

## LESSON 3: SOILS

### NATIVE PLANTS FOR HEAVY SOILS

#### About Heavy a.k.a. Clay Soil

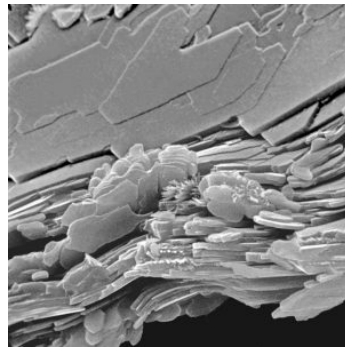
The particles that make up clay soil are finer than those of sandy soils. This is why clay feels smooth and slippery when wet, rather than gritty and granular like sand. The fineness of the particles makes it difficult for air, water and roots to pass between them, and clay soil can become easily compacted. For these reasons, it can take a long time for clay soil to become saturated after periods of drought, and a long time to dry out after being watered.

The good news is that having clay soil means that you will need to water less often than if you had sandy soil. But it also means that it is easier to overwater your plants. Remember, roots need air as well as water, and keeping clay soil wet for extended periods of time can lead to root rot and other diseases.

**TIP:** Before watering, check the soil moisture at least 3-4 inches below the surface. If the soil is moist, don't water yet. If it's dry, water deeply. Many of the plants on this list will thrive with as little as a monthly watering in summer once established.



Surface cracking



Clay under microscope

**NOTE:** Look for the “**clay**” icon on TPF nursery signage and in our online Native Plant Database – these plants accept heavy soil.

## GROUNDCOVERS

***Achillea millefolium*** (yarrow) – 18 in. H x 2-3+’ W, spreading – Low fern-like foliage; white flowers.

***Arctostaphylos*** ‘John Dourley’, **A. ‘Pacific Mist’** and others (manzanita) – Sizes vary – All are drought-tolerant with evergreen foliage, winter or spring flowers, and characteristic red-brown bark.

***Artemisia californica*** ‘Canyon Gray’, **A. ‘Montara’** (CA sagebrush) – 2’ H x 6’ W – Finely textured, silver-gray, aromatic foliage.

***Baccharis pilularis*** ‘Pigeon Point’ (Pigeon Point dwarf coyote brush, 2’ H x 6-8’ W) and **B. ‘Twin Peaks #2’** (Twin Peaks #2 dwarf coyote brush, 2-3’ H x 3-5’ W) – Durable evergreen choices for slopes and parkways.

***Berberis (Mahonia) repens*** (creeping barberry) – 2’ H x 3-5’ W – Slow-growing with evergreen, colorful foliage and bright yellow spring flowers.

***Ceanothus*** ‘Yankee Point’, **C. ‘Joyce Coulter’** and others (CA lilac) – Sizes vary – All are drought tolerant and evergreen with blue or white flowers in spring.

## GRASSES, RUSHES & SEDGES

***Bouteloua gracilis*** (blue grama grass) – 6-12 in. H x 1’+ W, spreading – Use as an accent or a lawn substitute. Pretty seed heads in summer.

***Elymus condensatus (Leymus) ‘Canyon Prince’*** (Canyon Prince giant wild rye) – 3-4’ H (with taller flower stalks) x 3-5+’ W, spreading – Upright, blue-green foliage. Plants slowly spread by rhizomes.

***Juncus*** species (rush, wiregrass) – 2-3’ H x spreading – Vertical accent for moist or somewhat dry areas.

***Muhlenbergia rigens*** (deergrass) – 4’ H x 4’ W – Bold ornamental bunchgrass with graceful flower spikes in summer.

***Sporobolous airoides*** (alkali sacaton) – 2-3’ H x 3’ W – Airy flower spikes in summer

## PERENNIALS & VINES

***Calystegia macrostegia ‘Anacapa Pink’*** (Anacapa Pink morning glory) – 20+’ long – Vigorous pink-flowering vine for covering fences.

***Encelia californica*** (CA bush sunflower) and ***E. farinosa*** (brittlebush) – 3-4’ H x 3-4’ W – Yellow-flowering local natives for full sun.

***Epilobium (Zauschneria)*** species and cultivars (CA fuchsia) – Sizes vary – Red, orange-red or sometimes pink or white flowers in late summer/fall. Great hummingbird plant!

***Eriogonum*** species and cultivars (buckwheat) – Sizes vary – All are drought-tolerant with beautiful flowers in late spring/summer; great wildlife value.

***Fragaria vesca*** (wood strawberry) – Less than 6 in. H x spreading – Low evergreen foliage, white flowers and edible fruit.

***Keckiella cordifolia*** (heart-leaved penstemon) – 3-5' H x 4-6' W – Arching branches; red flowers in early summer. A favorite of hummingbirds.

***Penstemon 'Margarita BOP'*** (Margarita BOP foothill penstemon, 2' H x 3' W) and ***P. spectabilis*** (showy penstemon, 4' H in bloom x 2-3' W) – Very colorful and showy spring/summer flowering perennials.

***Salvia 'Allen Chickering', S. 'Poza Blue'*** (sage hybrids) – 5' H x 5' W – Strongly fragrant foliage and blue to purple flowers. Very drought tolerant.

***Sphaeralcea ambigua*** (apricot mallow) – 3' H x 3' W – Desert native with almost constant orange flowers during warm months.

***Vitis californica*** (CA wild grape) – to 40' long – Sturdy vine that produces small, edible grapes; good for birds.

***Woodwardia fimbriata*** (giant chain fern) – 3-6' H x 3-6' W – Large lush fern for moist shady areas.

## SHRUBS

***Arctostaphylos 'Howard McMinn', 'Ian Bush', 'Sentinel', 'Sunset'*** (manzanita) – Sizes vary – Beautiful upright or rounded evergreen shrubs with sculptural red-brown branches and winter-spring flowers.

***Artemisia californica*** (CA sagebrush) – 3-4' H x 4' W – Local native with grey, very fragrant foliage.

***Atriplex*** species (saltbush, quail bush) – Sizes vary – Grey-green evergreen foliage. Very drought-tolerant.

***Berberis (Mahonia) aquifolium*** (Oregon grape) – 3-6' H x 6' W, spreading – Attractive evergreen shrub for dry shade or sun.

***Carpenteria californica*** (bush anemone) – 3-8' H x 4-8' W – Good for dry shady spots but flowers better with partial sun. Fragrant spring flowers are white with yellow centers. Evergreen.

***Ceanothus 'Concha', 'Frosty Blue', 'Ray Hartman', 'Skylark', 'Snow Flurry'*** (CA lilac) – Sizes vary – Fast-growing and evergreen with lightly scented blue (sometimes white) flowers in spring. Drought tolerant.

***Cercocarpus betuloides var. betuloides*** (birch-leaf mountain mahogany) – 8-10' H x 8-10' W – Open evergreen shrub with showy plumed seeds in late summer.

***Gambelia (Galvezia) speciosa*** (Island bush snapdragon) – 3' H x 5' W – Both shrubby and trailing in habit, bright evergreen foliage, tolerates shade but needs some sun for best bloom.

***Heteromeles arbutifolia*** (toyon) – 8-15' H x 10-15' W – Tough, adaptable, evergreen with red berries in winter. Important bird plant.

**Malacothamnus** species (bush mallow) – Sizes vary – Medium to large evergreen shrubs. Light pink flowers attract bees.

**Malva (Lavatera) assurgentiflora** (island tree mallow) – 6-10' H x 6-10' W – Fast growers with broad evergreen foliage and almost year-round, purple to pink, hibiscus-like flowers.

**Rhus integrifolia** (lemonade berry) – 5-10' H x 10-20' W – Drought-tolerant, evergreen shrub with tart berries.

**Ribes aureum** (golden currant) – 6' H x 2-3' W, spreading – Upright stems, yellow flowers and edible fruit. Summer deciduous.

**Romneya coulteri** (Matilija poppy) – 5-8' H x spreading – Stunning, yellow-centered white flowers, exceptionally drought-tolerant. Unless contained, plants spread aggressively by rhizomes and become invasive.

**Rosa californica** (CA wild rose) – 3-5' H x spreading – Forms thickets in sun or shade; best with moderate to regular water. Pink, fragrant spring flowers followed by colorful rose hips. Winter deciduous.

## TREES

**Acer macrophyllum** (big-leaf maple, 30-80' H x 10-20' W) and **A. negundo** (box elder, 30-80' H x 15' W) – Medium-scale winter-deciduous trees for moderately irrigated sites.

**Calocedrus decurrens** (incense cedar) – 70-90' H x 20' W – Large, aromatic evergreen tree.

**Chilopsis linearis ssp. arcuata** (desert willow) – 15-20' H x 15-20' W – Showy pink to purple flowers in summer; winter deciduous.

**Juglans californica** (Southern California black walnut) – 15-30' H x 15-30' W – Deciduous local native; great wildlife value.

**Platanus racemosa** (western sycamore) – 30-80' H x 20-50' W – Large deciduous tree with handsome mottled bark; likes water.

**Prunus ilicifolia ssp. lyonii** (Catalina cherry) – 10-40' H x 15' W – Small evergreen tree with glossy foliage and fruit for birds.

**Quercus agrifolia** (coast live oak) – 20-75' H x 30-60' W – Large, evergreen tree that provides tremendous habitat for wildlife. A local and statewide icon.