

MONSTERS AND MUTANTS

As if succulents were not curious enough already in their sculptural look and sometimes stark geometry, Mother Nature seems to delight in throwing us all a curve by producing deviant forms: plants with strange symmetry or bizarre color contrasts. Where do these odd things come from? Some appear so different from their normal counterparts as to induce incredulity. Just look at *Mammillaria bocasana* side by side with its famous monster form 'Fred'. (See below.) Should you even touch something so, I don't know, alien? Will you catch something?

Well, no, you won't catch something. Some crested or monstrose plants appear diseased but aren't really. A few do result from infection by virus or mycoplasma, but most are untested and we can only guess. A famous story from years ago has it that you can stick needles in the growing point of a cactus in order to induce crested growth (fasciation), but I don't really know if this works. It's possible that environmental conditions or other physical damage can bring about abnormal growth, as well.

While some growers profess no interest in the mutants (an author in the British journal awhile back denounced the interest in crests and monstrose forms as "childish"), most succulent fans are quick to grab the oddballs off the sales tables.

Two types of abnormal growth are most commonly seen: fasciation and monstrosity. Fasciation, which can also be seen in a variety of plants, not just succulents, occurs when normally cylindrical stems turn into a wedge, fan, or crest. This comes about when there is a change in symmetry, when the growing point ceases to grow in length, instead growing sideways in one plane. This can lead to a specimen very unlike the normal parent, with smaller leaves, more ribs, altered branching and suppression of flowers. Monstrose growth is even more difficult for the plant to deal with. In these cases, it's as though the plant can't decide where its growing point is and so creates growing points

all over its body. This can produce all manner of odd forms. Other mutations come from seed grown plants, such as spinelessness, variegation, etc.

As a general rule, mutant forms are weaker growers than their normal forms. They need greater protection from the full sun. They are subject to the same insect pests as other plants and tend to have more difficulty dealing with them. Given this lack of vigor, most of the mutants are puny growers on their own roots, so are usually seen as grafted specimens.

It is not unusual for a crested or monstrose plant to contain genes for normal growth. In a lot of cases, the normal growth will appear and, if not removed, will overwhelm the less vigorous abnormal portion.

Elton Roberts writes of 'Fred': "I have found that 'Fred' wants a shallow pot, as its roots are not deep. If put in too deep of a pot, the soil will stay damp too long and 'Fred' will say, "Good bye"."



(Photo of *Mammillaria bocasana* from "Mammillaria", by John Pilbeam; photo of 'Fred' from "Teratopia", by Gordon Rowley)