On the Dry Side: *Adenium*

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If there were a Mount Rushmore of succulent plants carved in some great, rocky cliff face, I think *Adenium* would be one of the great icons represented, probably the third one over. (I picture five rather than four stony figures. *Carnegia* would undoubtedly, be our spiny George Washington, perhaps one of the window-leaved *Haworthias* to fill in for the bespectacled Teddy Roosevelt. You and your cliff-carving crew can choose two of your personal favorites for the other photosynthetic heroes.) Awesome, isn't it? As we raise our hands to shield our eyes from the sun, we admire the great swollen stem, the smooth, arching branches, and those fabulous flowers. Carving those was no mean feat, let me tell you.

There's something solid and trustworthy about *Adenium*. Maybe it's because they're not too terribly demanding. Or, maybe it's the flowers that sprout so plentifully and last for days. If you will all take a seat on one of these rocks and try to make yourselves comfortable, I'll tell you a little something about this wonderful plant. The wind is brisk, so watch your hats.

Taxonomically speaking, we are in the *Apocynaceae*. Some of the less succulent members of this botanical clan are the oleander (*Nerium*) and little *Vinca*. *Adenium* and many of its relatives have a thick, bitter, poisonous sap. So, you, leaning against the tree back there, spit that out. Perhaps even more familiar to our crowd is the genus *Pacypodium*. In fact, *Adenium* is sort of a *Pachypodium* without the prickles. That smooth, lovely trunk is definitely part of this plant's appeal.

Adenium is considered by many to be a pachycul, which is a transitional phase between plants with a genuine caudex and stem succulents. A pachycul (meaning thick stem) is open to any pollinator that may happen to buzz by looking for some chow and a good time. Now I know that those look like stigmas (where the pollen is received in fertilization) that are sprouting up from the partition. Actually, they are the long, furry ends of the stamens or, male parts of the flowers, and they act to guide our lusty pollinator to the goods. It is the stamens that form the cone-shaped partition, and on its underside are the masses of pollen. The only way into the inner chamber is through narrow slits in this stamen-cone.

Now, onto the female part of the flower… As we can see in our cliff face illustration, the female bits are all protected from the elements and various other party crashers down in the inner chamber. At the base of the inner chamber is the ovary. Traveling up from the ovary and toward the conical partition of stamens is the tubular style. At the style's top end are the real stigmas, ready to receive pollen with the aid of sticky glue. This top end of the style is attached to the inside of the cone made by the stamens, where the pollen is. Moreover, even though the pollen and stigmas are very close together, *Adenium* will not pollinate itself; it is not self-fertile. What is needed is an insect with a long proboscis and

loose morals. (Our local oleander enlists the aid of the hummingbird-like hawk moth for its pollination.) The proboscis, covered with pollen from another plant's flower, travels down the outer chamber and through the slits in the cone-shaped partition, leaving the pollen on the gummy stigmas at the top of the style. As it withdraws at just the right angle, it picks up more pollen for the next flower. The eventual result of all this fooling around is a pair of fruits bursting with tufted seeds, all ready for a gust of wind to disperse them.

Neat, huh? And pretty complicated. So complicated, in fact, that some authors see a close relationship between the *Aponyceae* and *Asclepiads* (Stapelia et al). The carrion flowers have a similar structure, fruits and tufted seeds. These are very sophisticated plants indeed, another good reason to have *Adenium* sculpted in stone. The carvers certainly did a convincing job on those granite stamens.

Adeniums are frost tender plants, and enjoy some protection from the full Arizona sun. They can take liberal amounts of water during their warm weather growing season. They may want to drop their leaves during the cold winter months when only light occasional watering is necessary. If kept warm, however, they may keep their leaves and take more water. Cactus they ain't.

So, thank you all for braving the elements and coming out to this grand monument dedicated to our favorite plants. Now, where are those port-a-potties?