## Spring Challenges of a Mountain Aerie by Francie McGowan

Spring has arrived up here in the mountains above 4,000 feet. Or has it? While rain and sun drench the lower foothills, snow, interspersed with warm, sunny days is wreaking havoc with higher mountain gardens. Gardening at higher altitudes is an ongoing challenge. Robert Frost perfectly encapsulated the effect of April in his poem, "Two Tramps in Mud Time,"

The sun was warm but the wind was chill
You know how it is with an April day,
When the sun is out and the wind is still,
You're one month on in the middle of May.
But if a cloud comes over the sunlit arch,
A wind comes off a frozen peak,
And you're two months back in the middle of March.

That pretty much describes what happened this last week up in the Sierra. After all the plants began leafing and basking in the sunlight, dark nimbus clouds loomed on the horizon and by daybreak, snow again covered the deck.

Late frosts and snow flatten early bloomers like daffodils and irises. There is nothing more jolly than a hillside of daffodils or more woebegone than those same flowers squished to the ground by snow after they have bloomed. They are hardy and deer-resistant, though, so often pop right back up after the snow has melted.

Effects of higher altitude on the landscape are harsh. The ground is drier up the mountain and water evaporates faster. Climate is colder, often with freezing temperatures at night, even in late spring. Sunlight is more direct and intense, but shadows from pines and cedars cast cool, dark swatches of shade across the land. Mountainous terrain results in more varied microclimates.

Microclimates are a boon or a bane to the mountain gardener, depending on the gardener's prowess in plant selection. It is important to the success of any garden to know what the plants need in terms of temperature, water and altitude. Although local nurseries often list the zones and cold-hardiness of plants, they never talk about altitude. Drought-resistant native plants will thrive on drier, hilly areas of the garden, while flowers and shrubs with greater water needs will be happier on flatter, more protected areas of the landscape. Creating rock gardens or raised beds are two ways to cope with dry, rocky hillsides because you can control soil content with amendments. Raised beds with amended soil is the best way to provide a nutrient-rich environment for vegetables. Because of the - zillions! - of pine needles and leaves shed by conifers, soil is high in acidity. Either buy plants that like acidity—roses, rhododendrons, ferns, azaleas, blueberries, columbine, lupine and most fruit crops—or amend the soil to make it more alkaline.

Another solution to the dry air and fast rate of water evaporation at higher altitudes is to use mulch to protect root systems from frost and snow in the winter, and scorching sun in the summer. It is essential to slowing water run off and evaporation. Mulch also inhibits weed growth and harmful insect infestation.

The challenges of mountain gardening are great but very rewarding. One of the pleasures of living up the mountain is being closer to wilderness and enjoying the gentle breezes of summer wafting through a naturally-shaded garden. Dazzling riots of wildflower color and the incense of cedars make this mountain aerie well worth the effort it took to develop.

Francie McGowan is a former University of California Cooperative Extension Master Gardener of Tuolumne County, who has enjoyed life up the mountain for the last 23 years.

University of California Cooperative Extension Central Sierra Master Gardeners can answer home gardening questions. Call 209-533-5912 in Tuolumne County, 209-754-2880 in Calaveras County or fill out our easy-to-use problem questionnaire (https://ucanr.edu/survey/survey.cfm?surveynumber=7269). Check out our UCCE Master Gardener webpage (https://ucanr.edu/sites/MG\_of\_CS/). You can find us on Facebook, on the radio at kaad-lp.org or 103.5 FM on Motherlode Community Radio and also on You Tube.