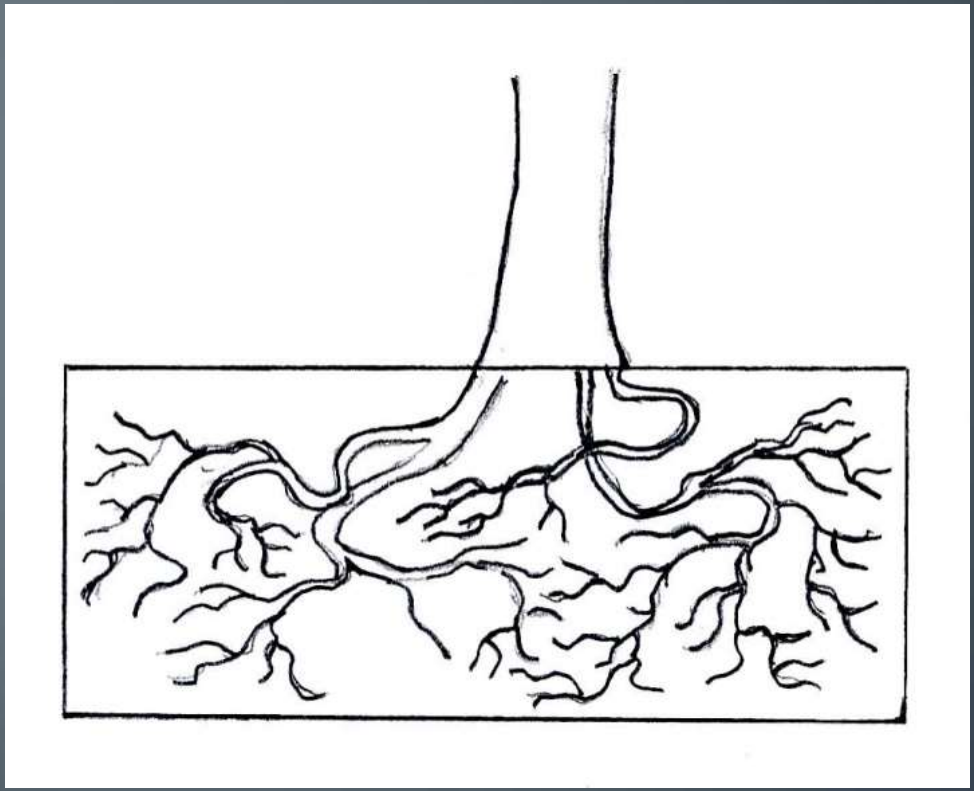


Dealing with collected trees

- The wooden box are often very heavy and it takes many repots before the tree is in the final pot

Dealing with collected trees

- The better technique consist of bending the roots in order to use a much smaller pot



Dealing with collected trees

- Require a fraction of the time to get the collected tree in small pot
- Require much less soil
- The roots get used to the new tighter environment
- Example of such a repot

Dealing with collected trees

Example using the technique of bending roots

- Going from collected pot to final pot

Dealing with collected trees

After removing all the old soil (i.e. larch do not need mycorrhizae)

- The roots are way outside of the pot

Dealing with collected trees

Identify big long roots

- Cut them back to a smaller root
- The amount of large roots that can be cut depends on the species

Dealing with collected trees

Bend a group of roots and attach them gently with small wire
- These small wires are inserted from the bottom of the pot

Dealing with collected trees

Add a layer of soil on top of the bent roots

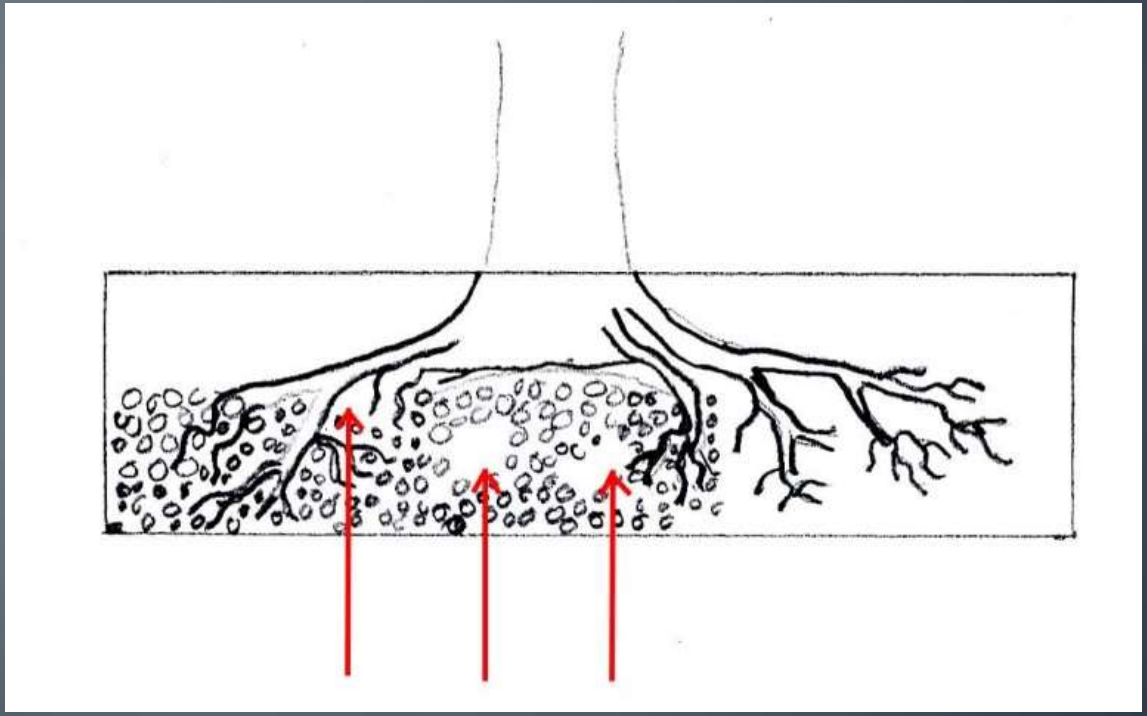
Dealing with collected trees

Bend another group of roots on top of the soil just added

Repeat process for all other groups of roots

Dealing with collected trees

- Using a chopstick, insert soil between roots and ensure to remove air pockets
- This is a much longer process with roots that are bent on top of each other



Dealing with collected trees

When do we use this technique?

- Can it be used right after collecting the tree?
- Can it be used on collected leafy trees

It becomes very important to understand the species we collect…!