

The Weekly Plant

26 Aug 2012

Name: spurge (*Euphorbia* species)

TAV location:

In just about every yard, road cracks.

Discussion:

Weeds are usually defined as plants growing where they are not wanted. The weedy spurges are plants almost no one wants, even though some are natives. They are weedy in behavior and appearance. Their seeds germinated with the first monsoon rains. They are now growing vigorously and setting seed.

Plants in the genus *Euphorbia* are often called spurges. Found in both the New and Old Worlds, this genus contains about 2100 species that vary greatly in size and form. You may be familiar with *Euphorbia pulcherrima*, the popular holiday poinsettia; *Euphorbia mili*, a houseplant known as crown-of-thorns; and the succulent Euphorbias, which look like columnar cacti.

All Euphorbias have two things in common: milky sap and very unusual flower structure.

If you break the stem or leaf of a *Euphorbia*, the sap that oozes out will be white. It can cause contact dermatitis in sensitive people, so handle these weeds with gloves. White sap is not unique to the Euphorbias. For example, milkweeds, in the genus *Asclepias*, are named for their milky sap.

A *Euphorbia* "flower" is really several tiny flowers clustered tightly together in a structure called a cyathium. In the center is a female flower - no sepals or petals, just the pistil (female part) with an enlarged ovary. Clustered around the base of the female flower are several tiny male flowers. Again, no sepals or petals, each has just a single stamen with a single anther. These may be surrounded by glands (possibly secreting nectar) and bracts. The bracts often give the "flower" its color. For graphics showing detailed flower structure see the website of the *Euphorbia* Planetary Biodiversity Inventory Project.¹

*An Illustrated Guide to Arizona Weeds*² lists six *Euphorbia* species as weeds, but there may well be more. Some are mat-forming and hug the ground. Others are erect, branching and growing to a foot or more in height. The leaves are opposite, sometimes with a red blotch in the center.

I am fascinated by the distribution of these weeds around the Village. I walked over several vacant lots on south Galileo (they have not been disturbed for several years). I saw not one weedy *Euphorbia*! Yet, in yards around houses, and especially in areas covered with gravel mulch, these weeds are plentiful. Were the seeds a contaminant in the gravel? Do these plants simply need the moister soil found under mulch? Are the spurges such poor competitors that a good cover of native grasses and wildflowers will drive them out?

Clearly, the spurges are good competitors in a home landscape situation. They are annuals, coming back each year from seed. The secret to their control, then, is to 1) eliminate them when they are small, before they begin to flower and set seed and/or 2) pull them out when they are large and easily visible and remove them from the yard. You can't know if seeds will be released, so remove the plants rather than letting them lie. Even if you are persistent in weeding this year, the spurges may return next year. Viable seeds deposited in previous years may still remain in the soil.



Left: weedy spurge with erect form; Right: with prostrate form. Smallest leaf is 1/8" long.



Left, top: milky sap. Left, bottom: some weedy spurges have red splotches on their opposite leaves. Right: cyathium with swollen ovary and white bracts. The green at the base of the ovary is the glands. Male flowers tiny and white, almost invisible.

¹ http://www.euphorbiaceae.org/pages/about_euphorbia.html

² Kittie F. Parker, The University of Arizona Press, 1972, <http://www.uapress.arizona.edu/onlinebks/WEEDS/TITLWEED.HTM>