## The Decline and Fall of a Large Saguaro

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I have been going to Usery Mountain, about a 30-minute drive from my home in Tempe, Arizona, ever since in the 1970s when I encountered male tarantula hawk wasps (Hemipepsis ustulata) defending their territories foothill paloverdes (Parkinsonia microphylla Torr.) on the ridgeline. A few years later I moved uphill to the highest peak in the mountain system, still less than 4000 feet in elevation. I began to photograph the saguaros (Carnegiea gigantea [Engelm.] Britton & Rose) on the north side of the mountain, at which time I noticed that the larger saguaro cacti were prone to collapses that left them dead, while the smaller saguaros grew taller and taller over time. From these smaller saguaros would come the replacements for those that died, provided that the smaller cacti survived a great many years, thanks to an abundance of good luck (no killing frosts, no bacterial infections, and no microburst wind storms).

My first photograph of the largest saguaro on the mountainside was taken in 1990. Even then, after century or so of growth, I could detect a slight lean of the cactus downhill. Little had changed by 2005 but then in May 2010 (twenty years after my first photograph) the lean was definitely more pronounced (Fig. 1), the effect of being top heavy and shallow rooted in soils that had softened as a result of spring rain. When I checked on the saguaro in the following month I found it broken at its base, sprawled out on the mountainside – moribund (Fig. 2). In my experience no saguaro resprouts from its base after a collapse. Survivors of a fall are apparently nonexistent, although I have seen some upright columnar cacti survive a bad frost or wildfire.

By October of that same year, the green flesh of the saguaro had turned brown and cracked. Six years later, the saguaro was reduced to its internal "ribs," the fleshy material having disappeared completely in the intervening years.

I continued to come to Usery Peak for two years during which time the skeleton of the cactus persisted but in 2019 I began to fall on the trail up the mountainside, a trail that I had constructed with my own feet. My son, a doctor, decreed that I was to give up my ascents and descents, advice that I followed, albeit reluctantly. The fate of older fallen saguaros showed me all too clearly what could happen after a fall, and I was not eager to emulate them.

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Figure 1. Saguaro before the fall. A, August 2008. B, February 2010. C, May 2010.

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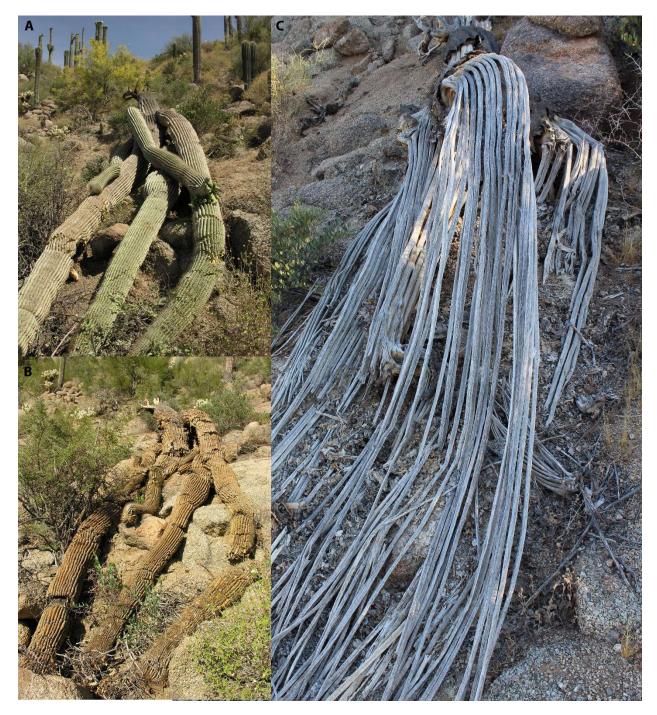


Figure 2. Saguaro after the fall. A, June 2010. B, October 2010. C, June 2016.