

# The Weekly Plant

## 21 April 2013

**Common names:** ocotillo, coachwhip, Jacob's staff, candlewood, flaming sword, vine cactus

**Scientific name:** *Fouquieria splendens*<sup>1</sup>

### TAV location:

In landscaped area between Activities Room and swimming pool.

### Discussion:

Its canes can reach skyward almost 30 feet. It can bloom without rain and without leaves. Like saguaros, it prefers the well-drain soils of hillsides and bajadas. And it isn't a cactus.

Ocotillo is one of my favorite plants. To me it says Sonoran Desert just as much as the saguaro, though it is also found in the Chihuahuan Desert as far east as Texas. Though it is not a cactus, it shares some features with them. Ocotillo have wide-spread, shallow roots, the better to benefit from light rain. The bark is capable of photosynthesis. The leaves drop off to reduce water loss. Unlike cactus, new leaves may appear after rainfall (and can do so several times a year) only to fall off when dry weather returns.

If you remember the Weekly Plant discussion of catclaw acacia<sup>2</sup> (and I'm sure you do), you'll remember I made a distinction between thorns, prickles, and spines. A thorn is derived from a stem, a prickle is an outgrowth of the plant's epidermis, and a spine is derived from a leaf. Ocotillo have spines - here's the story.



Ocotillo have two types of leaves known as primary and secondary. Each year the end of a cane grows longer. The first leaves formed on this new growth are the primary leaves. Each section of a cane has primary leaves only once in its life. The primary leaves have a petiole (leaf stalk) and a blade (the green part). If you look at the picture to the left or, better yet, find an ocotillo with new growth, you will see a red petiole that extends part way into the leaf blade. Right now it is firm but flexible. Soon, the green part of the blade will drop away, leaving only the red portion of the leaf. This hardens and becomes the spine. Forever after, this portion of the stem will form only secondary leaves. The secondary leaves are born on a very, very short stem, stay close to the cane, and appear to be clustered together. They never have a petiole and they never form a spine.



The flowers appear in long clusters at the tips of the canes. Each orange-to-red flower is about an inch long. The color and shape suggest hummingbirds should feed on and pollinate the flowers, and indeed they do. Both carpenter bees (important pollinators) and verdins (small grey birds with yellow heads) also feed on ocotillo flowers. They don't have long beaks so they slice open the base of the flower to get to the nectar. Carpenter bees appear to pollinate these flowers also, not when they feed, but as they walk around over the tops of the flowers.



*Flowers are showy and pollinated by hummingbirds and maybe bees.*

*Top: primary leaves with petioles appear on new growth at end of canes. Bottom: the secondary leaves are formed on a short stem just above a spine. You can see a bud above one of the spines (arrow).*

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

<sup>2</sup> Find this Weekly Plant here: <http://tinyurl.com/ccacacia>