

The Weekly Plant 20 May 2013

Common names: soaptree yucca, palmilla, takwi (Tohono O'odham)

Scientific name: *Yucca elata*¹

TAV location:

South end of Langtry, on the side of the road toward the mountains. Look for the northern end of the wooden fence on the Old Spanish Trail side of the street. The yucca is almost directly across from the end of the fence.

Discussion:

The soaptree yucca at the south end of Langtry is in glorious bloom right now (see photo). Though a yucca can bloom several times in its life, it may not bloom every year, so enjoy this one while you can.

Yuccas are monocots in the Agave family (Agavaceae). Monocots are often easily identified by their long, slender leaves with veins running parallel to the length of the leaf (think grass). The leaves of yuccas, and agaves too, are important in identification. When flowering is not necessarily a yearly occurrence, it's difficult to use flowers for identification.

Yucca leaves are generally long and slender (leaves of many agave would be described as short and stout). The edges are often colored - white, yellow, red, brown - and often partially separate from the leaf in thin fibers (only some agave have fibers). Yucca leaves have sharp, pointed tips but never have sharp teeth along the edge of the leaf (many agave have toothed leaves). Some yucca, including this week's plant, become tree-like with leaves at the top of a tall trunk (agaves never form a trunk). Soaptree yucca can reach to 15 feet, often branching as it does so.

Soaptree yucca was used in many ways by the Tohono O'odham. The root was used to make soap (and it's a really big root²). The flowers and stalk were cooked and eaten. Sun-bleached leaves are used for the white coils of baskets. Unbleached leaves add a greenish-yellow color and a dye from the roots produces the red tones.

Flower production and pollination of those flowers is a big deal for the yucca and for its dedicated yucca moth. Biologists have determined that almost every yucca species has its own species of yucca moth³. These moths purposefully pollinate the flowers (as opposed to just accidentally distributing pollen from one flower to another), actually stuffing the pollen from one plant into the pistil of the flower on another plant⁴. The eggs are laid on the ovary of the pollinated flower and newly hatched caterpillars feed on the developing seed. Just a few seeds are eaten, ensuring the survival of both the yucca and the moth.

¹ Tropicos (<http://www.tropicos.org/>) is the source of the currently accepted scientific name.

² See photo here: http://www.wnmu.edu/academic/nspages/gilaflorea/y_elata6.jpg

³ From *A Natural History of the Sonoran Desert*, Arizona-Sonoran Desert Museum, 2000.

⁴ For a video of this process see: <http://www.denimandtweed.com/2009/10/video-of-yucca-pollination.html>



From left: Soaptree yucca leaves are long and slender. The plant was described in several text as palm-like; Leaf close-up, note stringy fibers along white edge; The flower has 6 tepals and 6 stamens. The pistil has three lobes (monocot flowers are in threes). The hole in the center of the pistil receives the pollen; Fruit is dry and opens when mature. It has 3 sections each with 2 chambers.

Photos and text by
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