

The Weekly Plant

25 August 2013

Common names: Sonoran or three-rayed chinchweed
Scientific name: *Pectis cylindrica*¹

TAV location:

Lot 184 on Galileo - along the curbing and adjacent soil. Look around the base of the for sale sign. The plants are small with small flowers partially hidden by the leaves. Only a few flowers on each plant are open. There are many, many plants all along the front edge of this lot.

Discussion:

I found this plant the first August we spent at Academy Village. It was only an inch high, with about a dozen leaves and a single flower. I could find it in none of my resources². What was it?

I was lucky to figure it out at all. I had identified another *Pectis* species. The description of that plant eventually led me to Sonoran chinchweed. All of the *Pectis* have two things in common - secretory glands and Fibonacci numbers.

Plants produce many chemicals. Most of these are used internally to create the roots, stems, leaves, flowers, and fruit the plant needs to grow and reproduce. Some plants also secrete chemicals. These chemicals may attract pollinators or help defend the plant against herbivores, including insects. This Week's Plant, indeed all *Pectis*, have secretory glands on their leaves (plants with glands on their stems were featured in The Weekly Plant on 15Apr and 16Sept2012).

Sonoran chinchweed has glands spread throughout the leaf. You see them as tiny dots when you hold the leaf up to the sun. Other *Pectis* species have glands along the edge of the leaf. The species in the Village with this type of glands is common chinchweed (*Pectis papposa*). In favorable years it can color "wide areas of the desert with its bright yellow heads"³ (each flower 1/2" wide). The scent of the secretion may also help with ID. If you rub the leaves of these two plants, you'll find that Sonoran chinchweed has no scent while common chinchweed is strongly, unpleasantly scented. The small flowers of plants in the Aster family are held together in heads. These flowers can be arranged spirally from the center outward. The number of spirals and the number of petals are often a Fibonacci number, the result of geometrically efficient growth.⁴ *Pectis* is unusual because the number of petals (equivalent to saying the number of ray flowers) rarely deviates from this sequence. In the US, all *Pectis* have 3, 5, 8, or 13 petals.

To give the details on this Week's Plant: Sonoran chinchweed is short - only 1" or 2" - with a spread of up to 6". The leaves are opposite, long (~1/2") and slender, unscented, and dotted throughout with translucent glands. The base of each leaf has several slender hairs. The flower head has 3 ray flowers and several disc flowers. Each ray petal is less than 1/10" long, the head less than 1/4" wide. Sonoran chinchweed is an annual that appears after the monsoon rains.



The flower head of Sonoran chinchweed has 3 ray flowers, each with a petal, and several disk flowers. The secretory glands are scattered throughout the leaves. There are several slender hairs at the base of each leaf (arrow).



Photos and text by Mary Welch-Keesey

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

² It is not in my 4 ID "picture books". Of all the web plant ID sites I use, I found it on only one: (<http://newmexicoflores.com/index.html>).

³ From http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250067298.

⁴ There are many articles on Fibonacci numbers and nature on the web. Explore!

Left: Common chinchweed (*Pectis papposa*) is a showy annual, about 6" tall (Fibonacci number = 8). Right: Also common chinchweed. The "notches" on the edges of the leaves are the secretory glands.