

## A Bonsai Close-Up on Wiring by Pauline F. Muth

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Wiring and other shaping techniques for bonsai are needed to create a beautiful tree that not only reflects the idea of the bonsai artist but increases the survival of all the carefully chosen branches. The difference between a tree that is shaped only by pruning and a tree that has been wired is light years apart.

Why do we use various methods to change the shape of a tree and create bonsai?

- To build a design around the vision of the artist
- To create a feeling of greater age
- To redirect the trunk line and the branch placement
- To give the tree greater beauty in the eye of the artist
- To place each branch for maximum exposure to light

What can be done to reshape a tree?

- Pruning
- Hanging weights from the branches
- Using stakes or guides to pull branches down
- Lever devices
- Tourniquets (use plastic tubing to protect the bark from the pressure of the wire)
- Wiring branches to reshape them

Copper or aluminum wires may be used. Each has advantages and disadvantages: (Note Cu is toxic to members of the *Prunus* group)

Copper	Aluminum
Annealed wire work hardens to the shape..larger gauges must be cut off	Anodized wire remains soft and can be reshaped
Superior holding capability allows the use of lighter gauges	Heavier gauges must be used
Color oxidizes with time and may blend in making it difficult to find to remove	Color often bleaches off leaving silver colored wires which are easy to locate for removal

## Supplies needed for good wiring

- Wire cutters:
  - Cutting shears
  - Bonsai tip wire cutters
- Pliers
- Florist tape
- Raffia
- Plastic tubing
- Turn table with stopper and tie down hooks
- Bungee cords

## Wire gauges

- Copper is in gauges from 24 to 6 (fine to heavy)
- Aluminum is in gauges from 1 to 6 (fine to heavy)
- Determine the gauge to be used by doing the 6-inch test: press the tip of a 6-inch portion of wire against the supported tree. IF the wire bends, use a larger gauge. IF the branch bends, the wire is strong enough
- If you do not have a gauge heavy enough for the bend, wire is twice with the largest gauge you have.
- Use a wire strong enough to hold the branch in place while using the smallest gauge possible.
- Change the gauge of wires as needed going out a branch.

## Style of wiring

- Learn to wire by removing wires from well wired trees
- Wires are applied at a 45 degree angle only
- Anchor all wires as needed
- Determine the direction of the wire winding based on the movement you wish to achieve: both the motion of the branch and the rotation can be changes along with the angle of placement

- Preplan wire placement to avoid crossing wires and to place support where it is needed for maximum leverage for bending.
- Put the first bend of wire over a branch to pull the branch downward while putting the first bend under the branch to move it upward.
- Support placed wire with your thumb while applying wire with your dominant hand. Hold the wire a few inches away from the branch to give you some leverage in wrapping the wire.
- Use pliers to help you arrange wire and pull on the ends of wire to arrange it properly.
- End all wire under a branch and cut close to branch
- Work on wiring in the following order:
  - Main trunk or trunks
  - Largest branches
  - Medium branches
  - Fine branches
- When changing wires to a smaller gauge, start the new gauge next to two turns of the heavier gauge wire.
- Remove wires before the tree grows into the wire to avoid wire damage.
- On delicate trees, you can protect the branches by either wrapping the wire with florist tape or by wrapping the branches with florist tape or damp raffia.

#### Time of wiring

- Deciduous trees are best wired before the buds open in spring
- Conifers are best wired from autumn to spring before the buds are active
- Spring wiring offers the challenge of spring growth so watch the wires!

- Some species are best wired as follows:
  - White pine: mid fall to late winter
  - Red Pine: mid fall until late winter also late spring to early summer
  - Juniper chinensis: mid fall to late winter also late spring to early summer
  - Juniper rigida: mid fall to late winter also late spring
  - Maples and beeches: after leaf fall or before budding out in spring
  - Illex serrata: Spring
  - Rhododendron: fall or after blooming