

# MANZANITAS, CALIFORNIA'S "LITTLE APPLES"

THE GENUS *ARCTOSTAPHYLOS* AND  
ITS HORTICULTURAL POTENTIAL AND  
DIVERSITY

The manzanitas are centered in California, with over 90% of the species found nowhere else in the world

- Only one species, *A. uva-ursi* or bearberry occurs outside North America; that species is found all across the Northern Hemisphere
- Although belonging to the heather family, Ericaceae, manzanitas are best adapted to summer-dry, hot climates, whereas most other ericoids prefer cool, humusy, partly shady conditions in acid soils
- Manzanitas vary in form from low woody ground covers only inches high to shrubs and even small trees up to 20 feet tall

Manzanitas can be recognized by the following traits:

- Red to red-purple bark filled with tannins
- Evergreen lance-shaped to ovate, usually entire leaves that are often vertically oriented
- Drooping clusters of white to deep pink, urn-shaped flowers,
- Berrylike reddish fruits with a mealy pulp and bone-hard seeds often partly fused together
- Some species form expanded root crowns or burls from which they stump sprout when injured
- All attract wildlife to feed on the fruits and sip nectar from the flowers although the “legitimate” pollinators are tiny native bees that can squeeze inside the flowers

Manzanita flowers have 5 tiny sepals, 5 petals (seldom 4) fused into an urn with tiny lobes at the tip, 10 stamens that open by pores at the anther tips and have pronglike appendages, and a superior ovary.



Here is a cut-away view of the inside of manzanita flowers



Here is what a burl looks like on Eastwood manzanita, *A. glandulosa*



The berries of silver-leaf manzanita, *A. silvicola*



Manzanitas can be categorized by habitat, growth form (habit), or taxonomic relationships

- For example, a few manzanitas like Columbia manzanita (*A. columbiana*), Fort Bragg manzanita (*A. nummularia*), kinnikinnick or bearberry (*A. uva-ursi*), and Little Sur manzanita (*A. edmundsii*) are strictly coastal, preferring cool, foggy summers and part-day shade
- Many other species live in hot, summer-dry, sunny chaparral, in the foothills
- Of those species, several are rare and restricted to special low-nutrient soils
- A handful of species live in the high mountains including green-leaf manzanita (*A. patula*) and pinemat manzanita (*A. nevadensis*)

## Examples of growth form or habit include...

- Ground-hugging species that often root as they grow including kinnikinnick, pinemat manzanita, Little Sur manzanita, and Hearst manzanita (*A. hookeri hearstiorum*)
- Low mounded shrubs such as dwarf manzanita (*A. pumila*), lone manzanita (*A. myrtifolia*), Hooker's manzanita (*A. hookeri*), and a few others
- Still others (the majority) are medium sized to large shrubs
- Finally a few very tall species reach tree status including common manzanita (*A. manzanita*), bigberry manzanita (*A. glauca*), Columbia manzanita, and a few others

Taxonomically, manzanitas fall into a few basic groups, within which, species often hybridize, making a definite identification difficult. These groups are not always agreed upon but here are some of the criteria for further differentiation

- the hairiness of twigs and leaves
- The presence of stomates on both leaf surfaces or just the lower surface (*abaxial*),
- The nature of the floral bracts—whether leaf like, scale like, or colored,
- Whether the leaves have a distinct petiole or are clasping or nearly so, often with adjacent leaves overlapping like shingles
- Whether the bark is gray in age and peeling into long strips
- As a result, sorting out the manzanitas can be a real challenge

I'm going to loosely lump the groups of species, as follows:

- Prostrate or semiprostrate species,
- Shrub species with a definite burl,
- Shrub species without a burl, and...
- Species with clasping, overlapping leaves or,
- Species with clearly petioled leaves, which includes the majority

We'll start with the prostrate kinds, which make splendid evergreen ground covers that live a long time. Of these, *A. uva-ursi* has a broad distribution across the Northern Hemisphere



In California, kinnikinnick is (mostly) confined to the immediate coast from Pt. Reyes and adjacent areas northwards. It often blooms later than many others



Here you see it growing with salal (*Gaultheria shallon*) in a coastal forest. This species has great variation in height and leaf details, and several cultivars are available in the trade



The bright red fruits of kinnikinnix



In the mountains, kinnikinnick is usually replaced by the equally low growing pinemat manzanita, *A. nevadensis*. This species favors openings in forests, often on rocky soils



Because of its high elevation home, pinemat doesn't bloom until the snows melt. Sadly, this species has proven nearly impossible to grow in the ground in Bay Area gardens



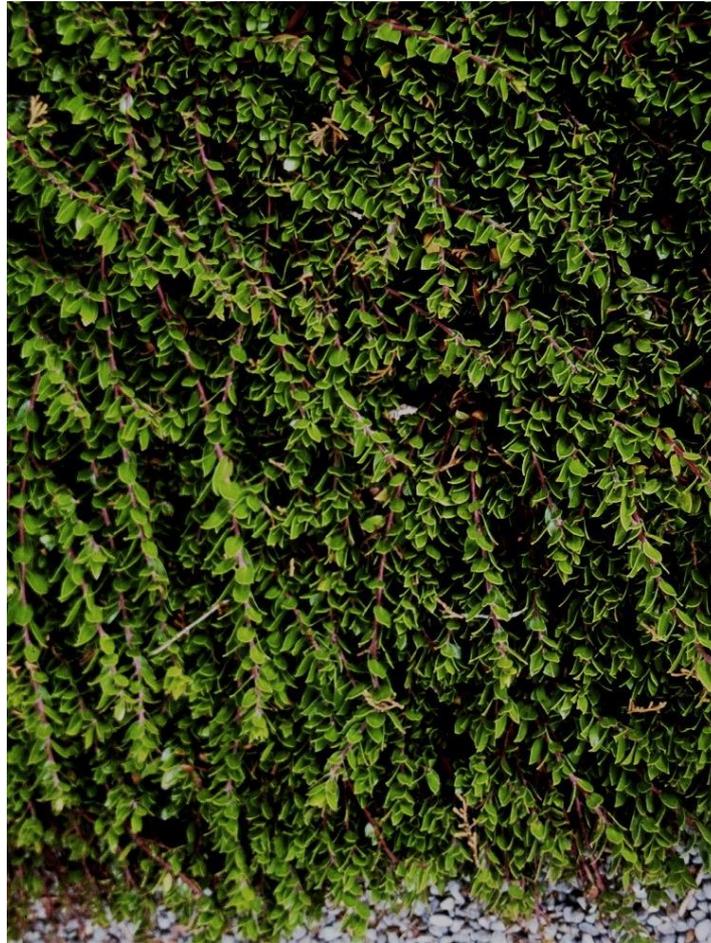
Pinemat manzanita leaves are often rounder and less pointed than kinnikinnick.



The Monterey coast is home to a few low-growing manzanitas such as this Little Sur manzanita, *A. edmundsii*, which is available and easy to grow. It is generally taller than kinnikinnick.



By contrast, the very rare Hearst manzanita, *A. hookeri* *hearstiorum*, grows tighter and lower than most kinnikinnicks, making an ideal ground cover for shade and fog.



Here is the Hearst manzanita in bloom in early spring



Restricted to San Bruno Mountain, the shingle-leaf manzanita (*A imbricata*) grows side by side with kinnikinnick (to the right)



As its name indicates, shingle-leaf manzanita has closely overlapping leaves and pale pink to white flowers but is hard to source.



From old stabilized sand dunes on Fort Ord land, the dwarf manzanita, *A. pumila*, forms low mounds taller than some of the other truly prostrate kinds.



Another low mound former, is mountain manzanita, *A. hookeri montana*, restricted to serpentine soils around Mt. Tamalpais



Mountain manzanita usually blooms in late March with flowers varying from white to palest pink. This is another species hard to source.



Our second group of manzanitas are the burl formers, which are able to stump sprout after fire, whereas the rest have to come back from seed after a burn

- The stump sprouters fall into two groups
- The first group has leaves with different degrees of hairiness or color on the two surfaces, and...
- The second group has uniformly colored leaves
- *A. tomentosa* (shaggy-bark manzanita) and *A. crustacea* (brittle-leaf manzanita) belong to the first group while...
- *A. patula* (green-leaf manzanita) and *A. glandulosa* (Eastwood manzanita) belong to the second
- *A. glandulosa* is subdivided into many subspecies, and is therefore more difficult to characterize

Here is a view of a large hedge of shaggybark manzanita, *A. tomentosa*. The bark is stringy and gray unlike most manzanitas.



In this photo, the taller manzanita with gray-green leaves is shaggybark, while the low grower in the foreground is a form of Hooker manzanita, *A. hookeri*

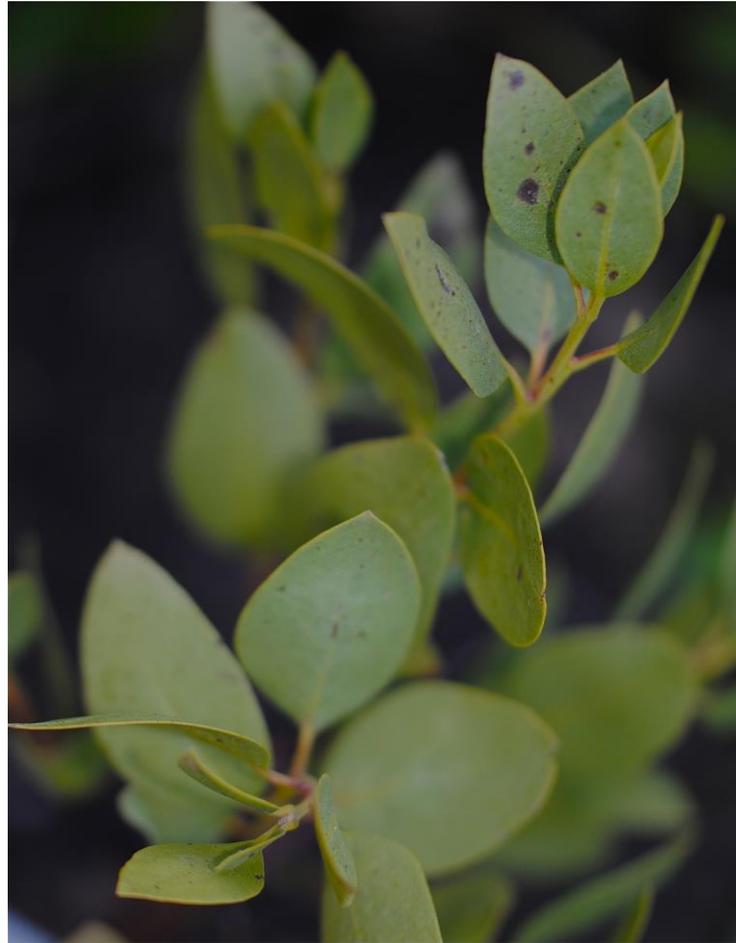




The green-leaf manzanita, *A patula*, is very common in montane chaparral throughout the mountains above 5 to 6,000 feet



True to its common name, green-leaf manzanita has uniformly bright green leaves year round



In the mountains, green-leaf manzanita blooms soon after the snows melt. The flowers are usually pale pink.



Eastwood manzanita (*A. glandulosa*) is not only highly variable but widespread through the lower elevations of California. Here you see a circle of stump sprouts around an old burl.



Eastwood manzanita has pale gray-green to bright green leaves, but there are usually glandular hairs, giving the specific epithet



A view of the glandular hairs



An Eastwood manzanita variety with bright green leaves



This population of Eastwood manzanita on Mt Tam grows to around 8 or 10 feet tall. In the foreground, sprouts coming from shrubs that were cut to create a fire break



Now, we'll turn to the manzanitas with clasping, overlapping leaves.

- All of these species are specialized, rare, and restricted, for reasons not obvious
- Most live on nutrient-poor, rocky soils from inland with hot summers to mountains overlooking the ocean and foggy summers
- Species of interest in the Bay Area include, *A. auriculata* (Mt Diablo manzanita), *A. pallida* (Alameda or pallid manzanita), *A. andersonii* (Santa Cruz manzanita), *A. regis-montana* (King Mountain manzanita), *A. montaraensis* (Montara Mt manzanita), and *A. virgata* (Bolinas manzanita)

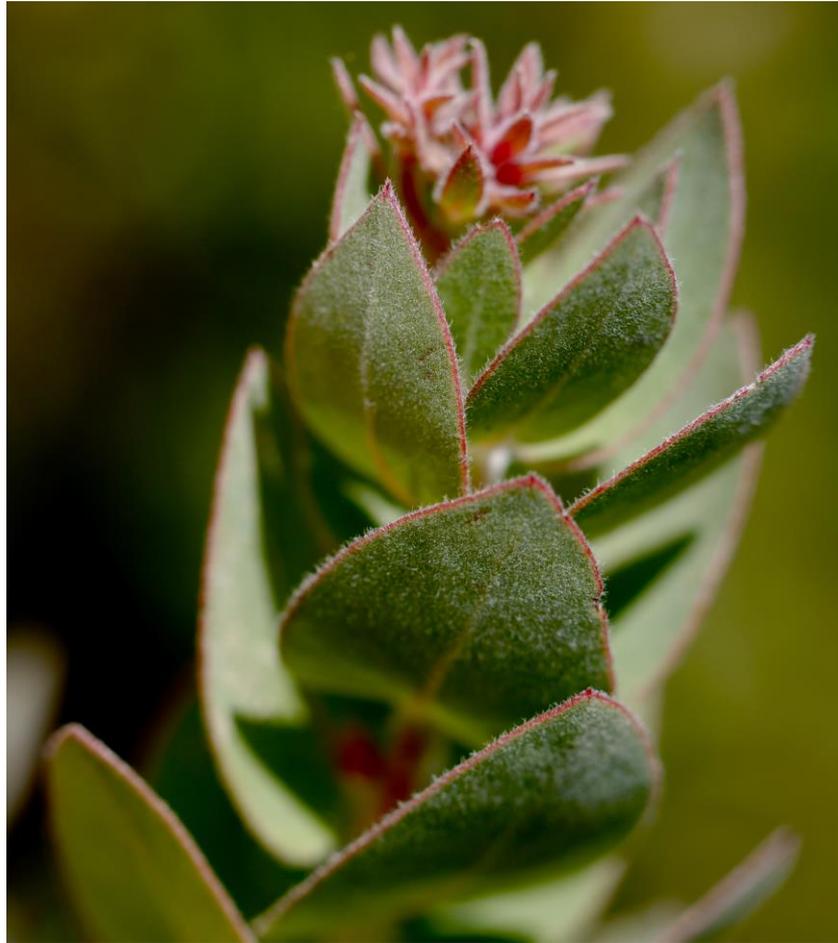
*A. andersonii*, from the coastal forests and chaparral in the Santa Cruz Mountains, grows into a dense shrub with pale green leaves and pale pink flowers. Note that these leaves are sometimes toothed



*A. auriculata*, Mt Diablo manzanita, is restricted to a few exposed chaparral slopes on poor sandstone soils, growing into shrubs to 10 feet high with pale, gray leaves



The new leaves of Mt Diablo manzanita are often red tinted



Flower color of Mt Diablo manzanita varies, but there are some very fine deep pink forms as seen here



The beautiful pinkish fruits of Mt Diablo manzanita



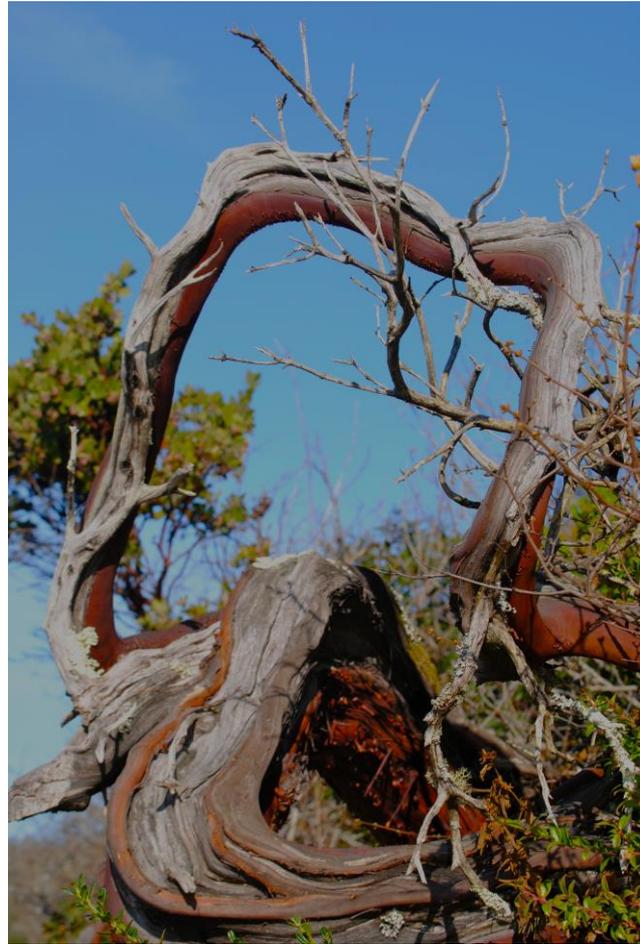
The Montara Mountain manzanita (*A. montaraensis*) is restricted to sandstone ridges only on Montara Mountain, where it's abundant. It can grow over 12 feet high.



Montara Mt manzanita has pale green leaves and clusters of white flowers with a rather narrow profile.



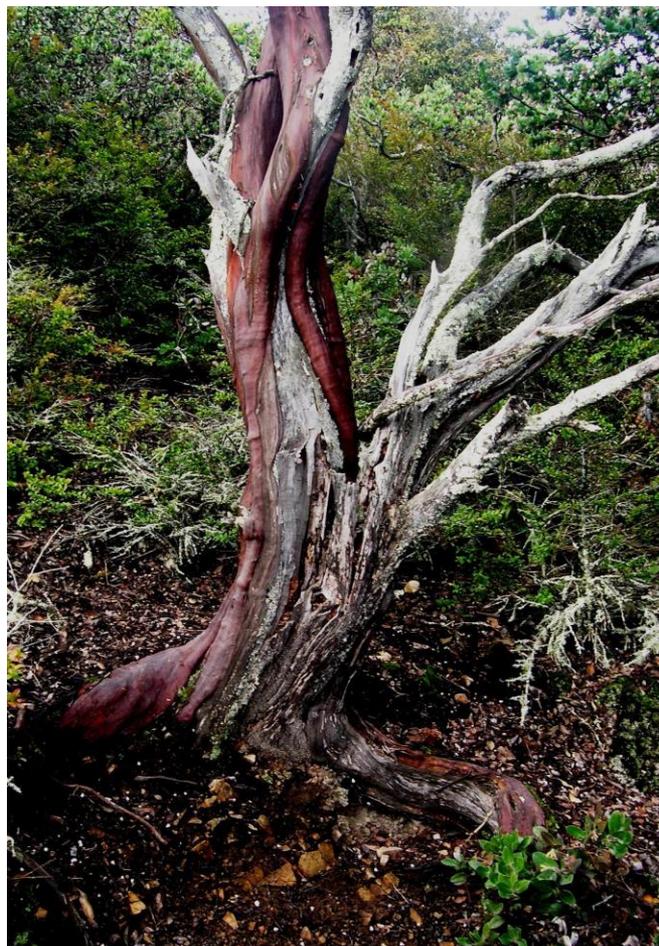
Wind sometimes sculpts the trunk of Montara Mt manzanita



Because Montara Mt manzanita blooms for a considerable time, there may be flowers and fruits on the same plant at the same time



The Alameda manzanita, *A. pallida*, can grow to 15 feet high with beautifully twisted and burnished trunks. It is found occasionally in the Oakland Hills as at Huckleberry Preserve and on El Sobrante Ridge but is dying out without fire.



Similar to Montara Mt manzanita, Alameda manzanita has pale green leaves and white to pale pink flowers with a narrow profile.



Here you see the handsome dense leaves of Alameda manzanita.



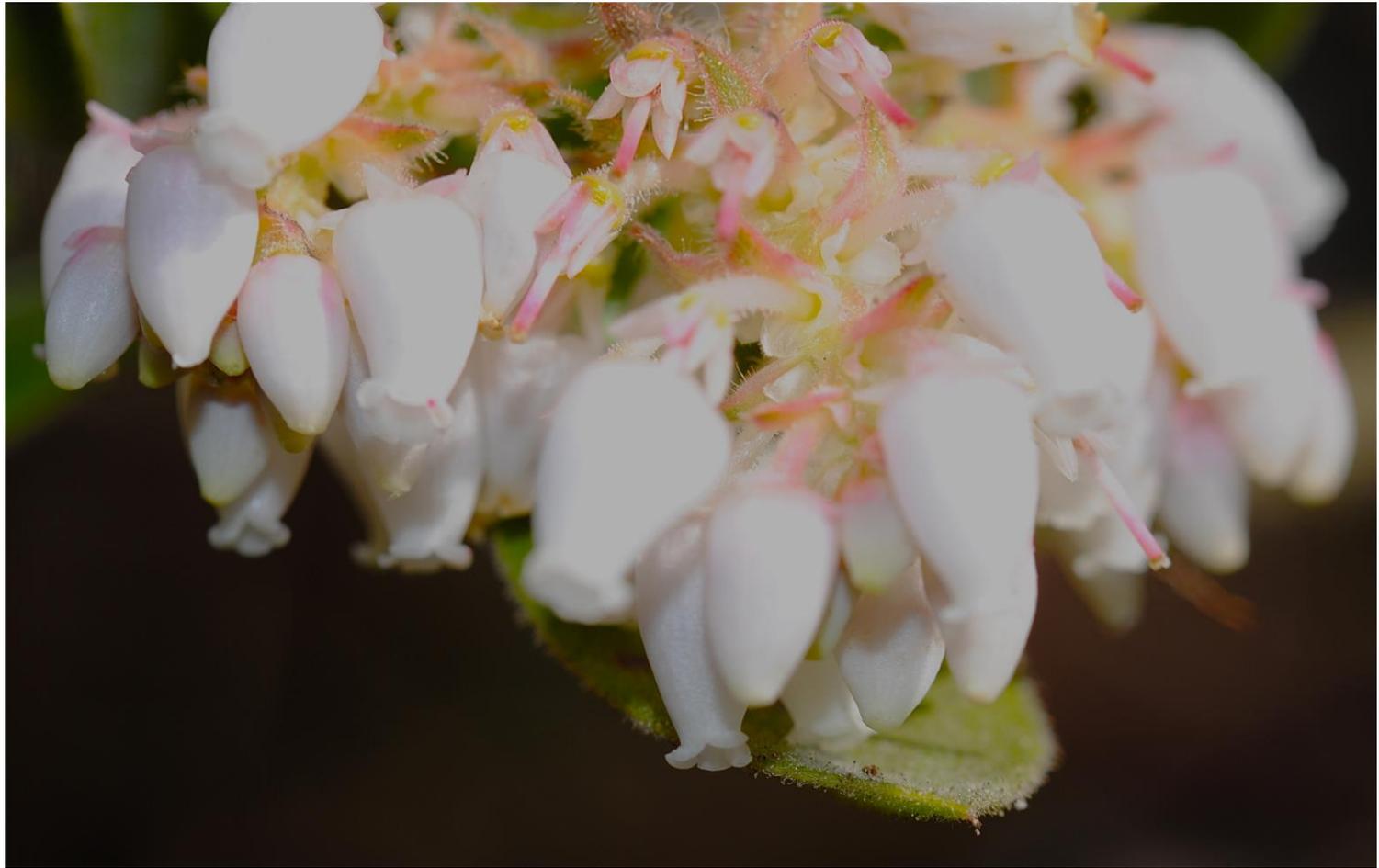
Alameda manzanita has some of the most beautifully patterned bark.



One of the most admired manzanitas at Tilden Botanic Garden is King Mt manzanita, *A. regis-montana*. Here you see an old specimen with that signature bark and trunk pattern



King Mt manzanita features very large clusters of white flowers.  
King Mountain is located near Woodside on the Peninsula.



Here are the pale green leaves of King Mt manzanita. This manzanita is endangered in the wild because larger, more aggressive trees and shrubs are shading it out.



The Bolinas manzanita, *A. virgata*, true to its name is found on Bolinas Ridge where it receives both summer fog and warm days. The habitat, as with these others, is on poor sandstone soils.



The pale green leaves of Bolinas manzanita are similar to those of the King Mt manzanita



Bolinas manzanita has pale pink to white flowers. This species is endangered when the forest around it encroaches, and is generally common only after fire.



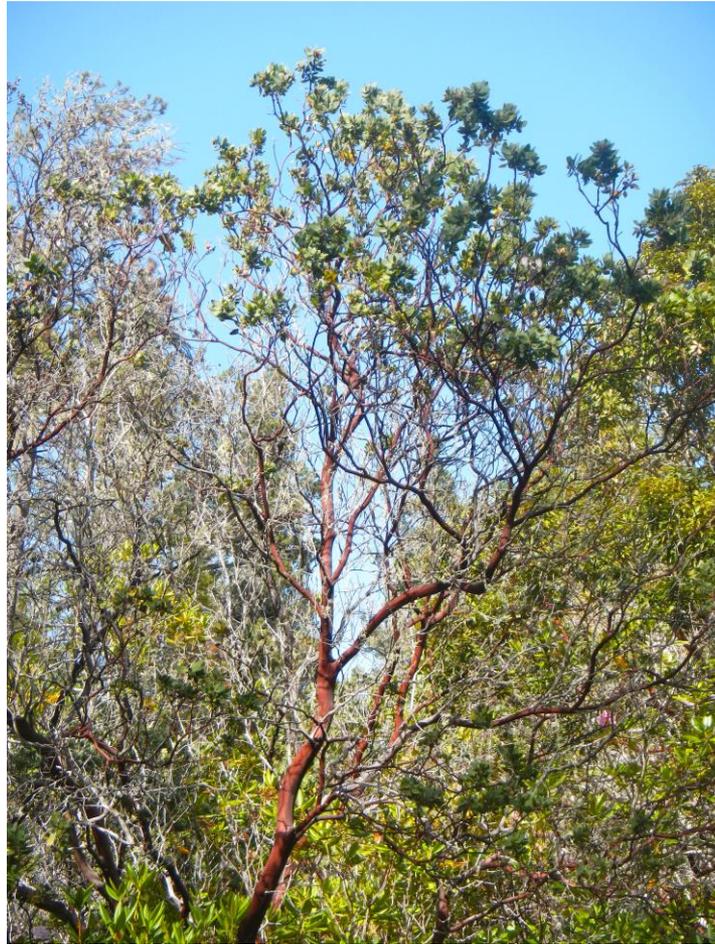
And now for our last group of manzanitas, shrubby species without a burl and without clasping leaves

- Many of these species are relatively widespread, although there are also a few rare ones among them
- These species range from 3-foot shrubs to 20 feet high or more
- I'm arranging these according to locale, starting with Northern California

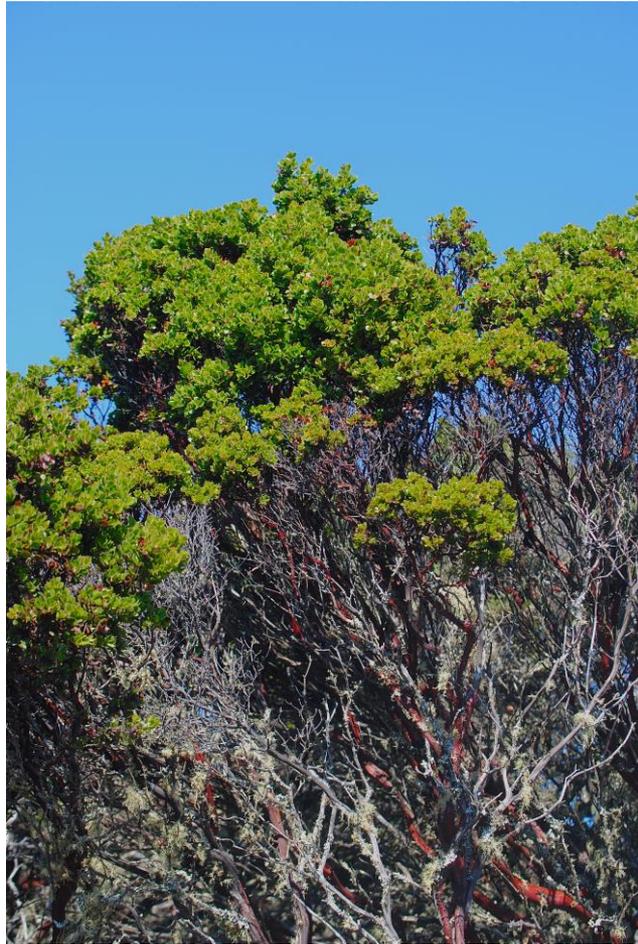
We'll start off with an unusual tall manzanita that prefers the foggy coastline on the edge of conifer forests, *A. columbiana*, which was named for its presence as far north as the Columbia River



Columbia manzanita grows up to 15 feet high and features shaggy hairs on the twigs and leaves.



One of the most unique of these species is sensitive manzanita, *A. sensitiva*, which grows on coastal slopes in full sun. Although it can reach 8 feet high, it is often less, and features small, bright green leaves. Mt Tam has large stands of this species.



Sensitive manzanita is identified by small, nearly round, bright green leaves and small clusters of small white flowers in scale with the leaves



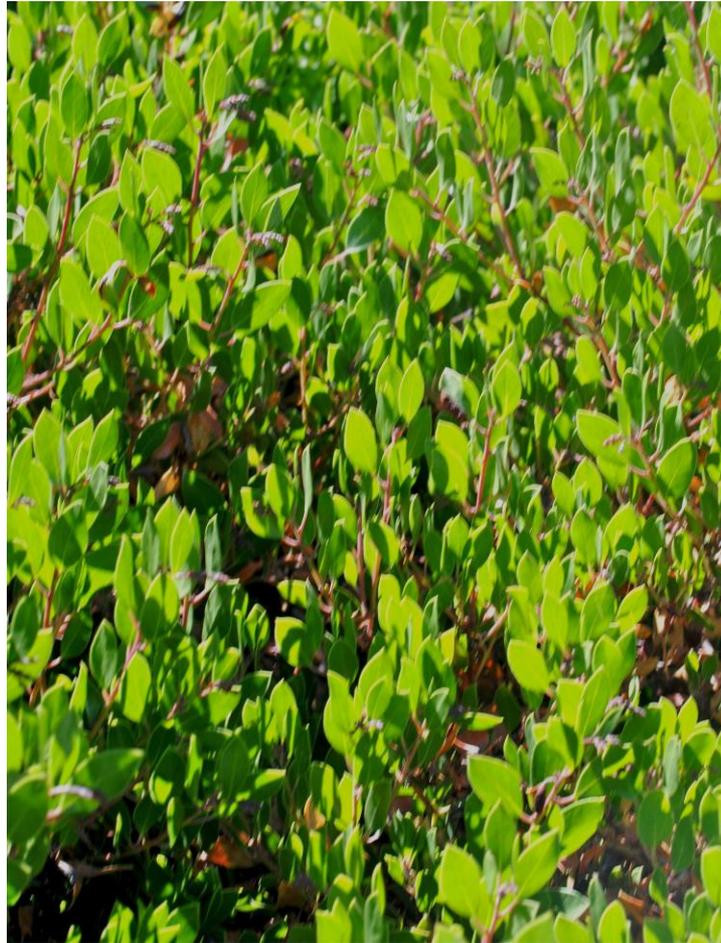
Closely related to sensitive manzanita, and often considered a variety of it, is *A. nummularia* aka Fort Bragg manzanita. This species forms low mounds to around 3 feet high and grows along the Mendocino coast.



The cultivar 'Small Change' is an excellent choice for a pot, as you see in this photo



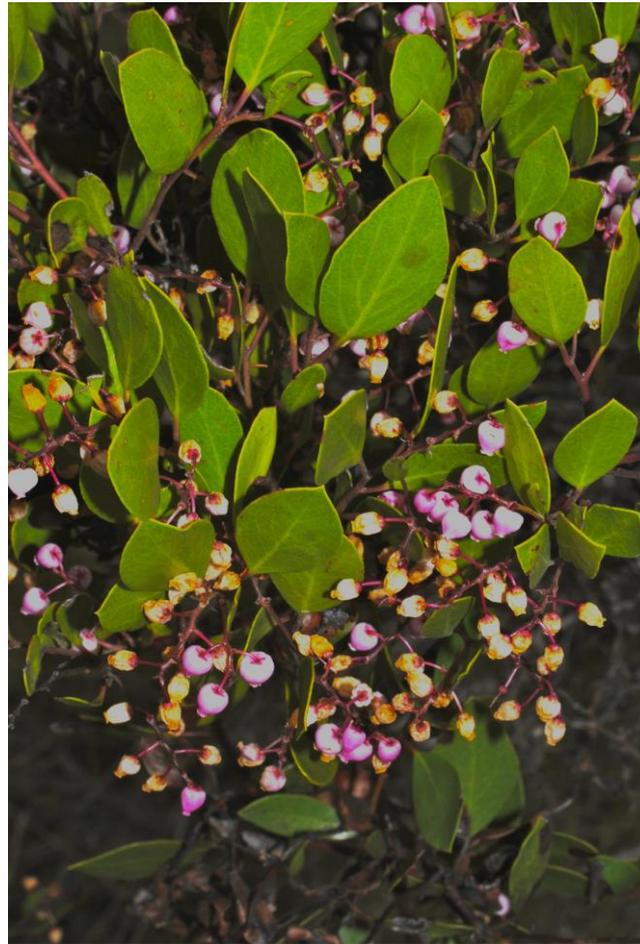
Rare in the wild north of Sebastopol is vinehill manzanita, *A. densiflora*. The cultivar 'Ed McMinn' is common in nurseries and makes a fine hedge to 4 or so feet high with bright green leaves.



Vinehill manzanita blooms well and adapts better to heavy soils than most others.



Another Sonoma County manzanita, relatively restricted and found on rocky soils, is Stanford manzanita, *A. stanfordiana*, a bright green shrub to around 6 to 8 feet



Stanford manzanita has lovely bright pink flowers and deserves greater popularity



Besides the many rare manzanitas in the Bay Area, two species stand out for their broad distribution and near-tree-like size. The first is common manzanita, *A. manzanita*, widespread and often found in partial shade of woodlands.



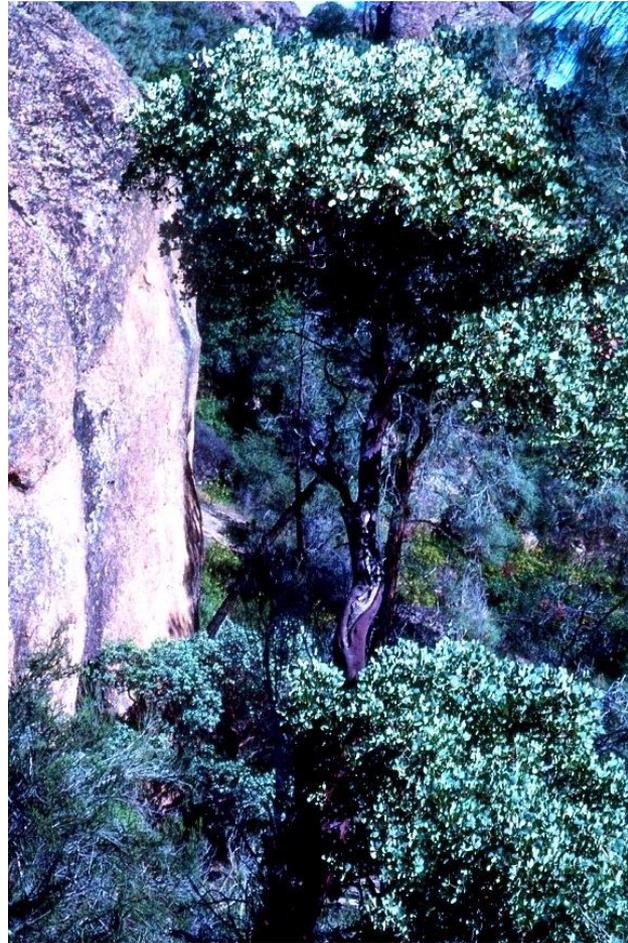
A prolific bloomer early in the year, common manzanita has pale to bright green leaves and white to palest pink flowers. It can grow to 15 feet high. The form pictured here is var. *laevigata*, a beautiful form from Mt Diablo



A closer view of common manzanita's var. *laevigata*, the flowers blushed pink, while the more widespread form usually has white flowers



The second widespread species is big-berry manzanita, *A. glauca*, which also grows up to 20 feet tall. It lives in exposed, summer-hot areas from Mt Diablo south through Southern California.



Big-berry manzanita features blue-green leaves and white flowers that often open before the New Year



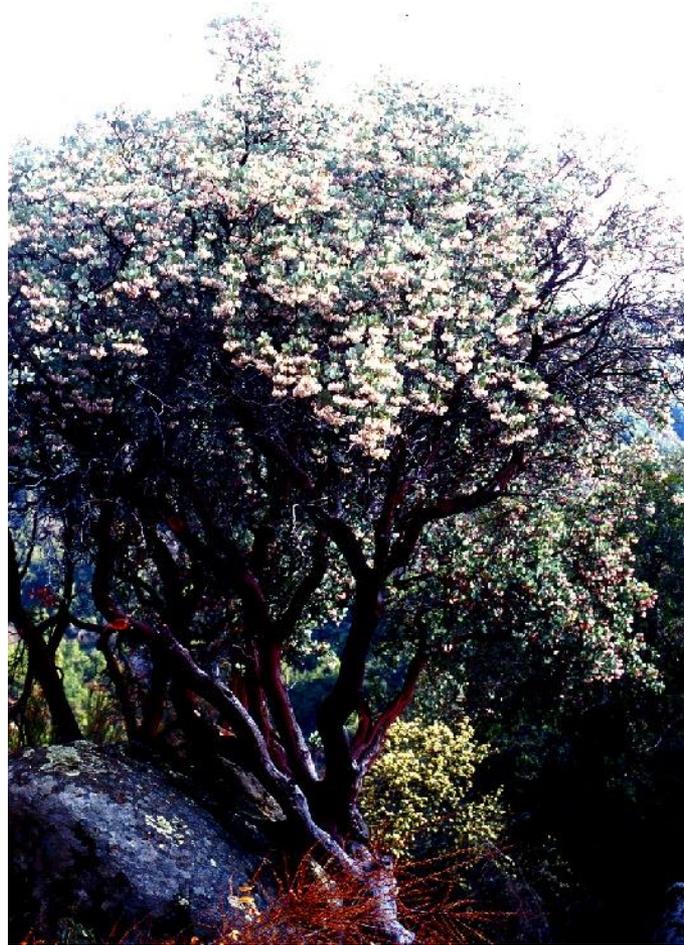
True to its common name, big-berry manzanita has among the largest fruits of any species, and they're sticky. Fruits on this species may linger into fall.



White-leaf manzanita, *A. viscida*, is another far-flung species, found in the inner North Coast Ranges (e.g., Mt St Helena) and through the Sierra foothills. This species often creates dense “groves” with its trunks and can grow to 12 feet high.



White-leaf manzanita often produces massive amounts of flowers in earliest spring, the flowers either white or pale pink.



White-leaf manzanita is named botanically for its sticky new growth. The fruits truly are colored like little apples.



Returning briefly to the mountains between Santa Cruz and Monterey, we find a highly localized and highly desirable species called Pajaro manzanita, *A. pajaroensis*.



The form to covet is a cultivar called 'Paradise' which grows to only 4 feet high and features beautiful bronze-red new leaves.



'Paradise' blooms very early and features lovely pale pink flowers that complement the new leaves



Going to Southern California, several manzanitas grow in the Peninsular Ranges, but also several are endemic to the Channel Islands. One of the best of these is island manzanita, *A. insularis*



Island manzanita often grows into treelike forms up to 15 or more feet high. Its bright green foliage contrasts beautifully with the pale pink flowers.



Island manzanita produces handsome, hairy, orange berries



Finally, from the San Jacinto and other Southern California mountains comes the stunning *A. pringlei* or pink-bracted manzanita



Pink-bracted manzanita not only features pink bracts but also lovely pink flowers. The problem is, as usual, finding a source.



This brief survey of manzanitas only hints at the potential. Many more are also highly garden worthy. Many of the species here are difficult to find in the trade and instead are available as cultivars.

