

The Art of Bonsai

By Eugene Howell

We have had our initial dose of cold weather this winter and the temperature for three successive nights got low enough to do some serious damage to any tropical bonsai which you may have left unprotected in a vulnerable location.

The techniques typically taken by bonsai owners when the word goes out that low temperatures are coming are to either put the trees in a greenhouse (if one is lucky enough to have one), bring them into the garage or house, or to place frost cloth over them and add light bulbs to keep the air warmer under the cloth. There is an additional method that most people do not use intentionally, although some use it and don't even know they are doing so. This method is to intelligently use microclimates.

Believe it or not, every homeowner has microclimates around his/her house and if you place some, or all, of your bonsai in one (or more), you can go a long way towards keeping cold temperatures from harming your plants and at the same time keep from running your electricity bill up to a "jaw dropping" level.

Let me define and discuss what a microclimate is and I am sure each reader will immediately recognize where there is at least one on his/her property.

A microclimate is simply an area that, for one reason or another, either stays warmer in winter or cooler in summer, than the prevailing temperature in the general area. This temperature variance can be anywhere from one or two degrees all the way to 10 degrees warmer or cooler than the surrounding area. It is usually created by a manmade structure, the natural terrain, or a unique combination of trees and shrubs. The most common type, in a city environment, is one caused by one or more manmade structures.

Take a look at the exterior of your house and the fences around it. If there is a spot where one exterior wall intersects another, normally at an angle of 90 degrees, this has the possibility of creating a microclimate. If this spot faces East, South-east, South, or South-west, then you probably have one. The idea is that since the prevailing cold winds come from the West or North-west here in Florida, the spot has the opportunity to trap air that becomes warmer than the general area. It becomes warmer not only because the air in the spot is trapped, but more importantly, as these intersecting walls heat up during the day they act as radiators during the evening hours and continue to heat this trapped air. The same thing holds true for the ground below the intersecting walls. The result is continued warmth for the bonsai throughout most, if not all, of the night hours.

Don't rely completely on intersecting walls of the house to create a microclimate. Where a fence meets a building, or two fences intersect, and these intersections face in the directions already mentioned, there likely is a microclimate.

A microclimate can be created by strategically planted trees and shrubs. When I was a kid I lived in Iowa for several years and saw many examples of this. Farmers would go out from their house and barnyard about 50 to 75 yards and on the North and West side of this area they would plant about three rows of closely spaced fir trees. Then immediately inside this they would plant about three rows of a fir that did not grow as tall as the previous rows. Next, inside this, they would plant three to five rows of an evergreen shrub. After a few years they would have a living wall, from ground level up to about 40 feet that would almost completely stop cold winds from passing through. This would allow the farm yard to get several degrees warmer during the day than the area immediately outside this living wall. They had successfully created a microclimate that might be as large as two acres or more. The warmest part would be anywhere from 10 yards inside the living wall, out to about 40 yards from it and the temperature would gradually decrease as one went outward from there.

If your landscape includes thick, fairly tall, hedges then on the South or East side of them, you may have a microclimate.

The natural slope of the terrain may also create a microclimate. Cold air will slide downhill. This means that if your property slopes downward, even as little as three or four feet, the cold air at ground level will slide downward into the lower part of the property. If this lower part is not a bowl (which will allow the cold air to fill it up and then spread out over the surrounding area) then the cold air will continue to move from your higher ground to your lower area and the temperature of the higher ground may stay a few degrees warmer. At my house, my backyard slopes downward for about six feet to the medium-sized lake behind the house. The resulting effect is that the higher part of my backyard stays sufficiently warmer that even with the temperature dropping to 30 degrees this week; most of my tropical plants in the landscape suffered no damage.

Never assume that what you suspect is a microclimate, really is one. You need to verify that it is. You can do this by placing a recording thermometer in the spot, at about 18 inches above ground level. The following day compare it to a recording thermometer that was in an area that experienced the full depth of the cold temperature during the night. If you do this several times and one thermometer consistently reads higher than the other, you have successfully identified your own personal microclimate.