

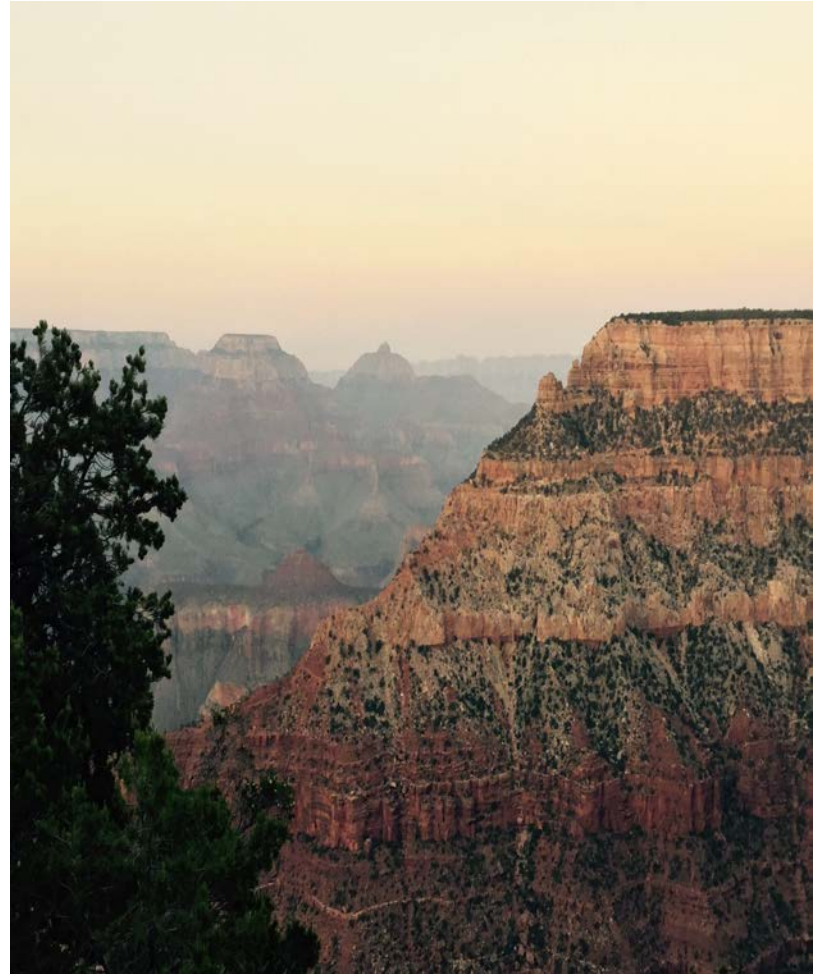
Pines as bonsai
Ghazi Zouaoui - March 2021



Among conifers, pines are quintessential trees in the art of bonsai.

The genus, *pinus*, comprises over one hundred species of shrubs and trees, mostly native to the northern hemisphere. They are often found in harsh environments: high altitude, high latitudes, and semi-arid climates.

The appeal of pines as bonsai is in their ruggedness.



The most basic requirements for growing pines are:

- Plenty of sunshine
- Well draining soil

When grown as bonsai, pines must be exposed to direct sunlight for a few hours a day in order to remain healthy. They do not fare well, and will weaken in the shade. As bonsai, pines will benefit from growing in quality, well-drained substrates, eg. the standard mix of screened lava, pumice and akadama.



When it comes to training, different types of pines respond differently to bonsai practices and techniques (pinching, pruning, decandeling, fertilizing regimen)

In order to achieve our design goals, it pays to adapt our practices to the pine species at hand.

For training purposes, pines can be divided in three categories:

- Single flush, short needle pines (scots pine, for example).
- Single flush long needle pine (Japanese white pine, ponderosa pine, etc).
- Double flush pine (Japanese black pine, and often Japanese red pine).



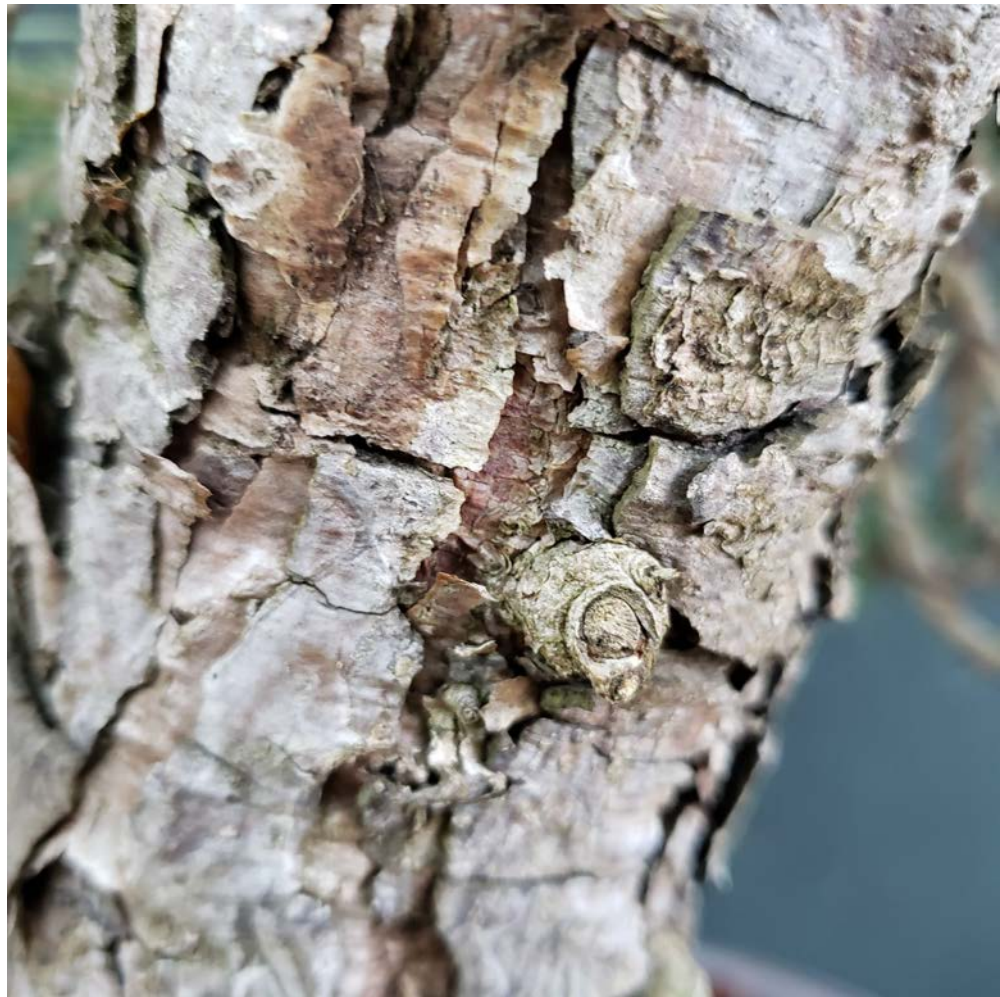
The following slides
summarize the seasonal
tasks for developing
pines as bonsai,
according to their
growth habit



Springtime



Single flush long needle pines:
These are pines that will extend new growth (candles) only once per growing season. The needles, while still soft, also have a strong propensity to elongate (sometimes dramatically) if overly fertilized. For well developed trees, in order to control, needle length, it is important to withhold fertilizer in the springtime. Candles should also not be reduced in length (pinched) else the remaining needles will lengthen due to the increased share of nutrients available to them. Never decandle a single flush pine. That is the best way to weaken it.



Single flush short needle pines:

The needles do not have a strong tendency to elongate excessively. Ramification and back-budding can be achieved by pinching the candles (reducing their length). After pinching, the remaining portions of the candles should be as nearly equal in strength on any given branch, and over time, over the entire tree. When pinching a candle, do so using a clean break while holding the base of the candle firmly (but without damaging the emerging needles or crushing the stem). If the needles have already emerged and the stem has toughened, use a pair of shear, and cut between needles). A good time to pinch your scots pine, for example, is around the time the candles have reached the appearance in the photo on the right.



Double flush pines:

These are pines capable of pushing two flushes of growth per growing season. The method of choice for training is decandeling: the complete removal of candles in the spring. Using a pair of shears, cut the entire candle off, at its base. It is best not to fertilize in the spring, but if you do make sure to remove all fertilizer remnants a couple of weeks before decandeling. Do not feed again until the subsequent (second) flush has hardened (typically not til fall). Decandeling will trigger the tree to produce multiple buds at and behind the cut site, and the second round of growth will bring shorter needles.



Summertime



Summertime care is simple:
Water as needed. No fertilizer.
Let your pine be.



Fall time



Fall is the time for cleaning old needles, downward growth, crotch growth, selecting next year's growth, pruning out unwanted stems, shortening or removing branches, wiring, and fertilizing generously (starting in early fall, very late summer). A well balanced organic fertilizer is best for your tree, and will be mycorrhizae friendly.

This is also a good time to clean and preserve deadwood.



Winter time



During winter, protect your pine from the worst of the cold and from desiccating winds. It is important to let your pine experience frost before moving it into its winter quarters. Once temperatures begin to routinely fall below 25 F, move your pine to a sheltered location where the temperature does not climb much above 40 F for any length of time. Good lighting during winter time is good for your pine. A cold greenhouse is ideal, or a sheltered location on the ground with a good layer of insulation over the pot and a wind break might also work. Remember that the japanese black pine (and other warmer climate pines) are typically not as hardy as high altitude pines and will require better protection. Remember to check your tree for water.



Final notes:

The best time for repotting your pine is always in the springtime as buds are swelling. Never bare root your pine. Always leave a portion (about half) of the old soil.

Avoid performing heavy manipulation on your pine during periods of extreme heat or cold or when the new growth is still tender. In spring and fall, spray your pine with an antifungal (copper fungicide, diluted lime sulfur, daconil, etc.). Keep an eye out for scale and other pests.

Keeping your pine healthy will go a long way towards keeping pests at bay.



When wiring, pruning, or otherwise handling pine foliage, approach the branches from below to avoid damaging the needles.

If your pine tree is early in its development as bonsai, or needs to (re)gain vigor, has poor foliage density, weak branches, etc., it is best to forego pinching/decandelling. Allow it to grow, feed it spring and fall (if it shows signs of healthy new growth) until it is vigorous enough to begin training.

- photographs courtesy unsplash-

