

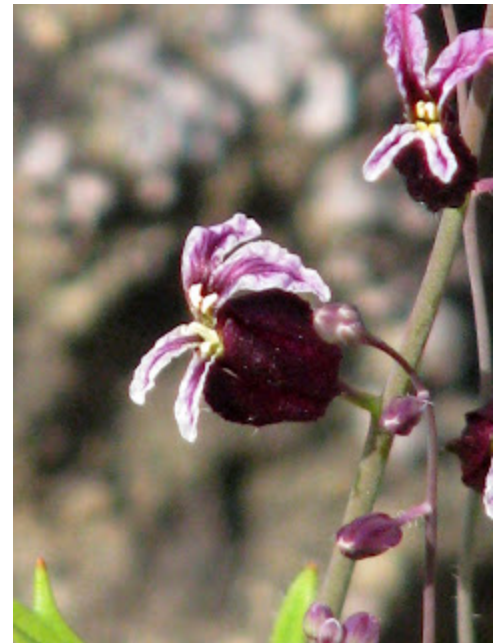
Strep Trekking 1, some observations on the genus *Streptanthus*, the jewelflowers

planethorticulture.blogspot.com/2009/04/strep-trekking-1-some-observations-on.html

Plant obsessions are odd enough to start off, but to be fascinated with a small-flowered mustard relative that few people will ever notice is probably weirder. *Streptanthus*, is Greek for twisted flower, but it is actually the wavy-margined petals that give this impression. The common name of jewelflower, is quite appropriate for many species given the intricate detail of the flowers and their often glistening colors.

Bristly jewelflower, *Streptanthus glandulosus*,
Calistoga CA

I have the great fortune, and indeed it is a sort of personal wealth, to have populations of *Streptanthus* on two different properties we own, one species here in Calistoga CA and three full species (with many variant races) at The Cedars, in Sonoma Co.,CA.



Jewelflowers occur in much of California, though they are seldom common, and typically are restricted to rocky sites and odd soil or rock types. Many are restricted to serpentine rock and soil. Having spent 30 years exploring serpentine sites throughout California, I got to meet a lot of *Streptanthus* - some extremely rare. Indeed it would be hard to "know" CA serpentine plants without getting to know *Streptanthus*. As with other complex species groups, it has been hard for botanists to concur on what name goes on what plants. Some variation is profound with strange characters appearing almost as if Dr. Seuss was directing evolution. Other variation is extremely subtle, slight changes in size, flower color, leaf shape, etc. Genetically it seems like the plants are not quite ready to "settle down" to a consistent form; there are still too many options to explore. One feature shared in many jewelflower species is a dramatic change in foliage from the seedling rosette as it matures into the flowering plant. Some species drop their lower leaves by flowering which makes identification more difficult, since only the atypical upper leaves may remain. Bearded jewelflower, *Streptanthus barbiger*, juvenile foliage rosette left, in flower right. Note the strange brownish-pink-amethyst color of the juvenile leaves, they almost mimic the gravel color of the serpentine rock. The botanical name means bearded jewelflower (barbed, barber, beard, etc. all come from that latin root), but ironically most populations and races do not have hairs (beards) on the flowers. This shows that botanical latin, while having to meet certain rules, does not have to correctly describe the plant; although for fairness sake, some plant probably did have hairs. This species is restricted to the North Coast Ranges of

California and always is found on serpentine soils or rock, often at great distance from its nearest neighboring population. The plants above are from The Cedars in Sonoma Co. The juvenile was photographed April 3rd, the flowering plant last year in May.

A jewelflower that occurs both here in Calistoga (Napa Co.) and in two forms at The Cedars (Sonoma Co.) is the bristly jewelflower, *Streptanthus glandulosus*, a widespread though infrequent species of both the Central Coast Ranges and the North Coast Ranges in California. It is frequently found on serpentine rock/soil, but is also on other rock types such as volcanic, sandstone, cherts, etc.

This seedling of bristly jewelflower illustrates where its common name comes from; most foliage and even lower stems are densely covered with bristly hairs. As the plant grows, most will also produce glandular hairs, i.e. hairs tipped with a sticky exudate, thus the botanical species name, *glandulosus*. Both the bristles and the glandular secretions are intended to deter predation by animals and insects. As will be mentioned below, there are a number of races of this species, but nearly all look identical at this juvenile phase. This species is also an exception to the generalization mentioned previously about the upper foliage changing dramatically; in bristly jewelflower it changes slightly, usually becoming gradually smaller and less toothed as the plant elongates. The race of bristly jewelflower that is found extensively within the canyons of The Cedars (Sonoma Co.) has rose-pink calyxes (the cup-like bowl from which the petals emerge). In the past this was given the botanical name of *Streptanthus glandulosus* ssp. *secundus* var. *hoffmanii*, or Hoffman's jewelflower. Hoffman was an amateur botanist who extensively explored serpentine sites in Northern California, particularly The Cedars area in Sonoma Co. which forms the headwaters of the two branches of Austin Creek. He was also fascinated with the genus *Streptanthus*. It was Freed Hoffman who coined the term, strep trekking, my title of this series.

Here's another race of bristly jewelflower which is found outside of the canyons of The Cedars (Sonoma Co.). In the past, this race was called var. *sonomensis*, or Sonoma jewelflower. It is similar to several races of jewelflower found in Marin Co. to the south, but is restricted to Sonoma Co. Even within the county, there are several color forms; white with pink, white, white with yellow or yellow. This is the typical color form of bristly jewelflower, a



very dark, almost black-red-purple calyx. These are plants found near my home in Calistoga (Napa Co.), but this color race occurs predominantly throughout its extensive range. A very similar color, though even darker and with smaller flowers is the rare Tiburon jewelflower, *Streptanthus niger*, found in only a few sites in Tiburon, CA (Marin Co.), the best known site is adjacent to the historic St. Hilary church.

