

SEASON-SENSITIVE IMPORTANT PLANTS AT RPBG

ADIANTUM ALEUTICUM. FIVE-FINGER FERN. PTERIDACEAE, BRAKE FERN FAMILY. Usually a winter-dormant small fern of moist forests, streamsides, and seeps with a distribution similar to giant chain fern. Delicate fronds are borne on polished black stalks (stipes) used in basket designs by the Indians, each frond divided into several to many fingerlike divisions, each division with several to many crescent-shaped leaflets. Marginal sori on the underside of the fronds, protected by the frond margin curling under (*false indusium*). Few populations in the East Bay but abundant in the more coastal counties including Samuel Taylor State Park and Pt. Reyes National Seashore in Marin County.

APOCYNUM CANNABINUM. INDIAN HEMP. APOCYNACEAE, THE DOGBANE FAMILY. Vigorous, colonizing winter-dormant perennial from substantial roots. Stalks to six feet high carry pairs of broad oval leaves similar to showy milkweed, and also imbued with copious and poisonous milky sap. Umbel-like clusters of small starlike whitish flowers open in summer followed by pairs of single-chambered seed pods with numerous hairy seeds carried on the wind. Although related to the milkweeds, Indian hemp lacks the complex gynostegium of that genus. The fibers of the old stems in fall, harvested and the bark peeled away, produce strong strands when twisted together, some of the finest twine used by the Indians and much coveted. Uncommon in the Bay Area, Indian hemp is locally abundant in temporary wetlands, often in partial shade, and isolated stands can be found in Marin and Sonoma counties but the main bulk of the populations is in the foothills and middle elevations of the Sierra like Yosemite Valley where the plant is widespread. Not recommended for most gardens because of its invasive ways. Incidentally, there is a second unrelated Indian hemp in the Bay Area whose fibrous stems were used in a similar way to this one. Its name is *Hoita macrostachya*, a member of the pea family Fabaceae, and found along creeksides in full sun to part shade but not nearly as abundant as *Apocynum*. Look for this second kind on the Mines Road and on Mt. Tamalpais in seeps.

AQUILEGIA FORMOSA. RED COLUMBINE. RANUNCULACEAE, THE BUTTERCUP FAMILY. Herbaceous perennial from a rootstock found along shaded coastal canyons near creeks and climbing into the middle and high elevations of the mountains. Basal triternately (three times compound) pale green leaves and nodding clusters of showy red and yellow flowers attractive to hummingbirds in spring and early summer, each flower with 5 flared red sepals, 5 cup-shaped yellow petals that end in pointed nectar spurs, and numerous dangling stamens. Seed pods ripen lots of black seeds that are easy to germinate. Not common in the East Bay but well distributed in coastal forests. May hybridize with other columbines when growing near them.

ARABIS BLEPHAROPHYLLA. COAST ROCKCRESS. BRASSICACEAE, THE MUSTARD FAMILY. A small short-lived perennial with a tuft of broad, oval basal leaves lined with eye lash-like hairs and carrying racemes of showy, rose-purple mustardlike flowers in early spring. Slender seed pods follow, and the bloom season is short but spectacular. Restricted to coastal bluffs in the Bay Area. Good populations can be seen on the top of San Bruno Mountain and at the tip of the Point Reyes Peninsula.

ARTEMISIA SPP. MUGWORT, SAGEBRUSH, AND OTHERS. ASTERACEAE, THE DAISY OR SUNFLOWER FAMILY. Important genus of rhizomatous, winter-dormant perennials and small shrubs, mostly with highly fragrant, sage-scented foliage, the leaves simple and toothed to highly dissected and green to silvery gray. The tiny wind-pollinated pale yellow flower heads appear in late summer and fall and are relatively inconspicuous. Many have been used medicinally. Often the rhizomatous species are found on banks of water courses while the shrubs are mostly in

drylands such as the high desert, coastal scrub, and the edge of chaparral with one species—*A. pycnocephala* or dune sagewort—on coastal dunes. Most grow well in gardens although some are invasive. Local species include the dune sagewort, California sagebrush (*A. californica*) in coastal scrub and chaparral, and *A. douglasiana* or mugwort, found in many habitats and growing from spreading rhizomes. Other species include the high desert dominant, *A. tridentata* or big sagebrush, amenable to Bay Area gardens and silver wormwood, *A. ludoviciana* another rhizomatous species. Also little known is our native version of tarragon, *A. dracunculus*, common in dry streambeds.

ASARUM CAUDATUM. WILD GINGER. ARISTOLOCHIACEAE, THE BIRTHWORT FAMILY. Creeping evergreen ground cover with large, rounded, dark green, ginger-scented leaves hiding dark maroon flowers with three long tailed sepals (no petals) with an off smell. Pollinated by flies. Forming colonies in moist coastal forests, particularly redwood and other conifer forests, rare in the East Bay but common in Marin County northwards, including the Bear Valley Trail in Pt. Reyes National Seashore. Not drought tolerant. Not related to the true ginger, which is a tropical monocot.

CHLOROGALUM POMERIDIANUM. SOAP PLANT OR AMOLE. AGAVACEAE, THE AGAVE FAMILY. A large summer/fall-dormant bulb surrounded by stiff brown fibers that often protrude from the soil. In winter, rosettes of multiple, wavy bluish green leaves emerge but patience is needed to find the flowers, the large panicles up to 6 feet high develop in midspring, the flowers opening in late afternoon and evening in late spring, each flower lasting one night. Flowers have six slender, slightly recurved white petals and although the late bloom time suggests moth pollination, bumblebees active late in the day are the main pollinators. Great quantities of black seeds later spill from the rounded 3-chambered seed pods, easily growing on their own. Soap plant has many uses, the outer fibers with the glue from the bulb scales producing excellent brushes, the bulb scales forming soap when rubbed in water, and the crushed bulbs used in streams to stupefy and gather fish. As well, long roasting renders the bulbs edible but they must be thoroughly cooked in order to be palatable. Soap plant is arguably our most abundant native bulb, growing by the hundreds in grasslands and woodlands throughout the foothills. It is well represented in Tilden Park.

CLEMATIS LASIANTHA. VIRGIN'S BOWER OR PIPESTEM. RANUNCULACEAE, THE BUTTERCUP FAMILY. A vigorous deciduous woody vine with pairs of pinnately compound, toothed leaflets and dense clusters of cream colored 4-pointed starlike flowers in spring followed by spectacular poufs of seeds with long feathery white styles attached for wind dispersal. Often forms bowers over shrubs like ceanothus and coffee berry, creating beautiful pictures in the spring. Abundant on Mt. Diablo and other dry areas and widespread through California's foothills.

CLINOPODIUM (SATUREJA) DOUGLASII. YERBA BUENA. LAMIACEAE, THE MINT FAMILY. The "good" herb of the Spaniards is an evergreen creeping ground cover growing mostly in dry shade and sometimes near coastal scrub. The oval, scalloped bright green leaves have a lively scent of mint and are excellent steeped in hot water for an herbal tea. Tiny white, two-lipped flowers hide in the axils of the leaves in summer. This plant once gave its name to San Francisco where it was once abundant, it also is common in dry woodlands of the East Bay in the hills near the bay. Easy to grow in gardens.

CYNOGLOSSUM GRANDE. HOUND'S TONGUE. Summer/fall-dormant perennial from a taproot, sending up a basal cluster of tongue-shaped leaves in winter followed by a panicle of blue or blue-purple, forget-me-notlike flowers in early spring, each flower with a white corona around

the stamens and ripening large spreading wart-covered nutlets, easy to grow. Widespread throughout the foothill woodlands and open forests, with good representation on Mt. Diablo and other East Bay locations but seldom available in the nursery trade.

DICENTRA FORMOSA. WESTERN BLEEDING HEART. PAPAVERACEAE, THE POPPY FAMILY. Winter-dormant rhizomatous perennial with pale to blue-green highly dissected leaves and slender stalks bearing several nodding, heart-shaped flowers, colors ranging from near white and pale pink to deep rose purple. Typical of redwood forests but also climbing into middle elevations in the mountains on semiwooded slopes. Can be invasive in the garden with supplemental summer water. Each flower consists of 2 tiny sepals and 4 clasping irregular petals, the seed pods containing many black seeds with an attached oil body (*elaiosome*) carried off by ants.

DUDLEYA SPP. CRASSULACEAE, THE STONECROP FAMILY. Rosetted leaf succulents, the leaves basal and tightly spirally arranged atop a single or branched caudex. Small, vase-shaped to starlike yellow, creamy, white, or red flowers borne in cymes at various times of the year. Many often confusing species, most concentrated in rocky habitats, often near the coast, in Southern California. Prominent Bay Area species include the coastal *D. farinosa* with pale yellow flowers in summer and *D. cymosa* found on rocky outcrops inland with pale yellow to orange-red flowers depending on locale.

EPILOBIUM CANUM AND *SEPTENTRIONALE*. (FORMERLY *ZAUSCHNERIA*). HUMMINGBIRD OR CALIFORNIA FUCHSIAS. ONAGRACEAE, THE EVENING-PRIMROSE FAMILY. Winter-dormant woody-based colonizing perennials with narrow silver-gray to pale green leaves and clusters of showy, trumpet-shaped scarlet flowers in late summer and fall, highly attractive to hummingbirds. (White and pink cultivars are available.) Highly variable in leaf color, length of stems, and growth pattern with many cultivars available. The flowers are followed by slender seed pods that contain numerous hairy, wind-dispersed seeds. Stems need to be cut to the ground in winter to allow healthy new growth in spring. Easy to grow in most well lighted situations. The main species, *E. canum*, is widespread on rocky slopes on the edge of woodlands and chaparral throughout the foothills, one variety wandering up to the granite rocks of the higher Sierra. By contrast, *E. septentrionale*, is restricted to rocky outcrops near forests in the northern coastal counties of California where its stems spread close to the ground providing a colorful and more compact looking presentation in gardens. The common species is plentiful in the Bay Area including parts of Tilden Park and Mt. Diablo.

ERIGERON GLAUCUS. SEASIDE DAISY. ASTERACEAE, THE DAISY OR SUNFLOWER FAMILY. Woody-based mounding perennial with broadly spatula-shaped pale green leaves and clusters of large, showy purple and yellow or pink and yellow daisies from late spring through summer. Each flower head has numerous narrow rays around a large cluster of tiny yellow disc flowers. Hair-tipped seeds are easy to grow as are semiwoody cuttings. Restricted in the wild to coastal prairies, bluffs, and dunes and abundant in Pt. Reyes National Seashore. Some cultivars available from native nurseries.

ERYSIMUM SPP. WALLFLOWERS. BRASSICACEAE, THE MUSTARD FAMILY. Mostly biennials making a leaf rosette atop a taproot the first year, then blooming the second year, setting seed, and dying. The leaves are typically narrow and subtly toothed, and the showy flowers are in tight racemes and are fragrant. Each flower has 4 crosslike petals, 4 sepals, 6 stamens of 2 lengths (typical traits of the mustard family Brassicaceae), and slender seed pods with abundant small rounded seeds that germinate readily. Flowers may be orange, bright yellow, or cream color. Our two most prominent species are *E. concinnum* from coastal bluffs in Marin County

with cream colored flowers, blooming early in the Sea Bluff Section; and *E. capitatum angustatum*, a rare variety from the Antioch Dunes with bright yellow flowers along the lower edge of the Foothill Section.

ERYTHRONIUM SPP. FAWN-LILIES OR GLACIER-LILIES. LILIACEAE, THE LILY FAMILY. Spring-flowering bulbs with pairs or triplets of tongue-shaped, sometimes mottled leaves and single stems with one to several showy nodding lilylike flowers of great beauty. Two prolific species at the Garden are *E. revolutum* with mottled leaves and pink flowers, and *E. multiscapoideum* with mottled leaves and white flowers with a yellow center. Fawn-lilies are nearly absent from the Bay Area but can be found on serpentine soils in the north Coast Ranges into Oregon and Washington, the higher elevation species not as often cultivated with solid green leaves and yellow or white, yellow-centered flowers that often fade purple.

ESCHSCHOLZIA CALIFORNICA. CALIFORNIA POPPY. PAPAVERACEAE, THE POPPY FAMILY. (Mostly) taprooted annuals with basal clusters of highly dissected blue to pale green leaves and stalks bearing single showy large satiny orange flowers, each flower with two sepals that form a cap that drops off, 4 separate petals, and numerous stamens providing pollen for visiting bees. Slender ribbed seed pods follow, explosively discharging the seeds, the seeds growing readily without any special care. Besides the medicinal use of the roots, reports have suggested cooking the leaves although that use seems dubious. Our state flower is very abundant on grassy prairies and foothills throughout most of California except the deserts (where other species of *Eschscholzia* occur), the flowers forming such massive displays that they can be seen from miles away in a pluvial year. Both the hills around Gorman on the I-5 Grapevine and the Poppy Preserve just west of Lancaster are premium spots to view amazing displays. California poppy is native to Tilden Park and most other parts of the Bay Area blooming from early spring into summer.

GRINDELIA SPP. GUMPLANTS. ASTERACEAE, THE DAISY OR SUNFLOWER FAMILY. Mostly upright woody based perennials (one variety is a prostrate ground cover) with broadly spatula-shaped dark to bright green, toothed leaves and clusters of large showy yellow daisies, the buds covered with a white, sticky gum. Blooms mostly in late spring and summer, sometimes into fall, and attractive to bees and butterflies. Each flower head has many disc flowers surrounded by many showy ray flowers. Easy to propagate from cuttings and drought tolerant. Common in dry areas on the edge of roadsides, woodlands, and chaparral throughout the East Bay but the prostrate *G. stricta platyphylla* is endemic to coastal dunes in places like Pt. Reyes.

HERACLEUM MAXIMUM. COW PARSNIP. APIACEAE, THE PARSLEY FAMILY. A stout summer/fall-dormant perennial from a large taproot, growing at a phenomenal rate in spring with many large, oddly scented, hairy, deeply lobed leaves, the bases often inflated and on the upper leaves surrounding huge umbels of flowers while still in bud. The white flowers are larger on the outside of the umbels, bloom in mid to late spring, and are followed by winged seeds dispersed on the wind. Easy to grow and propagate from seed. Very common in coastal habitats as well as protected canyons inland, also appearing in middle elevation forests in the mountains. Widespread in the Bay Area.

HEUCHERA SPP. ALUMROOTS. SAXIFRAGACEAE, THE SAXIFRAGE FAMILY. Perennials from subwoody rootstocks and basal clusters of round, scalloped leaves and airy panicles of tiny white or pink nodding bell-shaped flowers in mid to late spring. Many cultivars available, often hybrids between species. Both *H. micrantha*, the local species on rocky banks in foothill woodlands and *H. maxima* from the Channel Island woodlands are featured in the Garden, the latter with bigger leaves and larger flowers. Both do well in dry shade with minimal maintenance,

sometimes partially dying back at the end of the dry season but retaining leaves with summer water. *H. micrantha* can be found in Tilden Park and Huckleberry Preserve.

IRIS SPP. AND CULTIVARS. WILD IRISES OR PACIFIC COAST IRISES. IRIDACEAE, THE IRIS FAMILY. Among the most popular rhizomatous perennials for their beautiful flowers and availability, the most common of the lot is the Douglas iris, *Iris douglasiana*, often hybridized with other species and offered as Pacific Coast cultivars in a wide variety of colors. Evergreen sword-shaped, equitant leaves and small clusters of showy flowers with 3 colorful drooping sepals alternating with 3 colorful narrow upright petals, 3 stamens, and three style branches that resemble an internal set of petals. Most bloom in spring. Straight doug iris can have white, pale yellow, blue, or purple flowers in many shades and is common mostly on the west side of the Bay, being abundant on Mt. Tam and Pt. Reyes National Seashore. Other species in the area include the ground or long-tube iris, *I. macrosiphon*, in the north bay, and in mixed-evergreen forests in the lower mountains *I. fernaldii* and *I. purdyi*, both often with pale yellow flowers. Also the gorgeous coast irisi, *I. longipetala* with pale blue flowers is found on heavy soils in the west bay in selected locales such as Montara Mountain.

LEPTOSYNE (COREOPSIS) GIGANTEA. GIANT OR TREE COREOPSIS. ASTERACEAE, THE DAISY OR SUNFLOWER FAMILY. Fast-growing perennial featuring a stout somewhat succulent trunk to 6 feet high with a large mop of bright green fernlike leaves that are shed in summer and fall. Circles of large showy yellow daisies appear in early to midspring followed by large easy-to-grow seeds. Plants require a summer dormancy without water and can rot off when overwatered. They also need mild winters as their homeland, the southern California coast and Channel Islands experience mild nearly frost-free winters. Unique in their genus; other species don't form a true trunk, and in California, most others are annual.

LINANTHUS (LEPTODACTYLON) CALIFORNICUS. PRICKLY PHLOX. POLEMONIACEAE, THE PHLOX FAMILY. A small bushy woody perennial or shrub from rocky hills in coastal Southern California, blooming most of the year but with the best flower production in spring. Stems are covered with pairs of digitately divided, fingerlike leaflets with sharp spiny tips. Clusters of showy bright pink or rose-purple pinwheel-shaped flowers are displayed at branch tips.

LUPINUS ALBIFRONS. FABACEAE, THE PEA FAMILY. Silver-leaf bush lupine. Fast-growing semideciduous (often in summer) palmately compound, hairy gray leaves and striking spikes of blue-purple, fragrant pealike flowers in midspring, followed by peapod-like legumes with large seeds ejected by the pods twisting when ripe. Strong draw to bees and other pollinators. Short lived in gardens requiring well-drained soils and little summer water. Widespread on rocky slopes on the edge of woodlands and chaparral throughout the foothills and native to Tilden Park and Mt. Diablo as well as Mt. Tamalpais and many other parts of the Bay Area.

LYSICHITON AMERICANUM. SKUNK-CABBAGE. ARACEAE, THE ARUM FAMILY. Giant, winter-dormant perennial from fleshy roots with broad, oval skunk-scented leaves to a few feet long and yellow "flowers" in early spring, each flower in reality a bright yellow spathe bract wrapped part way around a narrow spike of tiny petal-less flowers, the whole spike falling over in fruit and planting the seeds. The odor is seldom strong enough to be offensive. Skunk-cabbage often grows with giant chain fern and other bog-loving plants. One local population (but absent from the East Bay) is Butano State Park near Pescadero in San Mateo County.

MAIANTHEMUM SPP. FALSE SOLOMON'S SEALS. RUSCACEAE, THE BUTCHER BROOM FAMILY. Rhizomatous winter-dormant perennials with single stems lined with ovate leaves and ending in a dense panicle or raceme of tiny white starlike flowers in spring followed by purple

berries (not edible to humans). Abundant in coastal mixed-evergreen and conifer forests, the two common species also climb into moist edges of meadows in the mountains. *M. stellatum*, starry false solomon's seal, travels widely to form large patches in shade and can be found in several local East Bay forests, while *M. racemosum*, fat false solomon's seal, forms dense clumps, has branched inflorescences of fragrant flowers, and is sporadic in moist woodlands and forests, more often near the coast. Both are common throughout Marin County and easy to grow in gardens but *M. stellatum* spreads rather aggressively.

MIMULUS SPP. ANNUAL MONKEYFLOWERS. PHYRMACEAE. Most are diminutive, reaching only a few inches high and readily reseeding year after year. Our new bulb bed has excellent displays of several miniature species, whose two-lipped flowers may be dull red and white (*M. pictus*) or rose purple (several others).

MONARDELLA VILLOSA. COMMON COYOTE-MINT. LAMIACEAE, THE MINT FAMILY. Low-growing mounded woody-based perennial with pairs of oval, highly fragrant, pale green often hairy leaves and in summer and fall, large pincushion-like heads of tubular blue to purple nectar-rich flowers heavily visited by bumblebees and butterflies. May partially die back in cold winters, can be heavily sheared to encourage new growth and denser structure. Perfect to grow on well-drained soils with minimal summer water in combination with buckwheats and small daisies. (Other species also sometimes found but this one is the common one in the wild as well as in nurseries.) Look for it in dry areas near chaparral on Mt. Diablo and near Wild Cat Peak.

MUHLENBERGIA RIGENS. DEER OR BASKET GRASS. POACEAE, THE GRASS FAMILY. A large winter-dormant perennial bunchgrass favoring open woodlands and banks near streams mostly in the Sierra foothills and mountains from central California south but not in the Bay Area. Large graceful mounds of narrow pale green leaves to 3 feet high and very narrow spikes of petal-less wind-pollinated flowers in summer. Widely used in native landscapes and drought tolerant. Should be cut back every year. Easy to grow from divisions.

PETASITES FRIGIDUS PALMATUS. WESTERN COLTSFOOT. ASTERACEAE, THE DAISY OR SUNFLOWER FAMILY. Vigorously rhizomatous summer/fall-dormant perennial growing on streambanks in moist forests, sending up stalks with clusters of white to pale pink flower heads in late winter followed by large, round, deeply palmately lobed leaves dull green on top and silvery underneath. Needs summer water. Occasional in the East Bay but common in the more coastal forests as at Pt. Reyes National Seashore northwards (also in the Santa Cruz and Santa Lucia Mountains).

SCOLIOPUS BIGELOVII. FOETID ADDER'S TONGUE OR SLINK PODS. LILIACEAE, THE LILY FAMILY. Fleshy-rooted perennial with pairs of broadly tongue-shaped leaves with several parallel furrows and mottled with dark purple spots. A handful of strange dark maroon flowers rise on slender stalks in January and February, the flowers with 3 broad striped sepals and 3 narrow petals and carrying an acrid scent attractive to beetles. Seed pods are carried on slinking stalks where seeds are deposited close to the earth, ready to be carried away to ant nests where the oil body is nibbled off and the seed planted. Typical of redwood forests west of the Bay and northwards; abundant in several parts of Marin County but not in the East Bay.

TRILLIUM SPP. TRILLIUMS OR WAKE-ROBIN. MELANTHIACEAE. Perennials from a deep-seated tuber sending up a single stalk a few inches high with 3 broadly ovate leaves, the veins forming a network atypical of most monocots. The leaves in some are blotched with dark purple. A single showy flower sits in the center of the leaves or is raised on a short stalk above the leaves, each flower with three colorful petals, three green sepals, and a six-angled ovary that

produces seeds with an attached oil body for ant dispersal. Plants die back in late summer. Two species in the Bay Area—*T. chloropetalum*, giant trillium, has a single sessile red, pink, white, or yellow-green flower and is typical of moist mixed-evergreen forests; *T. ovatum*, wake-robin, has a single flower raised on a stalk opening white and fading deep rose purple, typical of redwood and other coastal coniferous forests. Both species occur sparingly in the East Bay. Montara Mountain near Pacifica is a good place to see both species in early spring.

VANCOUVERIA HEXANDRA. REDWOOD IVY OR INSIDE-OUT FLOWER. BERBERIDACEAE, THE BARBERRY FAMILY. Colonizing rhizomatous winter-dormant perennial with bipinnately compound leaves, the leaflets reminiscent of maidenhair ferns, and open panicles of tiny nodding white flowers, the petals swept backwards or “turned inside out.” Native to mixed-evergreen and coastal conifer forests from the Bay Area north, not found in the East Bay but typical in Samuel Taylor State Park and other parts of Marin County.

VERATRUM FIMBRIATUM. FRINGED CORN-LILY. MELANTHIACEAE. This stout winter-dormant perennial is easily identified by its large, ovate, strongly pleated leaves. In late summer a panicle arises above the leaves, eventually opening flowers in late September and October, each flower a six-pointed white star with yellow center, the petals strongly fringed. Three-chambered seed pods follow before the stems flop over and go dormant to large fleshy roots. All parts of these plants and others in the genus are strongly toxic so care should be used when planting in gardens with pets and children. Rare and confined to swampy coastal conifer forest areas, fringed corn-lily occurs only in northern Sonoma and Mendocino counties. Salt Point State Park is an excellent place to seek it, within just a couple hours drive from the main Bay Area. Curiously, this species has proven easy to grow in the Garden whereas other species including the common mountain *V. californicum* have proven difficult.

WOODWARDIA FIMBRIATA. GIANT CHAIN FERN. BLECHNACEAE, THE BLECHNUM FERN FAMILY. A (sometimes) winter-dormant giant fern found by seeps and streamsides in moist shade throughout the foothills and middle elevation forests of California. Coarsely almost twice-divided bright green fronds to 6 or more feet tall displaying chainlike “stitching” of the sori from the underside of the frond on top, each sorus long and narrow and shaped like a worm (unique for California ferns). Reproduces by spores. Local populations new Jewel Lake in Tilden Park and Huckleberry Preserve.