

# The Weekly Plant

## 24 August 2014

**Common names:** mesa tansyaster

**Scientific name:** *Machaeranthera tagetina*<sup>1</sup>

**TAV location:** There are multiple plants in two different spots on the “mountain side” of Galileo. Look along the edge of the sidewalk 1) near the outlet of Javelina Way in the area where there are three sets of the black and gold posts, 2) just north (west?) of the Feinberg bench near lots 50-60.

### Discussion

This is the time of year when many plants in the aster family begin to bloom. We have a beauty along our roadways, a small plant with purple and yellow flowers. This is mesa tansyaster. There aren't a lot of purple daisies in our part of the world and all of them are closely related to this plant.

Mesa tansyaster is an annual, native to Arizona and southwestern New Mexico. Its size depends on the availability of water. Along the roadside, the plants in the Village are no more than 8" x 8". In my yard growing near irrigation, they are 2 feet high and almost 3 feet wide. The leaves are alternate, narrow, about 1/2" long with a few side lobes. The plants are highly branched, each branch ending in a flower. Though the flower is only an inch wide, the showy purple (sometimes almost blue) petals are a nice contrast to the yellow center, making the flowers quite noticeable. Over the past few years, I have acquire more and more of these plants, each one providing many seeds for next year's plants.



I've struggled with the ID of this plant, partly because it is not in most of my ID books. My friends at the UA Herbarium took a look. Key things for the ID - the stalk-like glands on the flower bracts and leaves and the number of petals. The glands make it a *Machaeranthera* rather than other related plants, and the number of petals distinguish it from its nearest relative Tahoka daisy (*Machaeranthera tanacetifolia*). Tahoka daisy has many more petals and is found throughout the western plains states.

As I walked around taking pictures, it struck me that mesa tansyaster has a very similar look to *Xanthisma*, a plant that is also blooming now, with yellow rather than purple flowers (*Xanthisma* was the Weekly Plant on April 26, 2013). Both plants are short, have small leaves that aren't very noticeable and both are highly branched. *Xanthisma* was previously classified as a *Machaeranthera* as were plants that are now placed in the genera *Dieteria* and *Arida* (both have purple flowers). DNA studies did not support grouping all of these plants under *Machaeranthera* and now there are only two species in the US that still bear this name<sup>2</sup>.

Molecular and chemical studies help us better understand plants and their relationship to each other. As a result, many plants are getting new names. This makes it hard on field botanists who depend on flower and leaf shape to identify a plant rather than its DNA sequence.

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

<sup>2</sup> Flora of North America: [http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=119254](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=119254).



Top: flower, fruit and leaves of mesa tansyaster.

Above: closeup of bracts under the flower. Notice the glands. Under a microscope they look like lollipops.

Right: A mesa tansyaster that has received lots of water. Two gallon watering can for size comparison.

Far right: *Xanthisma* - notice the similar form to mesa tansyaster. There is lots of branching and the leaves aren't really noticeable.



Photos and text by Mary Welch-Keesey

