

Growth Even in Winter

BY JONN KARSSEBOOM

In my personal book of the Laws of the Universe, looking pretty shouldn't mean silently suffering in the cold. There just isn't any good reason for it. The proof for my irrefutable doctrine? As in all of biology: Form follows function.

In other words, clothes should be created in direct correlation to what they are meant to do.

This belief of course has caused me to privately rail against the fashion industry for years. Don't get me wrong. They've done extremely well, dare I say excelled, where form is concerned. But as a hardcore, year-round gardener they've often forgotten completely about function.

Perhaps that's why I was in such a gleeful mood when I found myself amongst hundreds of others on the slopes of Mt. Hood at night. Gardening? Not quite. Rather I was unnaturally speeding along on a brakeless, rudderless rubber tube with classic rock and roll music pumping out of nearby giant booming speakers and all around me were multi-colored strobe laser lights in sync with the beat.

They call it "Cosmic Tubing".

Throughout this wonderfully fun and quite other-worldly event I couldn't help but to be curious in what would cause so many people to leave the warmth and comfort of their homes to be outside, with a blasting arctic wind in their face and an official temperature of just 17 degrees? (There were lines outside for passes that lasted for hours.)

Fun? Adventure? A chance to find a renewed appreciation for hot cocoa?

Sipping some myself in the tiny lodge I found my answer just watching fellow Rebels come and go through the heavy doors.

Their specialized clothes (and the many hidden layers underneath) gave them full protection. I could tell the experienced tubers didn't even register the cold because



they had thought through all of the details to keep their heat in and the cold out.

Which also made me think of how plants in my garden are able to handle below freezing temperatures without freezing through. As weather-tough as I think I may be, I know I'd be hard pressed to stand in the cold (even with my layers) for an entire night, let alone a winter's season.

So, how do plants do it anyway?

Plant cells and other living cells (like ahem, human cells) are incredibly similar in many ways. And, get this; they'll suffer the same exact damage during freezing as any

other living organism would. Meaning if the water inside the cell freezes its an eruption/disruption/interruption of life itself.

Here's the thing though. Plants have developed amazing adaptations. They lose water-filled leaves before the freezing winter appears. For evergreens, they have developed a heavy wax coating over their needles to prevent water loss and during extreme colds can even turn tiny valves to the "off" position (much like turning the outside water off from inside the house.)

While they don't generate their own heat like our warm bodies, plant cells do change to prevent near certain freezing death. They add solutes to the cell mix which is like adding salt to water to raise the freezing temperature. And they add proteins and fats too. All this while we're enjoying soccer games and fall color.

Back on the mountain the thought of the experienced tubers and tough winter plants made me pause during my last run of the night. As I stood on top of the hill, with my "tube" positioned to take me away with the slightest touch, I looked around.

The music thumped with John Mellencamp's "Ain't Even Done With the Night" and I could see the thick layers of snow weighing on the trees below. The laser lights sparked and flashed atop the whiteness and as I pushed off I felt, like the fellow tubers and plants in my garden, a warmth and life even in the cold.



Jonn Karsseboom gives (and receives) garden advice year round. Join his community of Garden Rebels at www.thegardencorner.com.