

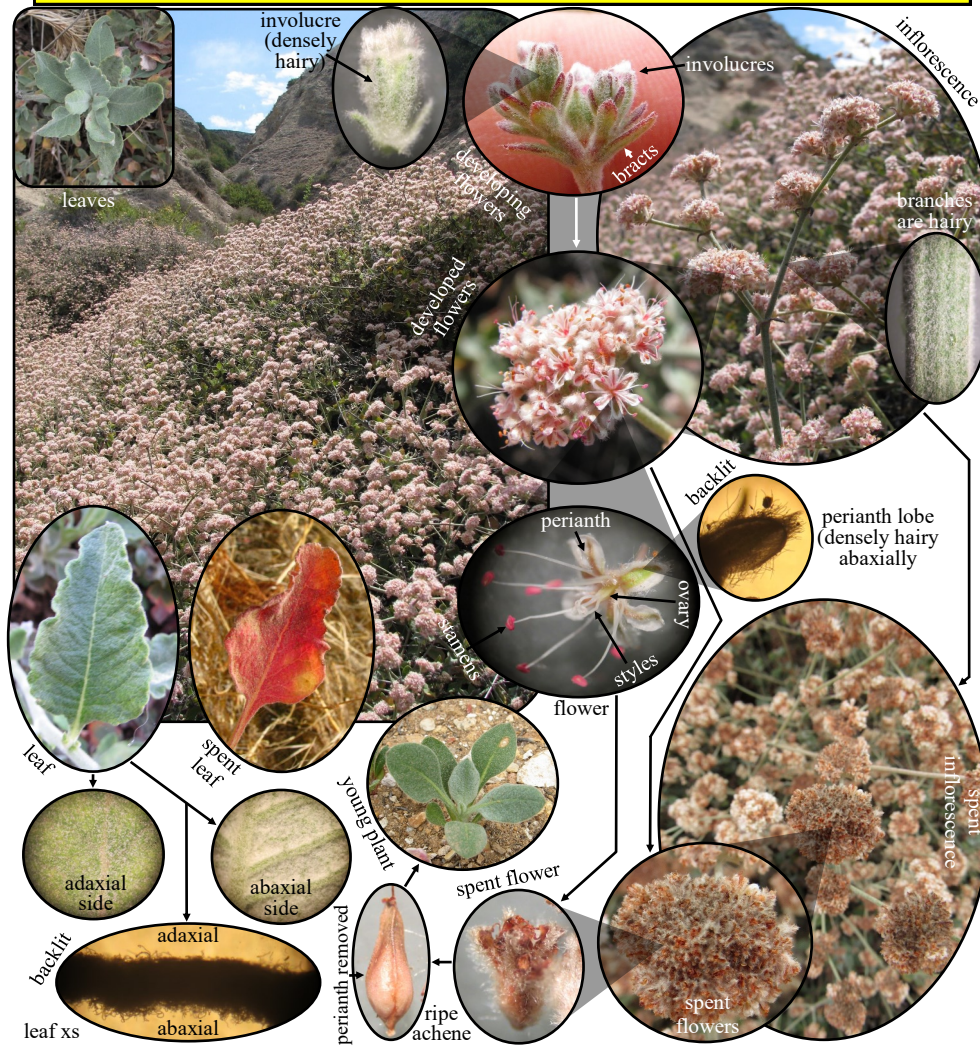
Ashyleaf Buckwheat (*Eriogonum cinereum*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower year-round)

Eriogonum cinereum is a perennial shrub. It is found throughout the peninsula. The overall plant has a bluish-gray color to it. The cauline leaves are ovate and hairy (the abaxial side being more densely hairy than the adaxial side). The flowers are clustered together in compact head-like inflorescences. The branches of the inflorescences are hairy and bracts are present (usually 3) and can be scalelike or leaflike. Peduncles are absent. There are 3-10 involucre per cluster and the involucre are hairy. The perianth is densely hairy, white to usually pink, and has lobes that are spatulate. The stamens are exserted and the anthers are pinkish. The fruit is an achene that is obconic, brown, and glabrous. The achene is found within the persistent perianth. This plant is an endemic to California and is a species of conservation concern.



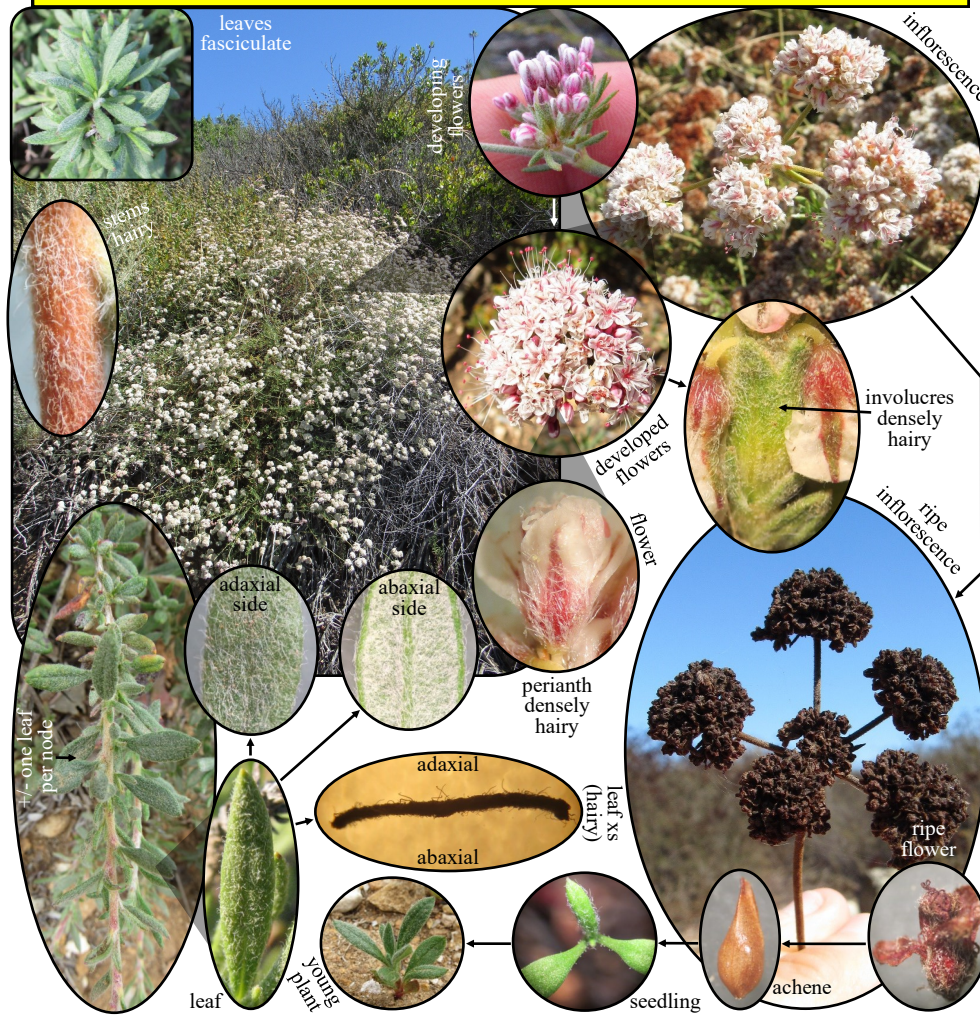
Palos Verdes Buckwheat (*Eriogonum fasciculatum* var. *palosverdensis*
-unpublished name)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)

Eriogonum fasciculatum var. *palosverdensis* is a perennial prostrate to very low growing shrub. This variety of California buckwheat appears to be restricted to the San Pedro Channel facing side of the peninsula. It is found in remnant patches of intact coastal sage scrub in 4 locations. This variety of California buckwheat has a prostrate to very low subshrub growth habit and the entire plant is densely hairy (stems, leaves, inflorescence, flowers). The leaf margins on the leaves are not rolled under. A propagation study also showed that these traits are seen and maintained within the F1 generation as well. The author puts forth the hypothesis that this variety of California buckwheat on the Palos Verdes Peninsula is an undescribed variety that is an endemic to the peninsula. Description for *E. fasciculatum* var. *palosverdensis*: Prostrate to subshrub plant. Overall plant is densely hairy. The stems of this buck-



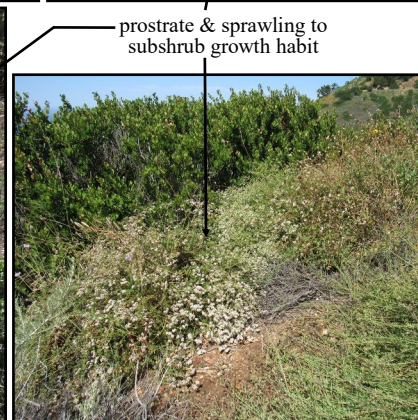
Palos Verdes Buckwheat (*Eriogonum fasciculatum* var. *palosverdensis*
-unpublished name)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)

wheat are densely hairy. The stems will also arch downwards and ramble along the ground. The leaves are linear to oblanceolate and range in color from green to typically bluish-green. The leaves can be fasciculate or 1 per node. The abaxial side of the leaf is densely hairy (hairs appressed) and the adaxial side is densely hairy (hairs generally appressed to spreading). The leaf margins can be slightly rolled under or not at all (the later being the most frequently encountered). The flowers are clustered together in compact heads. The overall inflorescence is hairy and head-like to cymose-umbellate. The involucre is densely hairy. The perianth is densely hairy and white to pinkish. The fruit is an achene that is obconic, brown, and glabrous. The achene is found within the persistent perianth. There was a historic collection from the peninsula (Palos Verdes hills) made by Edith A. Purser in 1931 (SD 31177) that was labeled as *E. fasciculatum* (1931) and then annotated again as *E. fasciculatum* var. *fasciculatum* (1978); however, close examination of this specimen showed that this specimen is not *E. fasciculatum* var. *fasciculatum*, but rather this undescribed variety of California buckwheat.



Palos Verdes Buckwheat (*Eriogonum fasciculatum* var. *palosverdensis*
-unpublished name)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)



prostrate & sprawling to
subshrub growth habit



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propagation study



Palos Verdes Buckwheat (*Eriogonum fasciculatum* var. *palosverdensis*
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propagation study



Eriogonum fasciculatum var. *fasciculatum*
in a 1-gallon pot with upright growth

Eriogonum fasciculatum var. *palosverdensis*
in a 1-gallon pot with prostrate to downward growth

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other species of PV natives (*Calochortus catalinae*, *Dipterostemon capitatus* subsp. *capitatus*, and *Dichondra occidentalis*) have been observed growing up through or under the canopy of the PV local variety of *Eriogonum fasciculatum* - perhaps providing protection from herbivores (that might want to dig up the corms/bulbs or eat the leaves) and sheltering from full UV exposure



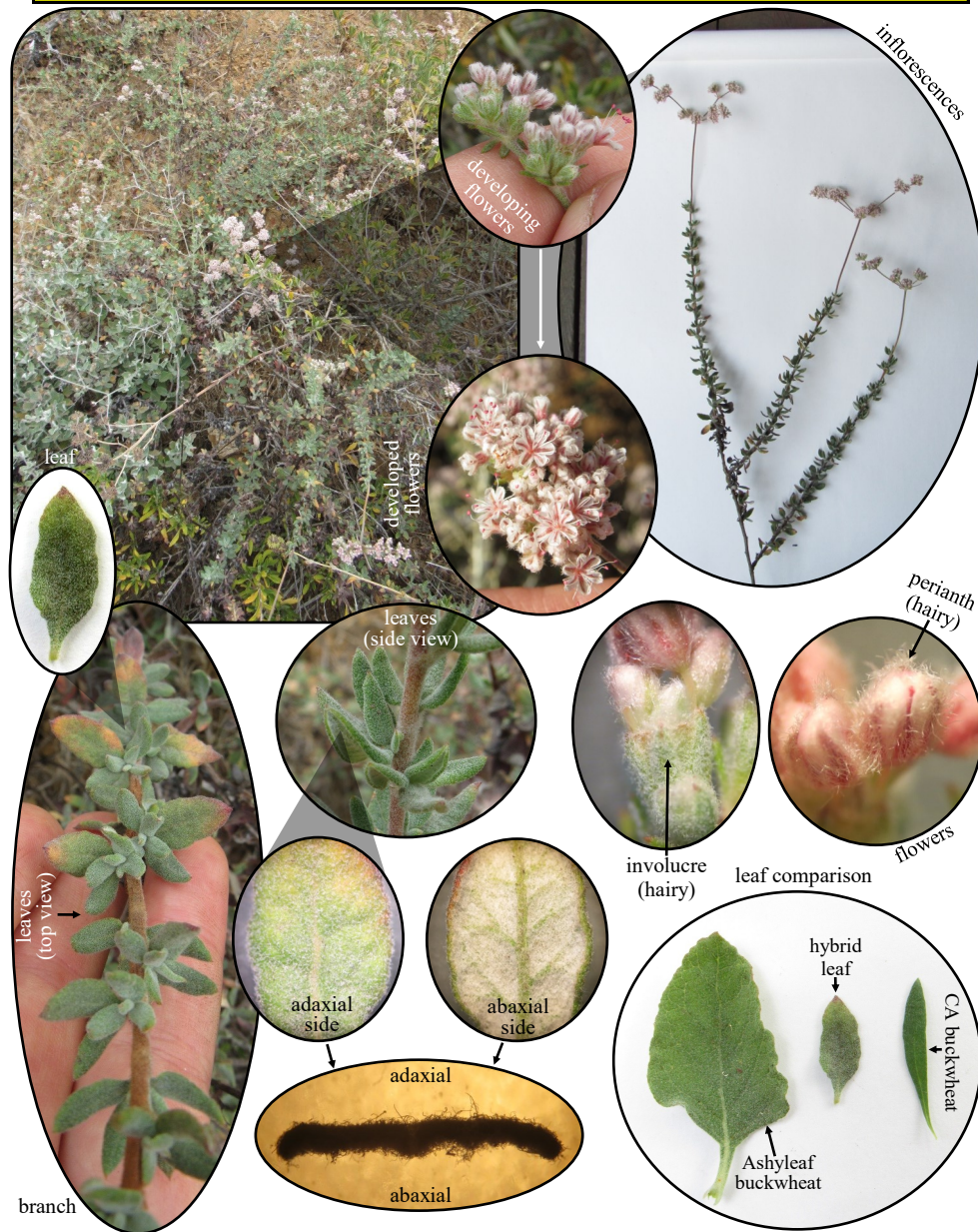
Hybrid (*Eriogonum cinereum* x *Eriogonum fasciculatum* var. *palosverdensis*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November

This naturally occurring buckwheat hybrid is located in a few spots on the peninsula where both Ashy-leaf buckwheat and PV California Buckwheat grow in close proximity.



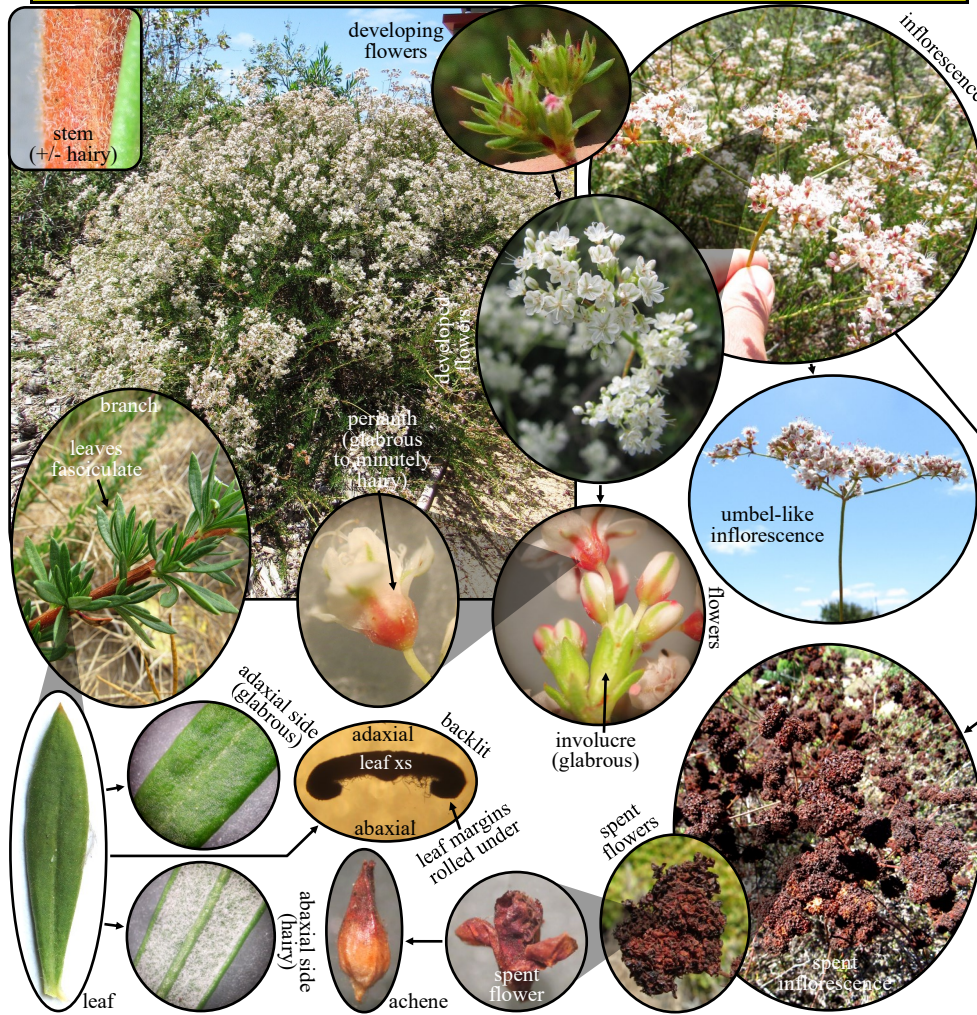
California Buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)

Eriogonum fasciculatum var. *fasciculatum* is a perennial upright rounded shrub. This variety of California buckwheat does not appear to occur naturally on the peninsula. It is encountered in restoration areas, native plant gardens, city projects, and in historical hydroseeded areas around the peninsula. Stems are glabrous to minimally hairy. The leaves are generally linear and green to dark green. The leaves can be fasciculate or 1 per node. The adaxial side of the leaf is glabrous while the abaxial side is densely short hairy. The leaf margins are rolled under. The flowers are clustered together in compact heads. The overall inflorescence is branched and often umbel-like. The involucre is generally glabrous. The perianth is generally glabrous (occasionally very minimally hairy) and white to pinkish. The fruit is an achene that is obconic, brown, and is glabrous. The achene is found within the persistent perianth.



California Buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)

generally forms a large tall upright shrub



California Buckwheat (*Eriogonum fasciculatum* var. *foliolosum*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - November (can sometimes flower all year)

Eriogonum fasciculatum var. *foliolosum* is a perennial rounded shrub. This variety of California buckwheat is found mostly on the Los Angeles Basin facing side of the peninsula and the Santa Monica Bay facing side. The stems are glabrous to minimally hairy. The leaves are linear and green to dark-green. The leaves can be fasciculate or 1 per node. The abaxial side of the leaf is densely hairy (hairs appressed) and the adaxial side is minimally hairy (hairs usually appressed). The leaf margins are rolled under. The flowers are clustered together in compact heads. The overall inflorescence is open and mostly cymose. The involucre is hairy. The perianth is hairy and white to pinkish. The fruit is an achene that is obconic, brown, and is glabrous. The achene is found within the persistent perianth.



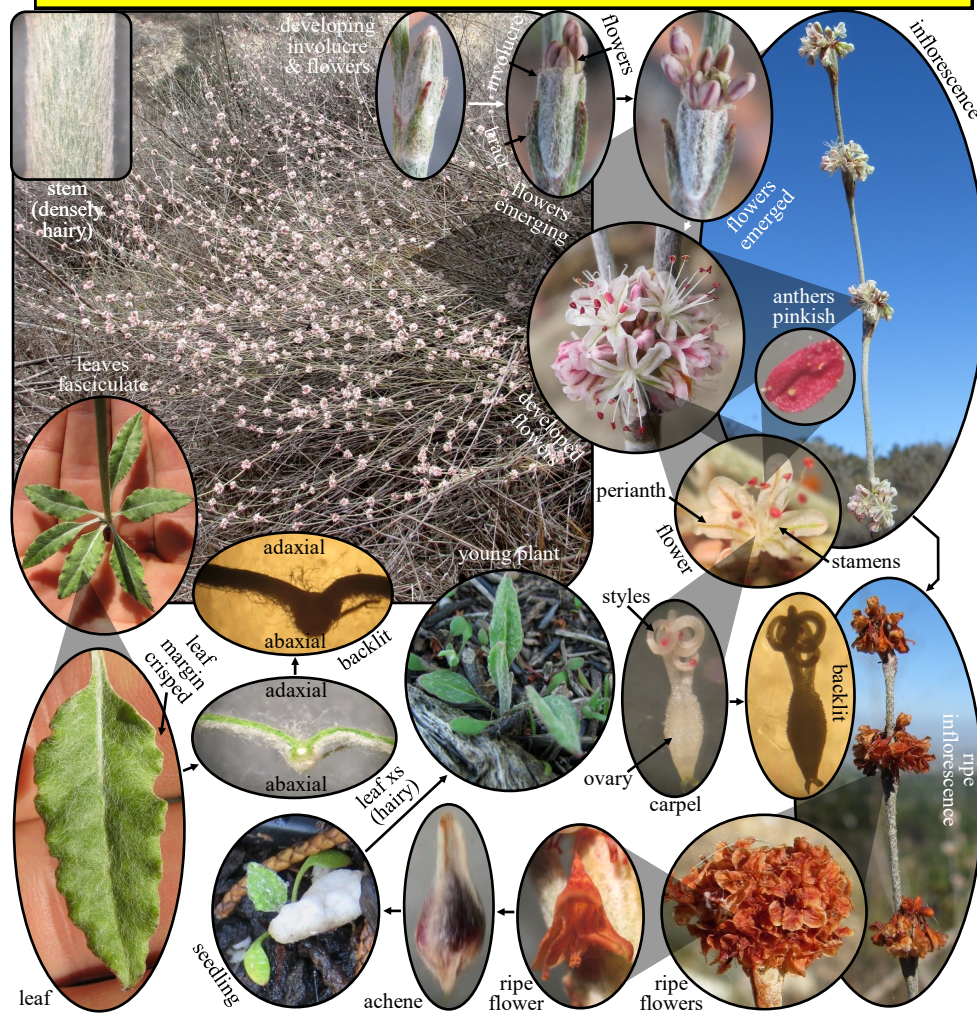
Long-stemmed Buckwheat (*Eriogonum elongatum* var. *elongatum*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: July - November

Eriogonum elongatum var. *elongatum* is a perennial herbaceous plant. It is found in a few locations on the peninsula. The overall plant is densely hairy which gives it a bluish gray to whitish color. The stems are erect to spreading. The cauline leaves have petioles and the blades are narrowly oblong to narrowly ovate. The overall leaf is hairy. The leaves can be fasciculate or 1 per node. The leaf margin can be plane or sometimes crisped. The inflorescences are virgate and dichotomously branched. There are 3 bracts that are scalelike and triangular that subtend the involucre of the inflorescence. The involucres are 1 per node along the inflorescence and are densely hairy. The perianth of the flower is glabrous and white to pinkish. The anthers are light to dark pink. The fruit is an achene that is obconic, glabrous, and dark brown or light brown with purple. The achene is found within the persistent perianth.



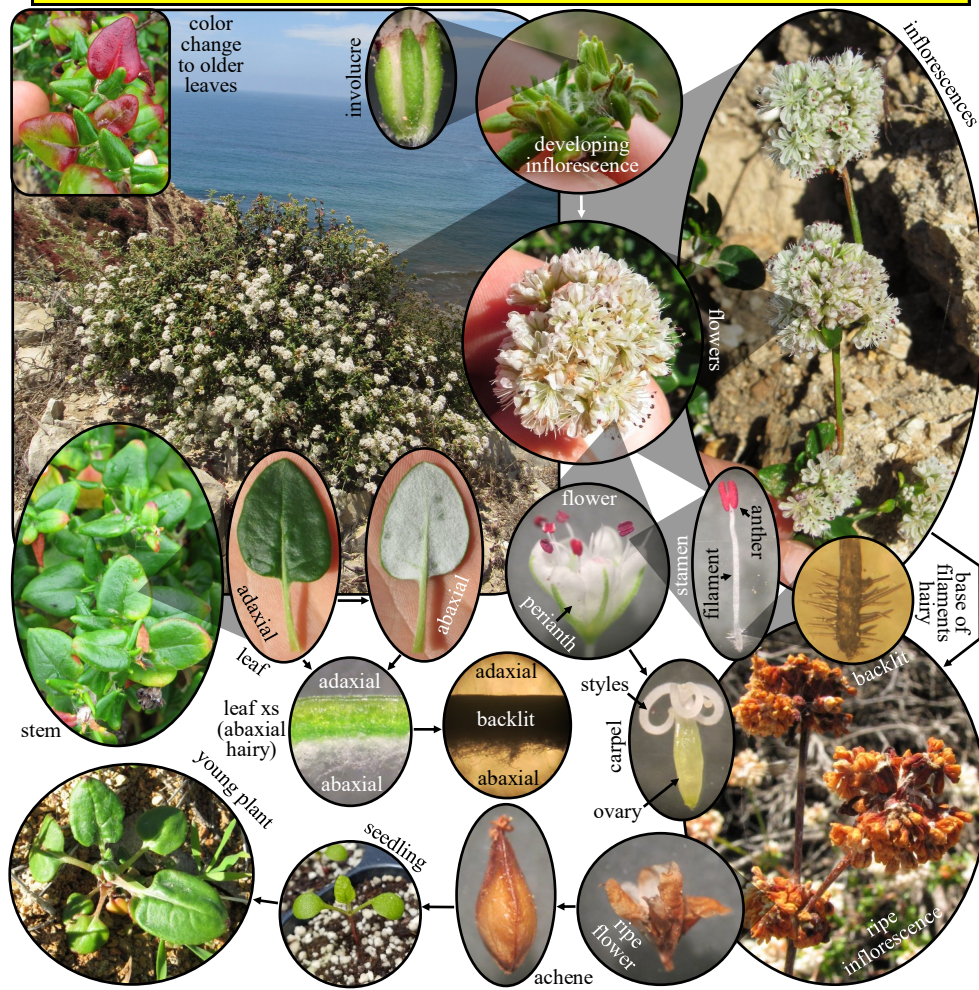
Seacliff Buckwheat (*Eriogonum parvifolium*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: April - August (can sometimes flower all year)

Eriogonum parvifolium is a perennial shrub. It is found along the coastal bluffs of the peninsula. The overall growth habit is highly compact, rounded and shrubby mat. The leaves are thickened and the blade is widely lanceolate to round. The adaxial side of the leaf is generally glabrous with the abaxial side being densely hairy (hairs appressed). The leaves are generally fasciculate and rarely 1 per node. Older leaves can turn a vibrant red. The inflorescence is generally capitate with dense compact cluster of involucre (2-7 per cluster). The involucre are hairy. There are 3 bracts that subtend the involucre and they are triangular or elliptic, and are scalelike or leaflike. The perianth of the flower is glabrous and white to pinkish. The anthers are light to dark pink. The fruit is an achene that is obconic, glabrous, and brown. The achene is found within the persistent perianth. This plant is endemic to California. This plant is the food plant for the El Segundo dotted-blue (*Euphyllptes battoides allyni*).

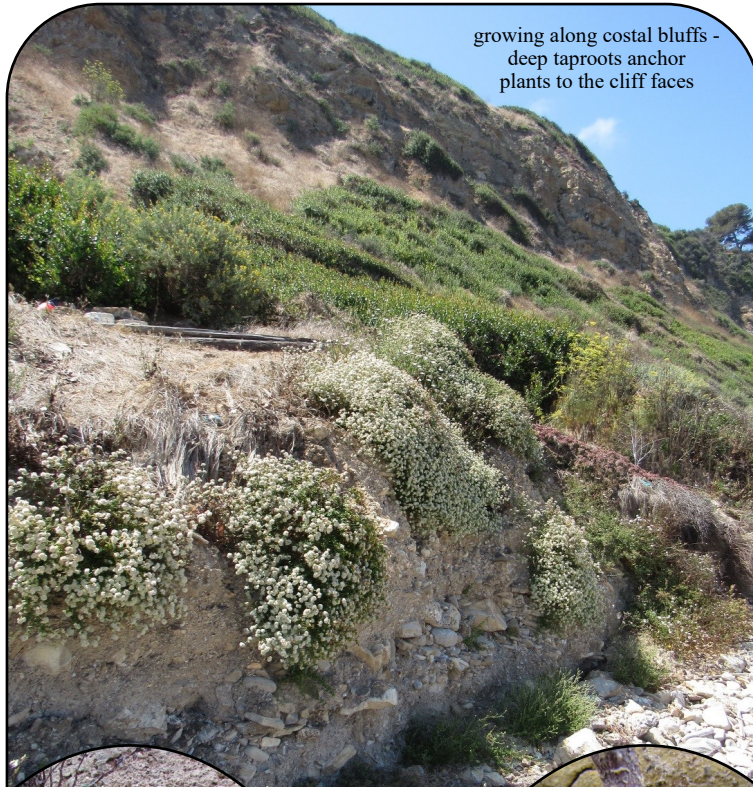


Seacliff Buckwheat (*Eriogonum parvifolium*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: April - August (can sometimes flower all year)



growing along costal bluffs -
deep taproots anchor
plants to the cliff faces



stout and long
taproots anchor
plants to cliff faces

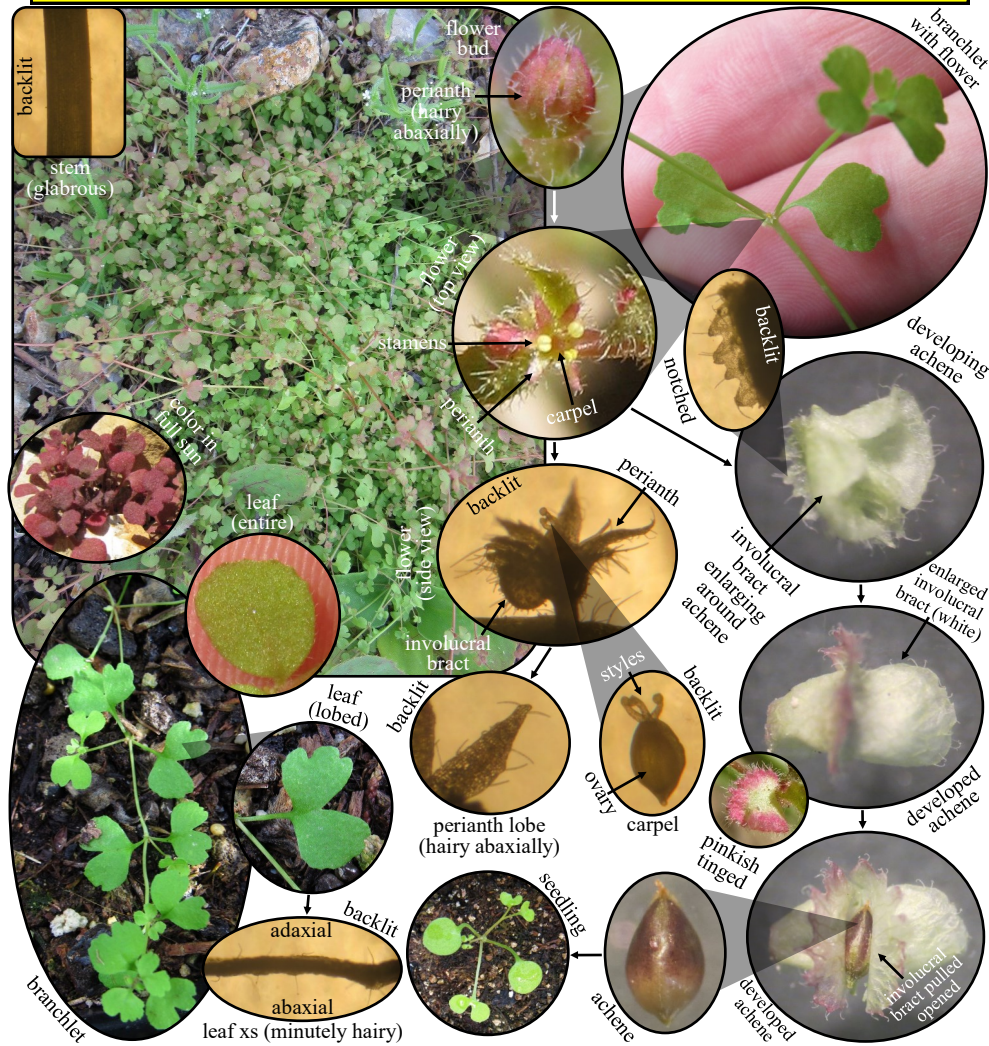
Fairy Mist (*Pterostegia drymarioides*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: March - July

Pterostegia drymarioides is a small annual herbaceous plant. It is found throughout the peninsula usually in the shade of other larger shrubs. It likes to sprawl out across the surface of the soil or rocks. On the coastal bluffs, it can be found growing in full sun and the whole plant is often a pinkish-red color. The leaf blade can be entire to lobed. The inflorescence is terminal and cyme-like. Involucral bracts are present and are erect, hairy, 2-winged, swollen on one side, notched or lobed, and veined. The flower has a perianth that can be greenish yellow to pinkish with 5 to 6 lobes that are hairy abaxially. There are usually 6 stamens in the flower. The fruit is an achene that is brownish, obconic, and glabrous. The mature achene is contained within the modified swollen involucral bract which can be all white or tinged with pink.



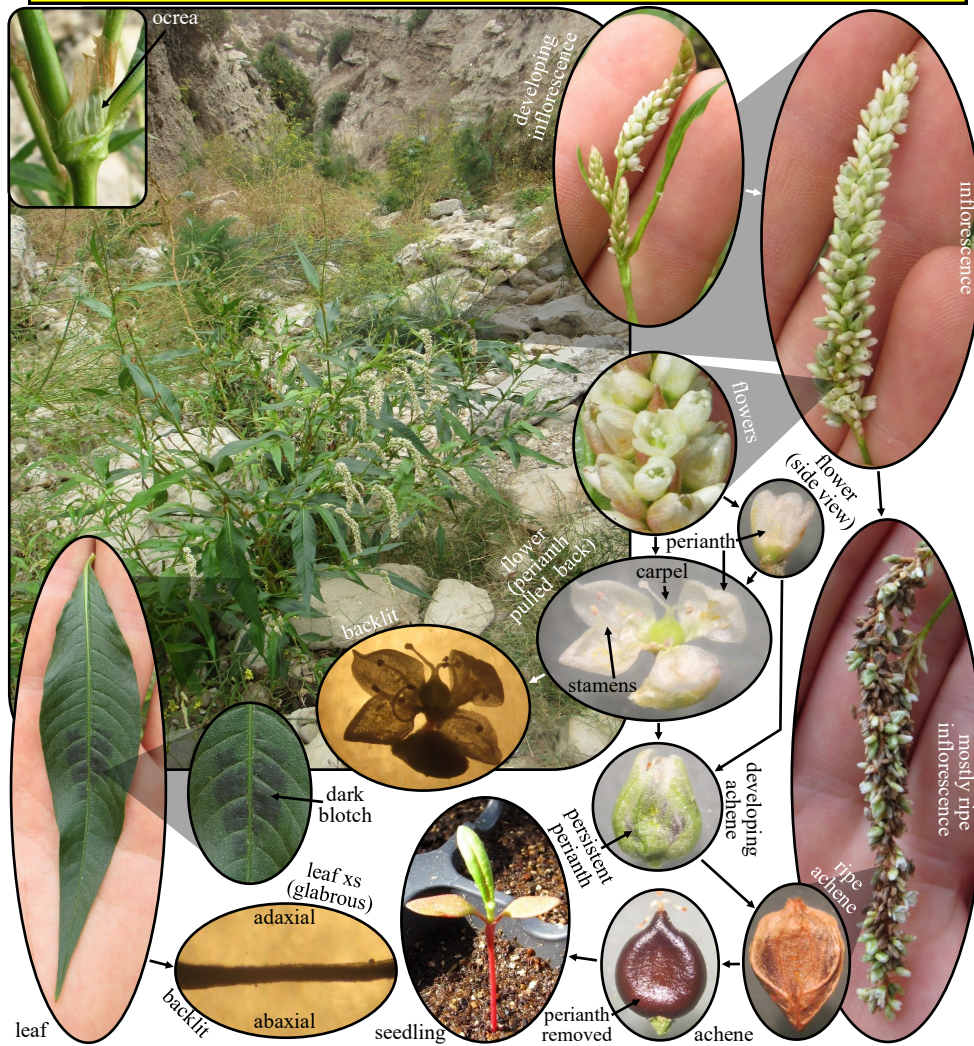
Common Knotweed (*Persicaria lapathifolia*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: June - October

Persicaria lapathifolia is an annual herbaceous plant. It is found in a few canyons on the peninsula where there is perennial water flow. The stems are ascending to erect. The blade of the leaf is narrowly to broadly lanceolate. The blade sometimes has a dark blotch near the center of the blade on the adaxial side. The ocrea is brownish, papery, veined, and the base is inflated. The inflorescences are generally terminal (sometimes axillary) and usually erect when young and generally nodding with age. The flowers have a perianth that is greenish white to pinkish and glabrous. There are 5-6 stamens with anthers that are pink to red. There are 2 (sometimes 3) styles that are fused at the base. The fruit is an achene that is brown to black, smooth, and generally shiny. The achene is usually surrounded by the persistent perianth.



Wild Rhubarb (*Rumex hymenosepalus*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: January - May

Rumex hymenosepalus is a perennial herbaceous plant from tuberous roots with short rhizomes. It is found in only one location on the peninsula. The stems of this plant are usually erect, thick, and fleshy. The blade of the leaf is large, generally fleshy, and lanceolate to oblong. The leaf margin is entire and the overall leaf can be flat to undulated. The flowers are densely clustered together and whorled (whorls 5-20 flowered) along the inflorescences that are terminal. The inflorescence can also be branched. The unisexual flowers have a perianth that is made up of 3 outer tepals that are somewhat inconspicuous and 3 inner tepals that are enlarged and lack tubercles. The overall perianth is pinkish-green when young. Staminate flowers have 6 stamens. Pistillate flowers have 3 stigmas that are plumose. The fruit is an achene that is brown to a reddish brown. The ripe achenes are hidden within the persistent and enlarged inner tepals. The inner tepals when young are a pinkish color and generally fleshy. Older (ripe) inner tepals are large, brown, dry, and papery.



Wild Rhubarb (*Rumex hymenosepalus*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: January - May



2 year old
tuberos
root



4 year old
tuberos
root

Willow-leaved Dock (*Rumex salicifolius*)

Order: Caryophyllales

Family: Polygonaceae (Buckwheat Family)

Flowers: May - July

Rumex salicifolius is a perennial herbaceous plant. It is found in a few spots on the peninsula (mostly canyons) where there is perennial water flow. The stems are usually erect to ascending. The blade of the leaf is linear-lanceolate to linear. The margins of the blade are entire and the overall leaf is flat or slightly crenulate. The inflorescence is terminal and axillary. The flowers are densely clustered together and whorled (whorls 7-20 flowered) along the inflorescence. The unisexual flowers have a perianth that is made up of 3 outer tepals that are somewhat inconspicuous and 3 inner tepals that are widely triangular. The margins of the inner tepals are entire or notched. There is 1 large tubercle present on the inner tepals of the pistillate flowers that is smooth to generally warty. Staminate flowers have 6 stamens. Pistillate flowers have 3 stigmas (stigmas plumose). The fruit is an achene that is reddish brown. The achenes are hidden within the persistent inner tepals that has one large tubercle.

