



PLANT GEEK SERIES

FASCINATING FASCIATION & RIVETING REVERSION

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Welcome to our final installment of the Plant Geek series, focusing on some niche horticultural topics that I think are fascinating. I hope you do to! Last newsletter we discussed the importance of Latin nomenclature. This time we're discussing fasciation and reversion in the garden. Buckle up. We're about to get really geeky!

Sometimes plants go a little haywire and grow in unusual shapes and forms. Meristems are the active growing points on a plant. A number of factors can cause meristems to a little wonky, producing abnormal stems or flowers. Genetic mutations, bacteria, viruses, nematodes, and chemical or mechanical injuries can all cause fasciation (also called cresting). Fasciated plants have a flattened, ribbon-like stem, leaf, or flower, instead of a cylindrical/spherical shape (Photo 1). Fasciation can happen in almost any type of plant, but is quite common in cacti and succulents, the Aster family, Celosia, Digitalis, Delphinium, Euphorbia, ferns, Forsythia, Veronicastrum, and many others. While less common, fruit can also be fasciated, such as strawberries and tomatoes. This is illustrated in the world's weirdest tomato cultivar 'Reisetomate', whose strange fruit (which develop from highly fasciated flowers) look like a cluster of fused grapes.

Some plants are intentionally cultivated to pass on the fasciation, which can be quite ornamental. For example, many fasciated cacti (Photo 3) and succulents look like brain-coral (Photo 4), as does *Celosia cristata* (Photo 5). Others, like fasciated ferns have frilly foliage. Cultivated fasciated varieties often have “monstrose”, “monstrosa”, or “cristata” as the species portion of their Latin name. Fasciated flowers look very odd, yet are fairly common to find. Look in your garden this summer (or even at the dandelions in your lawn) and you’ll likely find one! Fasciated stems often revert partially or entirely back to the normal growth form. If you want to maintain the fasciated form, cut out the reverted sections. This brings us to our next topic: reversion.



Photo 3. *Cereus peruvianus mostrose*



Photo 4.. *Euphorbia lactea f. cristata*



Photo 1



Photo 2

Reversion happens when an altered form of a plant reverts to its original form. Variegated (Photo 6), fasciated, and dwarf (Photo 7) plants can all revert. Sometimes this happens to only a single section of a plant, or only on new growth. Reversion is generally a survival tactic to help the plant adapt to changing conditions, such as light levels. For example, if grown under insufficient light levels, variegated plants may start producing solid green leaves and stems in order to increase the plant's photosynthetic capacity. Reverted sections often grow faster, potentially out-competing the rest of the plant. To maintain the altered form, reverted sections should be removed.

And that's a wrap on the Plant Geek series. I hope you enjoyed it!



Photo 5



Photo 6. Variegation reverting on *Crassula muscosa variegata*



Photo 7. Reversion on Dwarf Alberta Spruce. Credit: canr.msu.edu