

Freaks of the plant world



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Romanesco broccoli made even more beguiling by fasciation. **KENNETH SETZER** - Fairchild Tropical Botanic Garden



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Plants are prone to a particular deformation that produces a flattened, fan-shaped growth pattern called fasciation. It can be alarming if unexpected, and stunning when cultivated. Searching for fasciated plants has become a strange little hobby of mine.

Fasciation comes from the Latin for “bundled,” and indeed fasciated plant parts look bunched together, almost as though they’ve been melted, flattened and stretched. It can happen to any plant part. Most often flowers, fruit, stems and foliage, but even roots can be fasciated, albeit less often.

It’s quicker to list what does not cause fasciated growth, but here’s what does: Exposure to frost, physical trauma, insect attack, fungi or the bacterium *Rhodococcus fascians*, known to cause leaf galls in some plants, have all been implicated in fasciation. Excess nourishment is also a noted cause. Some plants may also inherit the tendency to fasciate.

EXPOSURE TO FROST, PHYSICAL TRAUMA, INSECT ATTACK, FUNGI AND THE BACTERIUM *RHODOCOCCUS FASCIANUS* HAVE ALL BEEN IMPLICATED IN FASCIATION.

The cells of the plant’s point of growth — the apical meristem, at the tip of a shoot — grow in a flattened shape, more or less, which can lead to all sorts of fanciful twists and turns instead of a normal cylinder shape. Abnormal cell growth may make you think of cancer, but fasciations are not harmful to the plant. However on

an evolutionary time scale, who knows? Maybe the flowers will prove to be unappealing to pollinators, or not. I have seen bees collecting pollen from fasciated flowers.

When I came across fasciated firespike (*Odontonema stricta*) in the yard, I feared it was diseased, but that isn’t the case. The tubular red flowers beloved by hummingbirds were underdeveloped and clustered in profusion on a flattened, fan-shaped stem. It looked like a shoehorn. The plant produces this condition, as well as normal flowers, year after year, and the plant thrives.

Fasciation has its own variations, and when it results in a fan shape, it is referred to as “crested.” Many plants are actually cultivated for cresting as a selling point. You’ll encounter crested *Euphorbia lactea* often for sale among the cactuses, though it is not a cactus. Nurseries often stock them, along with actual fasciated cactuses like *Mammillaria elongata cristata*, aka brain cactus, a plant that just begs to be placed into a skull planter. If you grow either, provide very well-draining, porous soil in a pot with excellent drainage.

Celosia is another plant cultivated for its fasciated variety, called cockscomb celosia (*Celosia argentea cristata*). These beauties look like they were plucked right out of a tropical coral reef. Gerber daisies also tend to fasciate, looking much like a melted flower as a result.

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Really, any plant can fasciate. It’s been noted in plants as widely divergent as ferns and flowering plants, conifers and cottonwoods, and fruits like strawberries, tomatoes, pineapples and the flower fractals of Romanesco broccoli. Romanesco is odd to begin with — its gorgeous chartreuse color and repeating spirals create an edible sculpture. I thought it couldn’t get any more fantastic until my wife brought me a fasciated Romanesco surprise.

In addition to the “crested” appearance, plant growth may appear diffusely branched like the business end of a broom, coiled like a snail shell (as in the case of some cactus fasciations) or as a tangled, Medusa-like mess of coils. Flowers or leaves growing from fasciated stems are often clustered, undersized and overabundant.

If you keep fasciations in mind, you are bound to find some. Check the supermarket for those flattened, massive strawberries for one. Remember that if you find fasciations in your own plants, you need not remove the afflicted part, as it is not a communicable condition or problem, and well, it’s just super fascinating. Doesn’t everyone love plant freaks?

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