

Microclimates. Micro-worlds
by Bonnie Turnbull

Welcome to my yard. You say it's too hot? You say my yard is too sunny for a walk around?

But you must see my vegetables before we go in! It's growing well enough, but look at this cabbage leaf, lacy with holes. Now flip it over. See that tiny egg? Look carefully because the tiny, newly-hatched caterpillars often lie right along the leaf veins marvelously hidden.

But let's go on. Over here, a frog croaks in the deep shade under the thimbleberries. Follow quickly, for mosquitos hang on the fence there waiting for blood. They like this cool spot and there is moisture nearby.

And over here, I water about once a week. Still. Look at all the flowers! Grasshoppers clack and jump as we pass through the black-eyed Susans. Bees buzz. Small twigs snap when we step. You are right. It's sunny here, and dry, too.

Now let's go inside for that glass of iced tea...

Though my yard is what anyone would call *sunny*, conditions vary. Mobile creatures choose a spot where conditions suit them perfectly. Those conditions can differ, in important ways, from other areas just a few steps away.

These small areas where climatic conditions differ from the general region or other spots nearby are called *microclimates*.

You already know something about microclimates. You have stopped within the shade of that gnarled cedar on the mountainside, taken out your water bottle and guzzled the wet coolness.

Intense sun and little rain make for extremes in Tahoe--even within the small space of a single yard. Creatures like us, the bee, the frog, and the cabbage white butterfly are lucky. We move to our preferred microclimate--whether we want to sunbathe or cool off in a hammock. However, your plants are not so fortunate. You must be clever and choose a place right for them.

Some microclimate characteristics you already consider. Labels at the nursery always mention them:

- Sun/shade
- Water

To some extent, you can change these elements to better suit the plant. You may *irrigate* your cabbage or plant *shade* trees.

Other characteristics you may notice, but not think too much about. You can change these, too.

- Plant density
- Soil

If you create *dense* stands--something that rarely occurs naturally in Tahoe--plants will be in fierce competition for very limited resources. Cabbages demand large amounts of *water*, *soil* nutrients and *sun*. In spring, I mix compost and fertilizer into the soil of my raised bed, then plant cabbages and radishes closely together. At first, density helps. Leaves shade the dirt and help limit evaporation. However, as the seedlings grow, I must harvest the radishes from in between the cabbage heads or they will all be in fierce competition for the same *sun*, *water* and *soil* nutrients, thus reducing my harvest.

Some microclimate characteristics cannot easily be changed, and if you are like most of us, you do not think about them at all:

- Slope
- Wind
- Aspect

The thimbleberries snuck under the fence from my neighbor's yard. It thrives in the shade tucked between house and fence at the bottom of the *slope* where the cool air pools in the evenings. *Wind* protected, the leaves better retain limited moisture.

Yet steps away, drought-tolerant, sun-loving black-eyed Susans grow--but only because I have worked hard with the toughest of microclimates. The

ground there is side-*sloped* and sprinkler *water* runs off. Our usual south-westerly *wind* runs up the street and ruffles through them, drying them constantly. *Aspect* works against me, too. The land slopes gently down toward the west facing the scorching afternoon sun.

I must limit *density* and *water* just a few minutes at a time, several times a day, so all water soaks in. Too much at once, and it will run off instead. Last, I hold water in place by covering the soil with partially decomposed compost, a “lid” on the soil that we gardeners call *mulch*.

A friend moved last year and I have not been to his new house. He called me the other day to ask, “You’re a Master Gardener. Would you come over and tell me where I should put my new vegetable garden?”

I laugh. “You’ll be far better at deciding that! You’ve been watching your yard for months now. No one knows more about your yard--and all it’s microclimates--than you do!”

Photos by Jessie Brown