

**Plants
for a
Thirsty State**

by
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Introduction

As we approach the close of a fourth critically dry season in California, it is time for those of us who love to garden to take stock of where we've been, and where we're going. It is probably safe to say that the days of extravagant water use are over, except perhaps in the wettest years. But a constructive challenge remains: How to continue to provide beauty and diversity in the garden with a more limited water budget. You may wonder whether there is really a good variety of water-conserving plants to choose from, in terms of forms, textures and colors, and whether they can be grown by ordinary mortals. This booklet is devoted to answering these questions with an emphatic "Yes".

"Drought Tolerance" and the Real World

Few phrases have been so much used and abused concerning garden plants in the past four years as "drought tolerant". The concept is well-intentioned, but it means radically different things to different people, including professional horticulturists. It can cover desert plants, like the agaves, that can thrive for months or years with no water beyond meager winter rains. It is more often applied to plants that will live, sometimes thrive, with natural winter rainfall in more temperate regions and irrigation every few weeks in the summer. And sometimes it is altogether misapplied, to plants that simply don't consume as much water as others for growth and maintenance, though they should never go dry.

You will see only a few uses of "drought tolerant" in the descriptions included in this booklet, and many like "moderate to occasional watering", that state a range of plant tolerances. This still leaves ample room for confusion, so let us try to explain our terms a bit.

What It All Means

Interpreting instructions like "occasional watering" can be maddening for anyone who is new to gardening. The key to its understanding is that it's all relative, and that the actual regimen needs to be worked out over time by observing garden plants. Watering needs are related to stress factors in the environment itself. Frequent summer fog near the coast reduces loss of water from plant leaves, and both low humidity and high heat in interior valleys dramatically increase it. However, heavy (denser and higher-clay) soils in those same valleys can also retain water longer between irrigations, while sandy soils lose it faster. Short of actual wilting, plants show drought stress through slower growth and, in extreme cases, premature yellowing and loss of older leaves and finally shriveling of new shoot tips. Large excesses of water promote fungus pathogens that actually kill plant roots. This is often reflected in a yellowing of most or all foliage and, as plants near death, wilting of the leaves without actually drying.

Where a range of treatment is shown, as (quite often in the descriptions below) "moderate to occasional watering", what is implied is simply a broad range of tolerances. Often, when a little more water is available, plants will look better, grow more strongly and flower more heavily over a longer season; however, the minimum shown will keep them in healthy condition and not create too much stress. There are also (usually) major differences between the irrigation requirements of established trees and shrubs (less frequent) and more shallowly rooted perennials (more frequent).

"Moderate watering", for the coastal gardener, might mean a careful, deep irrigation every ten days to two weeks during the summer and fall, until natural rains begin, and at least monthly irrigations in the same manner during long midwinter and spring droughts. For the interior gardener, it might mean weekly irrigations during mild periods, and watering twice a week during heat waves. "Occasional-watering" might mean once every three to four weeks for the coastal gardener as applied to flowering perennials, even less during long foggy periods, or for well-established trees and shrubs. Central Valley gardeners should interpret it as meaning once every two or three weeks for the perennials, and every three to four weeks for trees and shrubs. The level of underground water tables will also impact irrigation requirements for deeper-rooted plants in all regions. Finally, where you see the occasional reference to "little watering" or "drought tolerant", applied both to true dryland plants and summer-dormant perennials and bulbs, deep watering once or twice in a summer should suit their needs, especially if the ground is dressed with a mulch of some kind (this both reduces soils temperatures by shading and retards evaporation).

A critical element in all of these estimates is *how* plants are watered. Whether by slow soaking by low-volume

watering heads or by the filling of summer basins (which are knocked down in winter to minimize flooding of roots), plants should be watered deeply enough to reach most of the root system with each irrigation. If you have doubts, dig beside a sample plant an hour or two after watering, and check the depth of soil moisture. Deep watering encourages roots to reach lower soil zones that are more likely to hold and retain water. Finally, almost any plant from a nursery container will require more frequent watering during its first (sometimes even second) summer than in succeeding years. One tried and proven way to speed root development and minimize the establishment period is to plant in fall, when normal rains (usually) begin.

Exposure

Many of the plants described here actually need full sun at least part of each day for strong growth and flowering. In other cases, their needs will depend on where you garden. A common line in the descriptions that follow is something like, "Sun or light shade near the coast, part shade inland". This reflects the fact that generally cooler air and soil temperatures near the coast reduce plant stress, including the loss of water and actual burning of leaves. On the other hand, the only way to maintain some plants (for example, high mountain natives) in consistently hot-summer areas is to shade them a bit during the heat of the afternoon—for example, by planting them under trees.

Soils

Those of us who live near the coast may naturally enjoy what are described as "well-drained soils". We often live on ancient dunes and coastal terraces where any organic matter is well mixed with sand or gravel, and water percolates well down through the network of plant roots, leaving both moisture and a good bit of air behind (plant roots breathe, too). People who live in valley bottoms and the flood plains of present or former rivers may have much denser soils, with high clay content that impedes both air circulation and the drainage of water through the root zone. In this case, where "well-drained soils" are recommended, one may have to take one or several measures to improve drainage: Build raised mounds or berms on which to plant; add bark or other organic amendments to open larger spaces between soil particles; possibly add coarse sand and gravel to the resulting mix for the touchiest plants (often those from mountain slopes).

The soil portion of each description that follows will at least give you a starting point, and your own eyes, digging arms and observation of what happens when you water should provide the rest.

Hardiness

There are many ways to state an estimate of winter hardiness for a given plant: USDA zones, now used around the world, and the much more elaborate *Sunset* zones, that account for both winter cold and summer heat and humidity, are a couple. We have chosen to use conservative estimates of the lowest temperature, in degrees Fahrenheit, that a plant will endure for short bouts in the winter and fully recover from in spring. That said, there are some cautions that we have experienced in the most painful way at the nursery: Especially near the coast, mild temperatures may continue late into the fall (sometimes even early December), encouraging plants to continue soft, summer-like growth. Then comes a sudden winter blast, with temperatures falling within a few days into the 20s or even the teens. Even the hardiest plants (for example deciduous shrubs from northern climates) may be heavily damaged under this scenario. On the other hand, a more gradual descent in night temperatures encourages even tender plants to bring growth to a halt, develop sturdier tissues, and be better prepared for the ultimate winter freeze.

We hope that you'll enjoy using the plant guide that follows, and find it valuable both in selecting plants for your "unthirsty" garden and in keeping them beautiful.

Plants for a Thirsty State

ABUTILON palmeri. Indian mallow. Indian mallow hails from our southern deserts. It is quite distinct from the hybrid abutilons, growing about 3 feet high and broad. Both the stems and large three lobed leaves are densely covered with white wool, giving it a striking, almost ghostly appearance. From mid spring to late fall, in mild climates, it produces a continual succession of golden yellow to bright orange (not the usual tawny shades) flowers, each about 1.5 inches broad, on wand-like stalks. This is an interesting novelty shrub for gardens in mild climates. It is best planted in well-drained soil, in a sunny spot. Occasional watering. Hardy to 20-25 degrees F.

ACACIA. Wattle. Widespread. A vast genus of trees and shrubs from many habitats, often with attractive divided leaves. Flowers are tiny but often borne in dense clusters. Flower color is usually bright to pale yellow. Our sparse offering for this genus is a sad testament to the problems caused by a few seriously invasive species like *A. decurrens* and *A. melanoxylon*. The following are well-behaved. Sun, most soils, hardiness variable.

cognata. River wattle. Australia. River wattle can be grown as a shrub or small tree and can reach 20 feet in height. Narrow leaves on gracefully drooping branches create a weeping effect. Typical yellow fluffy flowers appear in spring along the branches. '**Cousin Itt**' (PP#25133) is a low-growing (2-3 feet high x 4-5 feet wide) selection with arching branches and narrow light green leaves. These are useful for display alone or in shrubby borders. Hardy to about 20 degrees F.

pravissima is a shrub or small tree, popular in Australia, which has yielded some interesting forms. '**Golden Carpet**' is one of the most unusual. It forms a broad mound overall, up to 4 feet high and 8-15 feet broad. More interesting is that each stem arches out and down, following a sinuous path. Older stems show attractive pale bark. Closely set along the younger stems are triangular grey-green phyllodes (leaf-like stems), up to an inch long. In early spring sprays of small ball-like flower heads, brilliant yellow in color, issue from the shoot tips. This is a striking shrub for display on a raised mound or other conspicuous spot, also useful for large scale ground cover. Hardy to 15-20 degrees F.

ACANTHUS. Bear's breech. Mostly Mediterranean region and Asia Minor. Odd giant perennials, valued particularly for their large, often intricately lobed and sharp-toothed basal leaves. They form dense clumps, from which spikes of hooded, often bicolored flowers emerge in summer. Their typical use is in open borders or along paths and walkways. Avoid using them where space is limited or must be shared with smaller, more delicate plants, which they will simply overwhelm. They make wonderful snail food. Otherwise they are long-lived and nearly indestructible. Sun or light shade (they look their best with afternoon shading in the hotter interior), most soils, moderate to occasional watering. The following are hardy to around 0 degrees F.

mollis. Bear's breech. This is the one species well known to gardeners. The basal leaves are up to 2 feet long and quite broad, with deep, sharply toothed lobes. They are thick and leathery, with a shiny deep green upper surface. The flower spikes may rise as much as 6 feet, carrying dozens of white to pink flowers with reddish purple "hoods". '**Albus**' is a form with especially deep green leaves and pure white flowers.

spinosus. Bear's breech. This species has very large (often 3 feet long) dark green leaves with intimidating spines along the margins. In reality, this is mostly a good bluff. Though prickly, they lack the penetrating power of typical rose and barberry thorns. The flowers are white, in this case with dark purplish hoods, and borne on 3 foot stalks.

ACHILLEA. Yarrow. Europe, Asia, N. America. Rugged perennial daisies, with finely cut, often aromatic leaves and dense flat-topped flower clusters. Ours are mostly spring and summer blooming. These are nearly essential plants for perennial borders and mixed plantings. Full sun, well-drained soil, moderate to little watering when established. Most are hardy to 0 degrees F. and below.

filipendulina 'Coronation Gold'. Fernleaf yarrow. Russia and the Caucasus. This is an old favorite whose pale green foliage is stiffer and heavier in texture than that of many yarrows. Stiffly erect stems to 3 feet carry flat heads of yellow flowers in late spring. The flowers are useful for bouquets and dried arrangements.

millefolium. As it is now conceived, this is the most cosmopolitan of all yarrows, circling the Northern Hemisphere. It makes a dense mat of finely dissected leaves, deep to pale grey-green in color. The flower clusters are broad and well elevated above the foliage. Normal flower color ranges from pure white to what might be described as "dirty cream", though pink variants are occasionally seen in the wild. Hybrids with other species have greatly extended the color. We offer several strains and selections from the California wilds, as well as a number of non-native cultivars.

Of the natives, '**Pink Island Form**' from the Santa Barbara Botanic Garden will be the most familiar. It forms broad mats of dark green leaves, with flat clusters of rich pink blossoms rising continually on 2 foot stems. Our **Black Butte Strain**, selected in the Yolla Bolly Mountains, is a floriferous group with grey-green foliage and pure white flowers in generous heads. **Palisades Strain** is of high Sierran origin. The plants are generally under 1 foot in height, with smaller heads of pure white flowers. Recent selections from other growers are '**Calistoga**', with broad, dense mats of exceptionally grey leaves, and '**Sonoma Coast**', with beautiful dark green foliage. Both have snow-white flowers.

Among non-native cultivars, '**Fireland**' is distinguished by pale green leaves and orange red flowers, fading cream. '**La Luna**', selected recently at Suncrest, has large heads of beautiful soft yellow flowers.

'**Red Beauty**' is one of the smaller cultivars with attractive dark green, fernlike leaves. Its 18 inch stems carry crimson flower heads throughout the summer months. And '**Rosa Maria**' is another Suncrest selection, with sturdy growth, deep blue-green leaves, and flat clusters of deep rose flowers on 12 to 18 inch stems.

hybrids. This is a diverse group, combining *A. millefolium* with other species for plant vigor, long flowering season and a wealth of flower colors. The plants most resemble *A. millefolium* vegetatively, making thick mats with pale to dark green, dissected leaves. Flowering stems are mostly around 2 feet tall, and freely produced in the warmer months. The flowering heads are quite large, ranging in color from garish scarlets and oranges to soft pink and buff shades.

'**Appleblossom**' has broad, notably dense heads of dark pink flowers, aging white for an interesting bicolor effect.

'**Crackadoo**' has flat heads of soft orange flowers that age to a tawny golden hue. '**Credo**' has greener leaves and lemon yellow flowers. '**Heidi**' sports huge clusters of deep pink blossoms fading to pale pink. '**Moonshine**', now one of the most popular selections, offers bright grey-green foliage and brilliant yellow flowers. '**Paprika**' has flowers of rich burnt-orange. The flowers of '**Salmon Beauty**' are colored pale salmon, fading creamy yellow. And '**Sunbeam**' is an exceptionally tall (to 3 feet) selection with bright yellow flower heads.

x kellereri is a neat perennial making dense hummocks, up to perhaps 1 foot broad, with narrow, finely divided grey leaves. Clusters of unusually large, pure white flower heads are carried well above the foliage on 8-10 inch stems.

tomentosa. Dwarf Yarrow. Mediterranean region. This species produces dense green mats, the flowers carried just above the foliage. Its smaller forms are sufficiently well-behaved for the rock garden. '**Maynard's Gold**', also known as *A. t.* 'Aurea', is the most robust of the cultivars we have grown, making a broad, slightly greyish green mat with flower stems up to 6 inches high. The flower heads are unusually broad and colored a vibrant yellow. '**King George**' is a smaller plant with greyer leaves and creamy yellow flowers. They may be used in the rock garden.

ADENANTHOS. Woollybush. Australia. Interesting shrubs and small trees of the protea family, much resembling the related grevilleas. The leaves are highly variable, though usually hairy. Their odd tubular blossoms, sometimes resembling those of *Anigozanthos*, can be quite showy. They are useful on banks, in mixed plantings and in shrubby borders. Sun, well-drained soil, occasional deep watering when established. The following should be hardy to 20-25 degrees F.

cuneatus '**Coral Drift**'. Introduced by the UCSC/Koala Blooms program, 'Coral Drift' is a low, spreading shrub with limber stems and furry, wedge-shaped leaves, tinted with coral in new growth and becoming silver-grey as they expand. Small red flowers nestle among the leaves in fall and winter.

sericea. This sturdy, well-branched shrub can grow to 6-10 feet high. It has dissected, strikingly silky leaves and bright red tubular blossoms, produced most heavily in fall and winter. A soft and pleasing mound for use wherever winters are not too severe.

AEONIUM arboreum 'Purpureum'. This statuesque succulent shrub from the Canary Islands displays large rounded red-purple rosettes on sturdy stems that reach 3 feet. Thick spikes of yellow flowers can appear in spring. It is striking in the garden in mild climates, and often grown in a container in colder areas. Best leaf color in full sun, well-drained soil, occasional watering. Hardy to 25-30 degrees F.

AESCULUS californica. California buckeye. California buckeye provides bold texture to any planting large enough to accommodate it. When situated in watered gardens, the large lush hand-shaped leaves will persist until fall. In dry gardens, leaves drop by midsummer. Robust stems provide a nice framework when bare. White to pinkish white spikes of flowers are carried on stem tips in spring, large shiny deep brown ball-like seeds drop in fall and winter. Best in full sun, though it tolerates part shade. Moderate to little summer watering, hardy to 10 degrees F. or less.

AGAVE. Agave, century plant. The Americas. Perennials with showy basal rosettes of large, thick leaves, each ending in a sharp (sometimes viciously so) spine and often lined by marginal teeth. Each rosette grows for several years, then produces a tall, thick, often branched stem bearing many green to yellow or brown, tubular flowers, after which the rosette dies. Many species form a continual succession of rosettes, insuring their own future. Some species are spectacular subjects for large containers, delighting in sun, reasonably well-drained soil, and occasional watering. Their hardiness varies as shown.

colimana. Tough greyish green 2 foot rosettes have white edges. Flower stems can reach 10 feet and carry pale yellow flowers. Reported to occur quite close to the sea in Colima, Mexico and tolerate some salt spray. Hardy to around 20 degrees F.

gracilipes. This species forms dense, tough colonies of 1-2 foot grey-green, tooth-edged rosettes. It is one of the hardiest of the group, enduring bouts of 0 degrees F.

parryi. Traditionally used as a source of mescal, Parry's agave is native to a wide range of elevations in the Southwest United States and Mexico. It is one of the cold hardiest of the agaves. Rosettes of glaucous grey leaves reach up to 2

feet tall, and leaves are well armored with a shiny brown spine at the tip as well as small spines on the margins. Robust flower stems, when they appear, can reach 10-20 feet tall and carry umbels of yellow flowers. Rosettes can be solitary or produce offsets.

vilmoriniana. Large low fleshy blue-green rosettes have relatively narrow leaves that twist as they develop. Leaves do not have the typical spine common to most agaves, though leaf edges can be sharp. Flower stems to 10 feet produce light yellow flowers; the original plant dies after flowering, but many plantlets are produced along the flowering stem. Hardy to around 20 degrees F.

AGROPYRON smithii. Western wheatgrass. A colonizing cool season grass from the southwest and intermountain west of the U.S., useful for erosion control and meadow plantings. Rhizomes are wide spreading and erect culms are a pleasing blue-green in color. This grass will form a continuous dense colony about 2-3 feet high, useful in meadows and on banks. It will tolerate drought though it looks better with moderate watering. Sun, most soils including clay soils, moderate to occasional watering, hardy to 0 degrees F. or less.

ALLIUM. Widespread, Northern Hemisphere. In addition to such food plants as the onion, garlic and chives, the alliums include many fine ornamental bulbs for border, rock garden and container culture. A few are evergreen; most are deciduous at some time of the year. Most have narrowly strap shaped to cylindrical basal leaves during the growing season, and all display small 6-parted blossoms in umbrella-like clusters (sometimes contracted into spherical heads atop naked flowering stalks). They are attractive in containers and in naturalistic meadows. Sun, reasonably well-drained soil, moderate watering. The following should be hardy to 10 degrees F. or less.

taquetii. Japan. This tidy onion makes tight clumps of small, cylindrical bulbs, with very narrow, deep green 8-12 inch leaves. The flower stems rise just above the leaves in summer to display clusters of nodding, purplish red flowers.

unifolium. California. This is certainly one of the showiest and most easily grown of our native bulbs, quickly forming many-stemmed colonies. It has narrow, flattened 6-12 inch leaves and large clusters of pink blossoms on 1-2 foot stems, appearing in late spring. Summer dormant and markedly drought tolerant.

ALOE. South Africa to Yemen and Madagascar. This is a huge genus of dramatic trees, shrubs and more or less herbaceous perennials of the lily family (or its own family, in the eyes of some botanists). They are much better known and grown in southern California than here. Whatever their form overall, they have distinctive crowns of tapered, usually rather narrow, succulent leaves with mostly toothed margins. From the axils of the leaves rise branched or simple stalks bearing clusters of tubular, six-parted and often highly colored flowers. Flower colors range from deep red through orange and pink to bright or pale yellow. Depending on size, these are useful on banks, in borders and in mixed succulent plantings. Most delight in a sunny exposure and at least reasonably well-drained soil. Hardiness varies.

arborescens. Torch aloe. This is one of the classic aloes seen in older gardens. It is a large mounding, succulent shrub with toothed, narrow green leaves that curve downward. Spikes of bright orange red flowers attract hummingbirds and are showy in fall and winter. This plant has been widely used in its native South Africa as a living fence. It is limited in northern California by tenderness to temperatures below the mid 20's F.

cooperi. Grass aloe is low and clumping, with succulent white-spotted leaves. 18 inch spikes of fat coral flowers appear in midsummer. From the summer rainfall part of South Africa, this aloe can die to the ground in winter with hard frost, but will reappear in spring. Part shade is best in hot climates.

fosteri. Large spotted aloe. This species forms sturdy rosettes to 24 inches high. The green leaves are spotted and streaked with cream and darker markings. Branched flower stems to 5 feet carry bright orange to yellow flowers well above the foliage in late summer and fall.

humilis. Spider aloe. Spider aloe makes very tight clumps of narrow, bumpy grey-green 6 inch leaves. Spikes of bright orange flowers rise over the leaves in spring.

'Johnson's Hybrid'. Most of the popular aloes are large and dramatic. This one is of a quite different mold, making low mats with short stems and tapered bright green 6-8 inch leaves. It flowers almost continuously, producing a succession of 8-12 inch stems tipped by thick clusters of $\frac{3}{4}$ inch blossoms. The flowers have bright orange tubes and pale yellow inner petals, marked with green at the tips. This is an unusual and colorful ground cover for mild areas. We have yet to probe its ultimate hardiness, though it has thus far taken below 20 degrees F. with little or no damage.

reitzii. A robust plant with rosettes to more than 2 feet high. The thick leaves are grey-green, 4 inches wide and tapering to a point. A series of sharp chestnut teeth guard the leaf edges. Summer flowering brings a 3-4 foot flower stem, which is covered for the topmost 20 inches by densely packed, pendant very shiny bright orange flowers.

AMARYGIA hybrids. Naked lady. The "naked lady", *Amaryllis belladonna*, is one of the most beloved of old-time garden plants, and still can often be seen marking abandoned homesteads. It has been hybridized with other members of the family, in this case *Brunsvigia* species, to produce hybrids which not only amplify its best features but considerably extend its color range. These have the large (to 6 inches or more), parchment-covered bulbs of the original belladonnas and similar, though generally even longer, strap-shaped leaves, extending to 2 feet or more in spring. They die down by

early summer, and the bulbs sit quietly biding their time until September and October, when they thrust up heavy, succulent 2 foot stalks. At their tips, enclosed by a pair of bracts, are buds which rapidly expand into umbrella-like clusters of trumpet-shaped, broad-petalled blossoms. The individual flowers are 3-5 inches broad, intensely fragrant and variously colored. There are pure whites, delicate pinks and near-reds, often with contrasting white centers. These are indestructible bulbs with a life span possibly exceeding our own. They thrive in full sun and most soils, with little or no irrigation during their summer dormancy. Hardy to 15 degrees F. or less.

ANDROPOGON ternarius. Splitbeard bluestem. An Eastern U.S. bunchgrass that grows in the warm season and forms erect clumps with blue grey stems. Silver summer flowers are feathery and persist into winter after they dry. Fall coloring can add interest, with purple and red tones. This grass is an attractive addition to meadows and borders. Sun to part shade, most soils, moderate to occasional watering. Hardy to 0 degrees F. or less.

ANIGOZANTHOS. Kangaroo paw. These Australian perennials are unusual at the least; bizarre might describe them better. They form dense clumps of iris-like leaves. Branched stems, often clothed with colored hairs, rise above the leaves at various times (some selections bloom continuously), bearing fuzzy flowers colored nearly black to chartreuse, yellow and red. Each flower is fused into a tube, deeply slit along the lower surface and spread fanlike near the tip, giving it the silhouette of an animal's paw. Sun, well-drained soil (some are good container subjects, given a light, fluffy mix), moderate to light watering. The plants should be kept as dry as possible during the winter months, to avoid fungus rots. Hardiness varies from below 20 to 25+ degrees F.

flavidus is the largest, the hardiest, and the most easily grown of the "paws". It is distinguished by shiny, dark green leaves, 2 feet or more tall, and 3-5 foot flower stems bearing green, yellow or reddish blossoms. Our selection '**Burnt Orange**' is a striking cultivar with deep green leaves, reddish stems and bright burnt orange flowers.

hybrids. Efforts by plant breeders on several continents have yielded a wide variety of recent hybrids, ranging in size and habit from foot-high clumps for the potted plant trade to true giants, and in an amazing array of flower colors. Current selections at Suncrest span the range of plant sizes. Among the tallest is '**Harmony**', with particularly dark, shiny leaves and bright yellow flowers on 5 foot stems. '**Yellow Gem**' is nearly as tall, with attractive greenish yellow flowers. '**Tequila Sunrise**' has bright orange flowers. '**Kiwi Dawn**' has broad, bright green leaves and soft orange flowers on 4 foot stems. '**Kiwi Mist**' is a similar plant with red-fuzzy stems and dark green flowers. '**Pink Joey**' is an extremely prolific plant with stems to around 3 feet carrying clouds of bright pink flowers. At the lower end is '**Cape Magenta**', up to 18 inches high with bright magenta fuzzy buds that open to greenish flowers.

rufus. A smaller plant than the *A. flavidus* cultivars, with broad, greyish green leaves about 18 inches tall. Both the 2-3 foot stems and the abundant blossoms are densely felted with dark red hairs.

ANISODONTEA x hypomandarum 'Tara's Pink'. This South African hybrid shrubby mallow grows about 4 feet tall. It has slender, closely branched stems. The leaves are 3-lobed and toothed, 1-2 inches long, and bright green in color. Pink hibiscus-like blossoms with reddish centers, a bit under 1 inch broad, are sprinkled over the plants most of the year, most heavily in spring and fall. A showy shrub for gardens of any size. Sun or light shade, most soils, moderate to occasional watering. Hardy to 15-20 degrees F.

ARBUTUS. Widespread, Europe, Asia, N. America. Rugged trees and shrubs distinguished for reddish bark, leathery evergreen leaves and clusters of urn shaped blossoms which ripen into attractive berries. The following thrive with sun or light shade, well-drained soil, and only occasional, deep watering when established. Their hardiness varies.

'**Marina**'. This stunning hybrid of disputed parentage was introduced by the Saratoga Horticultural Foundation. It is strongly upright in habit, growing eventually quite large (Mama plant, in Victor Reiter's garden in San Francisco, was at least 50 feet tall) but quite controllable by pruning. The leaves are 4-6 inches long with a shiny surface. Both the flower clusters and individual blossoms are exceptionally large and showy. Flower color is light pink with darker shading near the base. Berries are only sparingly produced. It is hardy to around 15 degrees F.

menziesii. Madrone. Madrone is a beautiful though difficult tree native to much of California and the Pacific Northwest. Depending on exposure, it can grow narrowly erect or widely spreading, usually 20-40 feet in height. Its picturesque branches are enhanced by smooth reddish bark which peels to expose patches of light green. Leaves of 4-6 inches or more are dark green above, greyish green beneath. White spring-summer blossoms in large clusters give way to bright red fall and winter berries. Hardy to 10 degrees F. or less.

ARCTOSTAPHYLOS. Manzanita. Mainly Pacific Coast and Mexico. The manzanitas are tough, picturesque shrubs and small trees found in considerable variety in California. Their ornamental features include reddish to purple, often crooked trunks, round to pointed oval, green to greyish green leaves, and clustered, fragrant urn shaped blossoms, painted pink to white. The flowers are borne mostly in late winter and early spring and, often develop into attractive berries. The large species are bold specimen shrubs; smaller kinds blend well in mixed plantings; and the prostrate species and hybrids are among our most useful native ground covers. Sun (a few thrive also in light shade), well-drained soil, occasional to no supplemental watering once established, except as indicated. Most are hardy to 0-10

degrees F.

'Austin Griffiths'. Manzanita. This large manzanita hybrid selected at Native Sons Nursery is undoubtedly an offspring of *A. manzanita*. It forms an upright rounded shrub to about 8 feet, with bright greyish green leaves. Many clusters of light pink flowers are carried in late winter and early spring.

'bakeri 'Louis Edmunds'. An erect shrub growing around 6 feet tall, with purplish brown trunks, grey-green leaves and showy pink flower clusters in early spring. It has shown exceptional heat and drought tolerance, yet is one of the easiest manzanitas to grow.

'densiflora'. Vine Hill manzanita. One of the smaller manzanitas, nearly prostrate to upright in habit. It survives as a species only in a tiny area of Sonoma County, but horticultural selections have found their way into landscapes all over California. Here are two of them.

'Howard McMinn'. One of the most popular of the manzanitas, for several good reasons. It is rounded in form and profusely branched, growing 3-6 feet tall. It has shiny green leaves and abundant light pink flowers. It responds exceptionally well to pruning--even shearing, and tolerates a far greater range of soils and watering regimes than most manzanitas.

'Sentinel'. More upright in habit than the last, and usually taller, reaching 6 feet or more. It also has stouter trunks, is more openly branched, and has longer leaves of soft grey-green. It is reputedly less tolerant of irrigation and heavy soils than 'Howard McMinn', though certainly one of the less disease-prone manzanitas.

'edmundsii'. Little Sur manzanita. A matting species from the central coast. Most of its forms have small, nearly round leaves, reddish in new growth but dark green when mature. Both the flower clusters and individual flowers are small, though often colorful. **'Bert Johnson'** is an introduction of the Tilden Botanic Garden. It makes almost perfectly flat mats unless overcrowded. The stems are crowded with small greyish green leaves, bronze in new growth. The small flowers are white with a slight pink tinge. **'Carmel Sur'** is somewhat more robust and taller. It has narrower, greyish leaves and white flowers. Both have proven more drought and heat-tolerant than the more popular bearberry, *A.uva-ursi*. **'Big Sur'** is still more upright, growing 3 to 5 feet high and wide. It makes a dense mound with the typical cinnamon bark and masses of white flowers with pink bases in winter and early spring.

'Emerald Carpet'. Manzanita. This fine introduction by the Rancho Santa Ana Botanic Garden has already surpassed some old standard uva-ursi cultivars in popularity. It forms a dense mat of narrow, shining, emerald-green leaves, decorated by white flowers in winter and spring. It requires moderate watering in hot summer areas.

'hookeri'. Monterey manzanita. This is one of our local natives, colonizing open hills around Monterey Bay. It typically forms broad carpets or low mounds, though some individuals are more upright, growing 4-6 feet or more tall. It has slender reddish to purplish stems and dark, usually shiny leaves. Flower clusters are small but often abundant, making a good display. Flower color is white to light pink.

'Buxifolia'. A miniature form that stays quite low and spreads slowly, with an intricate network of short, slender branches. The leaves are small, narrow and arranged in tidy rows.

'Ken Taylor'. A broader and more open plant, probably spreading to 5 feet or more. It has dark, usually shiny leaves and pure white flowers.

'Monterey Carpet'. The lowest growing of the traditional selections, making a rugged ground cover. It is distinguished by crooked, purplish stems, narrow pointed leaves and white flowers.

'Wayside'. This is one of the most robust clones, growing about 3 feet high by 8 feet or more broad. It has attractive upsweeping, crooked trunks, the usual *hookeri* foliage, and white flowers.

'John Dourley'. One of the all-time favorites, this is a selection that almost got away, having been rejected at one point for introduction at Rancho Santa Ana. It was rescued and named for the former Superintendent of Horticulture at Rancho Santa Ana by Michael Evans at Tree of Life Nursery. This is a sturdy, mounding shrub, around 3 feet tall and 6-10 feet broad at maturity. It has broad but smallish, blue-green leaves, bronze in new growth. The flowers are light pink, and the berries nearly crimson.

'Lester Rowntree'. This robust hybrid, given to Rancho Santa Ana Botanic Garden many years ago by Lester Rowntree, was later introduced by the Garden. It grows 10-15 feet tall and 12 feet or more broad, forming attractive purplish trunks. The leaves are a little over an inch long, roughly heart-shaped, and grey-green in color. It makes a generous display of pink blossoms. This is a striking specimen shrub for larger gardens.

'Lutsko's Pink'. This neat shrub grows 4-6 feet high and wide, and is thought to be an *A. densiflora* hybrid. It has the typical dark red, shiny stems, medium green leaves and clusters of pink spring flowers of *A. densiflora*. Best in sun, with well-drained soil and occasional to no summer watering.

'manzanita'. A small, nearly umbrella shaped tree usually about 10 feet tall at maturity. It is remarkable for its beautifully gnarled, reddish brown trunks, large bluish to greyish green leaves and heavy clusters of white to pink flowers. Our own selection is **'St. Helena'**, with stout, widely spreading trunks, bright cinnamon bark, grey-green

leaves and white flowers. '**Dr. Hurd**', introduced by Saratoga Horticultural Foundation, is another fine selection, with even stockier, more upsweeping stems and greener leaves.

'**Pacific Mist**' is a tough and distinctive introduction by Rancho Santa Ana. It is a broadly spreading shrub, useful for ground cover, eventually mounding to about 2 feet tall by at least 10 feet broad. It has attractive pinkish younger stems, turning dark brown in age, and rather narrow greyish green leaves up to 2 inches long. Small clusters of white flowers decorate the plant in late winter. It is notably disease resistant for a grey-leaf manzanita.

pajaroensis. Pajaro manzanita. One of the most interesting of the manzanitas, but fast disappearing due to habitat destruction in the wild. It has spreading, zigzag trunks. The stems are densely hairy and heavily tinged with red when young. Large, pointed, deep green to bluish green leaves appear to clasp the stems. They are bronze to bright red in new growth. The large, dense flower clusters, appearing in late winter, range from white to nearly red in color.

'**Paradise**' is a robust selection, spreading in habit, with brilliant red to bronze new growth and deep rose pink flowers. Possibly even better is '**Warren Roberts**'. It is more upright and densely leafy than 'Paradise', with flowers nearly as dark. Both should be hardy at least to 15 degrees F.

refugioensis. One of the larger manzanitas, growing up to 10 feet high and about as broad. The trunks are stout and reddish brown in color. It has broad leaves clasping the stems. They are flushed with red to bronze in new growth. The flower clusters are large and vary from white to deep pink in color. Our selection combines grey-green leaves and full clusters of sparkling white flowers. Certainly hardy to 20 degrees F. or less; perhaps much less.

rudis '**Vandenburg**'. Many years ago we took part in a plant salvage effort at Vandenburg Air Force Base, where a mile-wide swath was being cleared for a Space Shuttle landing strip. This remains one of the most promising plant selections made there for ornamental use. It is a medium-large (about 7 feet tall, 10 feet broad in the parent plant), though compact, shrub. It has purplish stems and 1 inch broadly oval leaves, brightly tinted with red to bronze in new growth. Abundant clusters of small, pale pink blossoms dot the plant in spring. Probably hardy to 10-15 degrees F.

silvicola. Silverleaf manzanita. A generally large but variable shrub with striking grey to nearly white leaves, native to sand hills in the Santa Cruz Mountains. Its dense clusters of pure white to pale pink flowers in spring attract hummingbirds. '**Grey Eagle**' was recently selected from seedlings at the nursery. It is distinguished by neat habit and larger, very grey leaves. This species needs excellent drainage to thrive and requires little summer water.

'**Sunset**'. A striking hybrid, reputedly of *A. pajaroensis* and *A. hookeri*. It grows about 4 feet high by 5 feet wide, with dense, luxuriant foliage. New bronze leaves mature to shiny green. The flowers are pinkish white. Plants are reported to tolerate heavier soils.

uva-ursi. Bearberry. A low, often prostrate coastal species, extremely popular for ground cover. The plants have closely set, narrow leaves, dark green in color, white flowers and red berries. Traditional favorites are '**Pt. Reyes**', with stiff, dark leaves, and '**Radiant**', with particularly lush, shiny foliage. '**San Bruno Mountain**', introduced by the late Ken Taylor, has heavy stems, strikingly large, thick-textured leaves, pale pink blossoms and showy berries. '**Tom's Point**' is a promising introduction by the Tilden Botanic Garden. It is particularly well branched, lies quite flat and has dark, shiny leaves. All require moderate watering and some shading in hot summer areas. Hardy at least to 0 degrees F.

viridissima '**White Cloud**'. Sturdy upright shrub or small tree from California's Channel Islands, with thick trunks, strikingly furry stems, broad green leaves and large clusters of white flowers in late winter and spring. Introduced by Regional Parks Botanic Garden at Tilden.

'**Winterglow**'. A low mound, rising to 2-3 feet. Its nearly round ½ inch leaves display striking red and orange tones in new growth. The flowers are heavily flushed with pink. We first saw this making a fine low hedge at Rancho Santa Ana, where it was selected and introduced.

ARISTIDA purpurea. Purple three-awn. A showy grass from the southwestern U.S., growing about 1 foot high, with slender, wispy stems and narrow blue-green leaves, often tinged with purple. In summer it carries many graceful panicles of slender purplish spikelets. Protruding from each flower are three thread-like awns. Fall color can also be quite beautiful; though sometimes (for reasons not altogether clear) the plants simply dry to a pale tan. This is a beautiful grass for sunny meadows. Its one bad habit is the tendency of the sharp, barbed seeds to attach themselves to clothes and fur, like foxtails. Sun to part shade, well-drained soil, moderate to occasional watering. Hardy to 0 degrees F. or less.

ARMERIA. Sea pink. Northern Hemisphere. The sea pinks are tightly clumping perennials, forming tussocks of grassy or needle-like leaves. The tiny blossoms are borne in dense round heads above the foliage, on naked stems. Colors range from deep red to white. They have long been used in rock gardens, bank plantings and foregrounds of perennial borders. Give them a sunny spot, well-drained soil, and moderate to occasional watering when established. The following should be hardy to 0 degrees F. or less.

maritima. This world traveler is found on both European and Californian shores. It has grass-like leaves and usually 8-12 inch flower stems. A continual parade of new selections is making its way to California. '**Alba**' is a small form

with white flowers. '**Rubrifolia**' is distinguished by burgundy leaves and contrasting bright pink flowers.

'**Pink Lusitanica**'. A compact perennial with dense tufts of deep green, narrow leaves. Throughout the warmer months it displays balls of deep pink flowers on short stems.

ARTEMISIA. Wormwood, sagebrush. Widespread in Europe, Asia, N. America. Grey leaved, often aromatic perennials and shrubs for banks and borders. Sun, well-drained soil, little supplemental watering for those described below. Hardiness varies.

arbuscula. A beautiful mountain native, hugging the ground with short, woody trunks. It is usually 6-18 inches high, spreading to form a low mound. The stems are thickly set with small wedge-shaped leaves, each toothed at the tip in the manner of the common sagebrush, *A. tridentata*. Dense, narrow flower spikes are held erect and age an attractive, rusty brown. A perfect plant for exposed banks, thriving in full sun, with well-drained soil and only occasional watering when established. Hardy to below 0 degrees F.

californica 'Canyon Gray'. Unusual prostrate form of a coastal native, selected and introduced by the Santa Barbara Botanic Garden. It forms a loose mat at least 4 feet broad of finely cut, silvery leaves. Useful as a ground and bank cover. It should be cut back hard from time to time to keep it looking fresh and reasonably dense. Probably hardy to 15 degrees F. or less.

ludoviciana [ssp. incompta]. Silver wormwood. A high Sierran perennial form of silver wormwood, spreading to form a small thicket. Erect silver stems to 18 inches hold silver-backed aromatic green leaves. Insignificant flowers.

pedemontana. Mediterranean Region. Small scale ground cover for edging has finely divided leaves that form a flat, silvery mat. It creates a nice effect around rocks and other smaller perennials. Sun, well-drained soil, moderate to occasional watering.

'**Powis Castle**'. A shrubby selection, growing about 3 feet tall and at least 4 feet broad. It has stout, spreading trunks nearly hidden by the thick dome of foliage. The leaf blades are about 1½ inches long, with stalks of equal length. Both leaves and younger stems are covered with silky, silvery hairs. It is reputedly non-flowering, though some material defies its reputation. Hardy to 10 degrees F. or less.

pycnocephala. Sandhill sage. A California coastal native, this is usually a 1-2 foot shrub with soft white wool covering both the stems and the floppy divided leaves. '**David's Choice**' is a selected form, distinguished by low, dense growth. Even the flowering stems and clusters are showy. Hardy to 15 degrees F. or less.

tridentata var. vaseyana. California. This is basically a smaller, montane version of the big sagebrush which lines much of the basin and range country as far as one can see. This particular form was under 3 feet high in the wild, 3-4 feet thus far in cultivation. It has sturdy, closely branched trunks and silvery stems, with clustered silvery leaves, three-lobed at the ends. The flowering shoots are a foot or more long, also silvery and attractive until long after the flowers have withered, unlike many artemisias. This is a fine shrub for banks and mixed plantings. Hardy to below 0 degrees F.

ARUM palaestinum. Black calla. Originally from Israel and Syria, this is a tuberous perennial whose distinctive deep purple black flower spathes attract the attention of flies with their foetid aroma (fortunately, it doesn't carry far). Dark green arrow-shaped leaves up to 8 inches long leaves arise in the fall, the flowers appearing in spring. They are shaped like those of the common calla (*Zantedeschia*), green outside, broad interior is dark purple complemented by a black spadix (central stalk). The plant goes fully dormant in summer and is well adapted to California's mediterranean climate. It is a nice choice for naturalizing under oaks. Best in part shade to shade, in reasonably drained soil. Hardy to 15 degrees F. or less.

ASCLEPIAS. Milkweed. The Americas, South Africa. This is a group of over 100 species, ranging from annuals to shrubs and sharing its own family (*Asclepiadaceae*) with a large number of other mostly tropical genera. Most of the milkweeds, reflecting their common name, have a milky, usually toxic juice which flows freely from every cut or break. Those of interest here are perennials producing several to many stems from a compact, somewhat tuberous base. They have paired, lance-shaped to broadly oval leaves and produce broad clusters of waxy, long-lived flowers at the shoot tips. Structure of the flowers is normal at first glance, with the common five petals and sepals. On closer inspection it is nearly inscrutable; the stamens are fused into a flat-headed column which hides the pistil, and there are confusing appendages. Yet they are often quite beautiful, and amazingly attractive to butterflies. In the case of the spectacular monarch, the leaves also provide food for the caterpillars. When the flowers have withered, there are large, inflated pods, interesting in dried arrangements, which open to scatter fluffy seeds on the winds. Most delight in a sunny spot, with reasonably well-drained soil. The following will thrive with only occasional irrigation. Hardy as shown below.

fascicularis. Narrow leaf milkweed. California. Rhizomatous plants, forming substantial thickets in time. They have flexible upright 3-4 foot stems with narrow, light green leaves and carry heads of lightly scented, creamy white tinged pinkish flowers in summer. Attractive to butterflies. Hardy to around 0 degrees F.

speciosa. California and the West. Showy milkweed. We have admired this western native for many years in the wild and are pleased to be able to offer it to gardeners. This is a robust perennial, with several erect stems rising as much as 4 feet. Paired at intervals along them are broad 3-6 inch, usually white-woolly leaves. It flowers in late spring and summer, producing many-flowered clusters of rose purple to pale pink or white flowers. The seed pods are large and knobby, making an interesting display. Moderate to occasional watering. Hardy to 10 degrees F. or less.

tuberosa. Butterfly weed. Eastern U.S. A tough, hardy perennial, clumping from a narrow base. The erect 1½ to 3 foot stems are lined with brushes of narrow, dark green leaves. For several weeks in summer it carries broad heads of waxy bright orange blossoms, which are followed by interesting horned pods. Sun, well-drained soil, occasional watering. Hardy to below 0 degrees F.

ASPHODELINE lutea. King's spear. Originating in the Mediterranean region, this is a tough perennial of the lily family, most unusual in appearance. It travels slowly by underground rhizomes, eventually forming broad thickets. The shoots appear in fall, first as fountains of nearly thread-like 8-12 inch bluish green leaves, lengthening in spring to 2-3 feet high and topped by wands of fragrant pale yellow, star shaped blossoms. The plants die down in summer and are perfectly drought tolerant. Sun, moderate to little watering. Hardy to 10 degrees F. or less.

ASTER chilensis 'Purple Haze'. California aster. A California native aster that spreads vigorously in moderately watered gardens. Stems can rise from one to three feet depending on growing conditions and bear many bright lavender blue daisy flowers in fall. The flowers attract butterflies and beneficial insects. Restricting water helps to control its spread. Introduced by the Santa Barbara Botanic Garden. Sun to part shade, moderate to little watering, hardy to 10 degrees F. or less.

ATRIPLEX lentiformis ssp. breweri. Brewer saltbush. California. A bushy, spreading native shrub, growing up to 7 feet high. Its grey arrow shaped leaves on arching light tan stems create a dense, silvery mass. Plants resprout well after hard pruning. This shrub can be used for screening, as a hedge and in dry gardens. It tolerates coastal conditions, alkaline or saline soils and is fire resistant. Flowers are insignificant, but seeds are attractive to birds. It is native to California and the western states. Brewer saltbush is attractive as a free-standing shrub, and it can make a durable informal hedge or shrubby border. Sun to part shade, most soils, occasional to little watering. Hardy to 10 degrees F. or less.

BABIANA. Baboon flower. Some of the most dazzling of the South African bulbs are included here. The plants are prolific, quickly forming compact, many-stemmed colonies. They have elongated corms, from which new shoots rise in the fall. Several pleated, fuzzy, sword shaped leaves are held nearly erect along each stem. Each stem bears in spring a spike of ½ to 1 inch blossoms colored white to royal purple or maroon. These are fine container plants but are also suitable for a variety of sites in the open garden. Sun, reasonably well-drained soil, little or no watering after the plants die down in late spring. Hardy to 15 degrees F. or less, though the foliage is damaged at around 20 degrees F.

odorata. One of the more delicate species, with shoots 6-12 inches tall. Its spikes of creamy white flowers have a carnation-like scent and appear in spring over pleated green leaves.

rubrocyanea grows only 6-8 inches tall. Several pleated, fuzzy, sword shaped leaves are held nearly erect along each stem. The flowers are exceptionally large and colored deep purple with crimson centers. These are fine container plants but are also suitable for a variety of sites in the open garden.

stricta hybrids. There is by now a large assortment of named and unnamed hybrids involving *B. stricta*. 'Blue Gem', one of the showiest, has blossoms of intense blue-violet on 6-10 inch stems. Of our own selections, 'Bright Eyes' is one of the most floriferous, the flowers purple overall with lighter centers. 'Dark Mood' has blossoms of rich, deep maroon. Those of 'Deep Magic' are reddish purple with dark tips. 'Electric Rose' is pretty much what the name suggests, with some of the most vivid flowers we have seen on a babiana. 'Midnight Madness' is distinguished by large blossoms of deep blue purple. Those of 'Scintillation' have brightly contrasting lavender and white segments.

vanzyliae. An unusual species, growing 8-12 inches. Broad-parted flowers are softly shaded from yellow to cream.

villosa. One of the showiest of the baboon flowers. In spring it displays striking, vivid rosy red flowers over the pleated leaves.

BACCHARIS pilularis. Coyote brush. Low forms of coyote brush selected near the California coast have long been popular for ground cover. 'Pigeon Point' is a dense, low mound, with toothed, very bright green leaves. The creamy flower heads are small but have a pleasant fragrance suggesting a mixture of hay and honey. Another coastal selection 'Twin Peaks' is extremely dense, with leaves which are bright green when young, becoming greyish green with age. The flower heads--male in this selection—are also pleasantly scented. Sun (though they tolerate light shade), nearly all soils, occasional watering when established. Hardy to 15 degrees F. or less.

BAECKEA virgata. This delightfully wispy Australian shrub grows to 8 feet or more, and is related to and somewhat resembles the leptospermums. The narrow leaves are nearly hidden by honey-scented white blossoms in late spring and summer. It can be useful as a light screen. Sun, reasonably well-drained soil, moderate to little watering when

established. Hardy to 15-20 degrees F.

BALLOTA pseudodictamnus. Grecian horehound. Ballota is one of many Mediterranean mints still not well known, but deserving a place in California landscapes. It is a bushy subshrub, with woody base and older branches, growing only about 2 feet high. Its furry stems are crowded with broad 1 inch leaves, coated with soft grey hairs. Small white flowers, spotted with purple in the throat, are borne in interrupted clusters at the shoot tips in summer. They are pleasant but not particularly showy. This is a fine and quite useful plant for sunny borders and banks, thriving in most soils with moderate to little watering. Hardy to 10 degrees F. or less.

BAPTISIA. False indigo. Eastern U.S. *Baptisias* are perennial peas, attractive and often very durable in the garden. They produce several to many stems from a rootstock, each lined by large three-parted leaves. Many-flowered clusters of lupine-like blossoms develop at the shoot tips in spring or summer. They are followed by fat, pea-like seed pods which may turn nearly black as they mature. All are winter-deciduous. They deserve greater recognition here as valuable plants for borders and mixed plantings. They thrive in a sunny spot with reasonably well-drained soil and moderate to occasional watering and are beautiful additions to a large border. The following are hardy to below 0 degrees F.

alba (leucantha). This is a bushy 3 foot plant with bright green stems and leaves, slightly tinged with purple. It blooms in midsummer but will often follow a cutting with further waves of bloom. The flowers are many, about an inch long, and colored cream-white with a contrasting purple base. It clearly deserves to be better known.

australis. Blue false indigo. This is a robust plant, growing 2-4 feet high, with several branched stems. The leaves are up to 3 inches long and colored an attractive blue-green. The flowers are about an inch in length and painted bright to deep blue or violet. This is one of the great eastern perennials, popular in temperate gardens for many years.

leucophaea. A bushy 2 foot perennial with soft grey-green leaves on spreading, branched stems. Creamy yellow pea flowers decorate the stems in late spring and early summer.

minor. Considered by some to be a dwarf variety of *Baptisia australis*, this perennial from the central United States puts up erect stems to 18 inches with rounded blue-green leaves. Spikes of bright blue pea flowers are held over the leaves in late spring. Round inflated pods that follow the flowers turn almost black by summer's end.

BERBERIS. Barberry. Widespread, especially in Asia. Someday we will have to yield to the latest botanical pronouncements and include the plants fondly known as mahonias under this heading. For now, however, let us continue the traditional division of the groups. The following are spiny shrubs, both evergreen and deciduous. All have beautiful foliage, small, waxy flowers and interesting, sometimes colorful and tasty berries. They are useful as specimen shrubs, foundation plants, hedges and barriers (some are wickedly spiny). They thrive in full sun or light shade and most soils, with moderate to occasional watering when established. Their hardiness varies.

darwinii. Chile. An evergreen, thicket-forming shrub, growing 6-10 feet tall. It has arching stems, covered with toothed, shiny, deep green leaves. Yellow-orange flowers nestle among the foliage in summer, giving way to showy purplish blue berries. 'Sunglow' is our own selection, chosen after seeing and evaluating many seedling crops. This is a bushy plant with masses of exceptionally bright golden orange flowers. These are magnificent shrubs for screens and hedges (though not friendly to the touch). Hardy to 10 degrees F. or less.

x stenophylla 'Irwinii' (B. irwinii). A hybrid of *B. darwinii*, above, and *B. empetrifolia*. It grows much more slowly than *B. darwinii*, eventually to a height of 4-5 feet, and the branches are more nearly horizontal. The younger stems are slender and lined with narrow, deep green leaves. Flowers and berries are much like those of *B. darwinii*. A smaller, denser selection, forming a 2-3 foot mound, is 'Nana', with golden orange flowers. Hardy to 0-10 degrees F.

BESCHORNERIA. Mexico and Central America. Showy relatives of *Agave* and *Yucca*, with similar features. The plants form rosettes, or crowns, of long, sword shaped leaves like those of *Yucca* but soft and flexible. The rosettes branch at the base to form compact clumps. In early summer thick stems rise above the older rosettes to display bell shaped blossoms of various colors. These are striking specimen plants, and much less temperamental than some of their relatives. The flowers are attractive to hummingbirds. Sun or light shade, most soils, moderate to occasional watering. Probably hardy to 15 degrees F. or less.

albiflora. This species forms trunks and can reach 6 feet. The dense rosettes of avocado green leaves spread to 3 feet across. Robust pinkish red flowering stems can rise 5 feet or more over the crowns. Individual flowers are cream colored.

yuccoides. Red yucca. Red yucca forms crowns of 2 foot grey-green leaves, often drooping gracefully. Coral pink flowering shoots rise 3-6 feet from older rosettes in the summer months to display green and red, bell shaped blossoms.

BOTHRIOCHLOA barbinodis. Cane bluestem. California, across the southern U.S. and into South America. This densely clumping grass grows as much as 4 feet tall. It has bluish stems and soft, blue-green leaves. Dense, silky flower clusters are presented at the ends of wand-like stems in summer and fall. This rugged plant is useful for large banks and other open spaces. Sun, reasonably well-drained soil, moderate to occasional watering. Hardy to 0 degrees F. or less.

BOUTELOUA. Grama grass. The Americas. These are clumping or thicketing perennial grasses, with attractive foliage and unusual flowers. They are useful in meadows and on banks. The following thrive in sun, with reasonably well-drained soil, and moderate to occasional watering.

curtipendula. Side-oats grama. A clumping dryland grass growing 18-30 inches high, with fine textured bluish green leaves. Graceful flower spikes rise 18-24 inches over the foliage in summer and dangle small oat-like flowers along one side of the flower spike.

gracilis. Blue grama. Blue grama is a dense, neat bunchgrass, growing a little over 1 foot high, with many nearly erect, slender stems. The leaves are quite narrow, up to 6 inches long, and bright green in color. Rising well above them in summer are branched flower clusters with radiating 2 inch spikes which resemble little caterpillars. Blue grama makes an attractive cover for open banks and naturalistic meadows and can even be overplanted and mowed into something like a lawn (though perhaps not one on which you would care to take a nap). The cultivar '**Blonde Ambition**' (PP#22049) is grown for ornamental as well as utilitarian reasons. Somewhat larger than the species, its leaves can reach 1 foot in height; flower stems to 30 inches carry blonde "eyelash" flowers in summer.

BRACHYCHITON populneus. Bottle tree. A sturdy evergreen tree from eastern Australia, reaching as much as 40 feet. It has densely held, dark green, often lobed leaves. It develops a distinctive "bottle" trunk in time. Creamy white bell shaped flowers spotted pink on their inner surface are followed by 3-4 inch decorative woody fruits. Sun, moderate to occasional watering, hardy to 15-20 degrees F.

BRACHYSEMA (Gastrolobium). Australia. Leafy shrubs of the pea family, interesting for both foliage and flowers. They vary considerably in size and habit. Leaves are simple (undivided), and of many colors and textures. Their most distinctive feature is the curved bird's-beak shape of the flowers in some species. Sun, well-drained soil, moderate to occasional watering. The following are hardy to around 20 degrees F.

celianum (lanceolatum). Swan River pea. Spreading low shrub to 2-3 feet high with leathery narrow pointed leaves. The leaves are dark green above, silvery grey beneath for a glittering contrast. Bright red beak-shaped pea flowers nestle among the foliage in fall and winter, with scattered bloom in other seasons.

praemorsum 'Bronze Butterfly'. This is among the oddest of Australia's many pea-shrubs. It is almost perfectly prostrate, with slender branches forming a circle of 3-4 foot diameter. Wedge-shaped, toothed leaves are paired along the stems, giving the effect of little butterflies (or perhaps bowties). Their color is bronze- to purplish green overall, with narrow light green margins. Dull red beak-shaped blossoms are scattered among the branches, most heavily in spring. This is an interesting novelty shrub, especially attractive on raised mounds and banks. A UCSC/Koala Blooms introduction.

BRODIAEA. Brodiaea. Western North America. *Brodiaeas* are beautiful cormous perennials deserving of far more attention than they have received. Where not devastated by rodents, they form substantial clumps over time, making a better show with each passing year. In late winter and early spring, each corm sends up a few grassy, often shiny, narrow leaves that gather strength for the main show, usually in late spring and early summer. Then slender stems rise a few inches to over a foot above the ground, each carrying several trumpet-shaped blossoms. Flower color ranges from deep violet to pale pink and white. They are elegant subjects for containers, in rock gardens, or on banks, thriving in full sun, with well-drained soil and summer drought (they die to the ground after flowering). The following are hardy to 10 degrees F. or less.

californica. This is one of those plants that any enthusiast of California natives ought to have in the garden. It is a robust species, with long grassy leaves and flower stems up to 2 feet high. Flowers are also exceptionally large—up to 2 inches long—and colored lavender to white (actually a vivid lavender in our material). It has proven remarkably easy to grow.

elegans. Harvest brodiaea. Plants of highly variable size, from 6 inches to over a foot. They flower as the annual grasses dry in late spring and early summer, bearing many shining deep blue violet flowers.

BROMUS benekenii. Denver brome. Central and Eastern Europe. A clumping bright green soft-foliaged grass, growing dependably in a wide variety of conditions, including dry shade with tree root competition. Leaves are covered with soft hairs that create special effects on dewy and frosty mornings. Slender see-through flowers emerge in spring and are tidy on the plant through much of the year. It is evergreen in even the coldest of climates, and tolerates coastal conditions. The foliage is lighter green when planted in full sun. It thrives in most soils, with moderate to occasional watering and is hardy to 0 degrees F. or less.

BULBINE frutescens. Cape balsam. South Africa. Bulbine is an odd, semishrubby perennial of the lily family, eventually making broad carpets with its branched, prostrate trunks. Individual shoots are spreading to nearly erect, and crowded with nearly cylindrical, succulent, bright green leaves, each 4-6 inches long. Flowering stems are produced at nearly any time of year at the shoot tips, each carrying dozens of stary blossoms in lengthy succession. The individual flowers are about a half inch across, and vivid yellow in the species. '**Hallmark**' is a more compact selection, reaching

about 16 inches in height. It has striking soft orange flowers with golden furry stamens. These are interesting subjects for either containers or the open garden, where they are attractive in borders and useful as a small-scale ground cover. They will thrive in a sunny spot with reasonably well-drained soil and moderate to little watering. Leaves can be scorched by sudden hard frosts. Evergreen to 20 degrees F., and probably hardy to lower temperatures.

BULBINELLA robusta. This is a vigorous South African perennial somewhat resembling *Kniphofia* and, like it, clumping from the base to form small thickets. In fall it sends forth fountains of narrow, bright green 2 foot leaves. Above these in early spring are carried torches of glowing yellow, bell shaped blossoms on 2-3 foot stems. It dies to the ground in summer. Sun, most soils, winter moisture and summer drought preferred. Hardy to 15 degrees F. or less.

CALAMAGROSTIS foliosa. Mendocino reed grass. A California coastal native bunchgrass, growing 12-18 inches tall. It has densely clustered stems, bluish green leaves and paler, feathery flower panicles. Leaves develop purplish red tones in winter. Use it both in large drifts and with other grasses in meadows. It will thrive in most soils with moderate to occasional watering. Hardy to 10 degrees F. or less.

CALAMINTHA nepeta 'Blue Cloud'. Calamint. Calamint is a mounding, bushy perennial from southern Europe growing about 2 feet tall. It has dense grey-green foliage and small clusters of ¾ inch lavender blue blossoms borne in summer, resembling those of some of the salvias. Its leaves have a minty fragrance when stroked. A nice plant for mixed perennial gardens and borders. It seems quite easy to grow, given sun, ordinary soils, and moderate to occasional watering. Hardy to 0 degrees F. or less.

CALLIRHOE involucrata. Winecups. North Dakota to Texas and Missouri. A delightful perennial making low rosettes, with lobed bright green leaves. Its flowering stems are prostrate and extend from the central crown. These carry a succession of vivid 2 inch rose purple mallow flowers in summer and fall. It grows best in sun, with reasonably drained soil, and moderate to occasional watering. Hardy to 0 degrees F. or less.

CALLISTEMON. Bottlebrush. Australia, widespread. Showy shrubs and trees of the myrtle family, with attractive bark and generally narrow, leathery leaves. Their best-known feature is their dense brushes of colorful blossoms, of which the long stamens are the most conspicuous portion, along the stems. Most are easily pruned to develop shapely pale trunks, as well as sheared for hedges and screens. Except for their variable hardiness to cold, they seem nearly indestructible and are regularly subjected to a wide range of soils, exposures and watering regimes. Hardy to 20 degrees F. or less, except as noted.

'Cane's Hybrid'. This UCSC/Koala Blooms introduction is a welcome relief from the widely used, sometimes overly bold *C. citrinus*. It grows naturally as a shrub, up to 10 feet high and 8 feet wide, but is easily trained as a small tree. It has slender, slightly drooping stems lined by narrow leaves, each 2-3 inches long. The leaves are grey-green when mature, bronze- to rose-tinted in new growth. In late spring and early summer the plant is decorated by soft pink "brushes" of flowers near the stem ends. 'Cane's Hybrid' is amenable to the same uses and abuses as other callistemons but in addition, makes an elegant, somewhat parasol-shaped small tree. It is adaptable to many soils with moderate watering, and drought tolerant when established.

'Little John'. A showy dwarf cultivar. It grows round and dense, not much over 3 feet tall. The branches are neatly lined with short, narrow, bright bluish green leaves. In summer they are tipped by striking blood red brushes. The main drawback of this plant, except in southern California, is its tenderness to cold. The leaves have been damaged at 25 degrees F.

'Mauve Mist'. This is one of the taller selections, varying from 6 feet to over 10 feet according to cultural conditions. It is a dense, round shrub with foliage much like that of *C. citrinus*, very silky in new growth. In summer it covers itself with mauve pink blossoms.

***viminalis* 'Slim'** (PP#2444). Useful for hedges and foundation plantings, this new bottlebrush will keep a narrow profile over time. It will spread to 4-5 feet wide while reaching a height of 8-10 feet. Narrow green leaves are dense on flexible branches. Bright red flowers attract hummingbirds.

CALOCEDRUS decurrens. Incense cedar. A dense, evergreen western conifer, potentially over 100 feet tall (though not in our lifetimes). It has a stout, erect trunk with beautiful cinnamon bark and develops a pyramidal shape with age. Flat sprays of deep green foliage have a spicy aroma. Growing slowly at first, it gradually accelerates as it gets established. This is a spectacular tree for larger landscapes. Provide sun to light shade, moderate to occasional watering. In hot areas, it will prosper with moderate watering. It is adaptable to poor soil. Hardy to 0 degrees F. or less.

CALYLOPHUS (*Oenothera*) drummondianus. Sundrops. Texas. A bushy, slender stemmed perennial, about 1 foot high and perhaps twice that in breadth. Its stems are closely lined by dark, narrow 1-3 inch leaves. Clustered at the shoot tips in summer and fall are brilliant yellow, broad petalled flowers, about 2 inches wide in our material. Another sundrops worth growing is *C. hartwegii* 'Texas Gold'. This perennial has slightly larger leaves and flowers than *C. drummondianus*, but is similar in habit and exuberant bloom. These are beautiful perennials for low borders, banks and meadows. Sun, reasonably well-drained soil, moderate to occasional watering. Hardy to 10 degrees F. or less.

CALYSTEZIA macrostegia ssp. cyclostegia 'Candy Cane'. Coastal morning glory. Coastal morning glory can be found along a narrow coastal strip in central and southern California. This is a lush, slender-stemmed vine, which scrambles over--or through--any support. It has attractive dark green, roughly arrow-shaped leaves, which make a good cover. From late spring to fall, 'Candy Cane' is decorated by 2-3 inch, trumpet-shaped blossoms, white overall with broad, deep pink bands. This is an attractive leafy cover for fences and other supports. Sun, most soils, moderate watering for best appearance, though it will accept occasional watering or less. Hardy to 15-20 degrees F.

CAMISSONIOPSIS cheiranthifolia. Beach evening primrose. Beach evening primrose has long soft grey leaves on low spreading stems that form a mat. Bright yellow flowers are held in clusters at the branch tips in spring and summer. This coastal native can be found on sand dunes from Oregon to Baja California. It is not especially long lived, but reseeds nicely. Sun, well-drained soil, moderate to little watering. Hardy to 20-25 degrees F.

CAREX. Sedge. Worldwide, but mostly in temperate regions. A huge group of generally rugged, undemanding perennials. The sedges generally resemble the grasses, except in their flowering heads, and are compatible with them in the landscape. Those described below form dense basal clumps or mats of shoots with narrow, arching leaves. These give a fountain-like effect. Clusters of tiny, chaffy flowers borne on slender stems above the leaves--usually in summer--are mildly decorative. Various selections are useful in borders, as drifts on banks or in poolside plantings. The following selections will do well in sun or part shade, with reasonably well-drained soil, and moderate to occasional watering. Hardiness varies, but may be assumed to be 15 degrees F. or less.

divulsa. Misidentified for years as a native California species (*C. tumulicola*), this Eurasian sedge has proven to be widely adaptable and useful in California gardens. It makes spreading hummocks, usually under 1 foot tall, with arching deep green, very narrow leaves. One of the best sedges for ground cover, it will tolerate sun or shade and some drought as well as wet soils.

pansa. A coastal California and Northwest native, making what Philip Munz terms "scattered tufts" as the rhizomes wander. Better forms produce a nearly solid undulating turf. The leaves are narrow and usually 5-8 inches long, dark green and softly shining. Flowering stems may rise to 1 foot. Some summer watering keeps it green. Probably hardy to 10 degrees F. or less.

perdentata. Hill country sedge. A 4-10 inch mound, with glossy yellow green foliage, topped by tan seedheads in the spring. This low sedge from Texas makes a fine pathway in shady gardens, where the bright foliage illuminates moonlight walks. It is excellent in dry shade and can be combined with ferns. It is moderately drought tolerant when established.

praegracilis. Western meadow sedge. This native sedge from California and the Northwest is strongly rhizomatous and makes a dense, fine textured dark green carpet, useful as a turf substitute. Widely adaptable to soils, it will stay evergreen if given supplemental summer water.

texensis. Catlin sedge. Occurring from the southeast U.S. to Texas, this clumping sedge has fine textured green foliage. It is mowable and makes a good lawn substitute, and it mixes well with other sedges in a shady meadow. It does reseed to fill in plantings (and perhaps invade its neighbors).

tumulicola. Slender sedge. This inhabitant of meadows and open woodlands in California and the Pacific Northwest has dark green, wiry stems and grows in slowly spreading, irregular clumps. Useful in mixed plantings and for naturalizing, though not as strong as some other species described above.

CEANOTHUS. Wild lilac. North America, Mexico (the following are all California natives). Some of our showiest evergreen native shrubs and trees are included in this genus. Equally beautiful though little recognized in California are some hardy, deciduous shrubs of the eastern U.S. and their hybrids. The wild lilacs have extremely variable leaves--often shiny, often toothed or textured. Those of the subgenus *Cerastes* are often leathery and holly-like. The flowers are individually tiny but borne in sometimes massive clusters, appearing mostly in spring in the California species, summer and fall in the "easterners". Flower colors range from white to deep true-blue, violet and even an occasional pink. They have many uses according to their size and habit, from bold specimen shrubs to large-scale ground covers (whatever their height, few are truly small shrubs). Sun, well-drained soil, and little watering when established. Both cold and heat tolerances vary considerably.

'Blue Cloud'. Selected long ago by Louis Edmunds but never well known, this hybrid ceanothus grows to 8-12 feet high and wide. Leaves are small, shiny and green; sky blue flowers are profuse. It is more garden tolerant than some selections, and will tolerate hot interior climates.

'Blue Jeans'. Interest in this selection from Rancho Santa Ana has waxed and waned over the years, but it remains a fine plant for the garden. This is a rounded, dense shrub to 6-7 feet with stiff arching branches and small dark, firm textured leaves. It produces masses of lavender flowers in spring. It is very disease resistant.

'Centennial'. Low growing natural hybrid, selected from seed collected by Roger Raiche in coastal Sonoma County. It stays quite low and is wide spreading, with very small dark, lacquered leaves and vivid blue flowers in spring. Not

recommended for hot summer areas.

'Concha'. One of the "old favorites" among ceanothus, this is an arching shrub to 6 feet with very deep green, resinous narrow leaves. It blooms profusely in spring, with electric dark blue flowers in generous clusters.

cuneatus—excellent form. Buckbrush. Much maligned by those who have tried to bushwhack in the California chaparral, *C. cuneatus* can actually be a highly ornamental shrub. It offers a variety of habits, silvery bark in age, and interesting grey-green to deep green leaves. This particular selection has gracefully arching branches and grey-green leaves. Flowering is profuse on mature plants, with clusters of tiny creamy white flowers covering the branches. The flowers are also sweetly fragrant, their scent wafting for many feet in all directions. Hardy to 10 degrees F. or less.

'Dark Star', introduced by the late Ken Taylor, is an extremely dense, small-leaved shrub growing about 6 feet high by 12 feet wide. It is covered by masses of cobalt blue flowers in spring. We have found it less disease-prone than the similar and better-known 'Julia Phelps'. Hardy to 15 degrees F.

foliosus 'Berryhill'. Wavyleaf ceanothus. Our own selection from the wild, quite unlike any other available *Ceanothus* in appearance. It is mounding in habit, growing to probably 2-3 feet. Its slender, wiry stems are lined with tiny, very glossy leaves. It is decorated in spring by little round clusters of brilliant blue blossoms. Best on dry banks and probably intolerant of regular garden watering. Hardy to 10 degrees F. or less.

'Frosty Blue'. One of the best introductions by the Rancho Santa Ana Botanic Garden. It is a round shrub or small tree of 8-12 feet with beautifully textured, shiny leaves. Its masses of bright blue flowers contrast with white bud-scales to give a frosted appearance. Relatively tolerant of heavy soils and routine watering. Hardy to around 15 degrees F.

gloriosus, Pt. Reyes ceanothus, is a widely spreading ground cover for coastal climates. The traditional unnamed selection has unusually lush growth and dark green, noticeably toothed leaves. Its flower clusters are dense but pale. **'Anchor Bay'**, introduced by the Saratoga Horticultural Foundation, has thicker, more rigid branches, stiffer leaves and darker flowers. **'Heart's Desire'** was selected by Phil van Soelen of California Flora Nursery. It is low and dense, with relatively small, glossy leaves. None of these are recommended where summers are hot. Hardy to 0-10 degrees F.

gloriosus v. exaltatus 'Emily Brown'. A stiffly mounding shrub, with thick rounded small leaves, this selection can grow from 3-4 feet tall and as much as 10 feet across. The stems are crowded with bright blue flowers in spring. It will tolerate heavy pruning, sometimes even being used for hedges, and is relatively garden tolerant. Hardy to 15 degrees F. or less.

gloriosus v. porrectus 'Mt. Vision'. Mt. Vision ceanothus. This is a durable ground cover ceanothus, up to 2 feet high and 6-9 feet wide, forming a low, wide mound with stiff branches. Bright blue flowers decorate the plant in spring. A fine bank cover. Hardy to 15 degrees F. or less.

hearthiorum. Found only in the area of the Hearst Ranch in San Simeon, this is quite atypical of the group in habit--absolutely flat on the ground, and spreading symmetrically to a diameter of 6 feet or more. The leaves are dark green, narrow and somewhat puckered in surface. One of the neatest of the ceanothus for ground cover, though possibly not tolerant of much summer heat (results have been mixed). Probably hardy to about 15 degrees F.

impressus. Santa Barbara ceanothus. This is an extremely variable species, the plants growing up to 5 feet high and often widely spreading. It has sturdy, closely branched main trunks and stiff but slender, often reddish stems. These are thickly clad with crinkled, deep green leaves, usually ½ inch long or less. In spring it makes a dazzling display of true-blue to lavender or violet blossoms in short, dense clusters. It is rapidly disappearing in the wild as stretches of the southern coast are bulldozed for development.

'Vandenberg' is one of several selections made on the Air Force base of that name during a salvage operation in the early 80s. It is a dwarf plant, probably under 3 feet high and 5-6 feet broad even in old age. It has small, bright blue flower clusters. A much larger and older selection, once assigned to this species but possibly a hybrid, is **'Puget Blue'**. It has been grown successfully in the Northwest and is considered one of the hardiest and most garden tolerant of the warty-leaved ceanothus. It has attractively arching branches and clouds of bright lavender-blue flowers. Hardy to 10-15 degrees F.

'Joan Mirov'. One of the best of many introductions by Roger Raiche at the U.C. Botanic Garden in Berkeley. Thus far it has grown about 4 feet tall and 10 feet wide in various landscapes. It may be even larger in time, but certainly has great potential as a large scale bank cover. The slender stems are neatly lined by very dark, shiny ½ inch leaves. Deep blue flower clusters blanket the plant in spring. It appears to be one of the most disease resistant of the ceanothus tried to date. Hardy to 15 degrees F. or less.

'Joyce Coulter'. One of the old standards among the ceanothus, somewhat eclipsed by newer selections but still a valuable landscaping shrub. It normally grows 4-5 feet tall and at least 8 feet wide. Large, nearly rectangular leaves, deeply textured but lacquered in surface, are closely set along the stems. Flowers are only a medium true blue in color (how jaded we've become with so many selections to choose from), but abundant. The most striking features of this plant are the foliage and exceptionally good response to any degree of pruning, even hedging.

'**Julia Phelps**'. Even the most discriminating native plant buffs are sometimes hard put to distinguish this old timer from 'Dark Star', described above. It is similarly large (6 feet high by 12 feet wide or even more, if left to its own devices), dense and small-leaved. The leaves are perhaps just a little darker, and the flowers just a touch more purple in color. Both make a dazzling spring display. Both are, unfortunately, among the touchier and shorter-lived of the popular hybrids.

maritimus. Hoover ceanothus. We were once enthusiastic about a cultivar of this species from U.C. Davis, but found few interested customers, though it performed very well in the landscape. Two selections by David Fross, Native Sons Nursery, have generated much more enthusiasm. Both are compact, creeping shrubs with small, closely packed leaves somewhat resembling those of *C. gloriosus*, grey on their undersides. '**Frosty Dawn**' grows up to 2 feet tall and 6 feet broad (often less) and has flowers of a rich lavender shade. '**Pt. Sierra**' is distinguished by somewhat larger ultimate size, more arching habit, and smaller leaves carried on flatter sprays of branchlets. Most recently the Arboretum at U. C. Davis has released '**Valley Violet**', the showiest selection yet. It has somewhat larger leaves than the last two and bright blue purple flowers all along the stems in spring. All are excellent small to medium scale ground covers for open banks. Hardy to 15 degrees F. or less.

'**Ray Hartman**'. Still a great favorite after many years, this is a vigorous, roundish tree of 10-20 feet, with large, heavily veined leaves and masses of bright blue flowers opening from pink buds. It is one of the most tolerant of ordinary garden conditions. Hardy to about 15 degrees F.

rigidus (cuneatus v. rigidus) '**Snowball**'. *Ceanothus rigidus*, one of our local endemics, has been largely overlooked as a garden plant, though often quite showy in the wild. It is a low, mounding shrub with stiff angular branches. Masses of white flowers in spring are held above prickly, holly-like small leaves.

Suncrest Hybrids. Most hybrid ceanothus have arisen by happy accident in public or private gardens, where different species or previous hybrids were planted together. In 2006 we decided to try some deliberate hand crosses to try to combine specific traits we valued. Reselections from those crosses are now in the fields, and some have clearly fulfilled their promise. '**Blue Ray**' combines 'Ray Hartman', the wonderful tree-form hybrid described above, with 'Dark Star', for deeper flower color. It has succeeded on both counts. It is similar in size and habit to 'Ray Hartman', with large, dark green textured leaves and is a massive bloomer in spring. Flower clusters are quite large, their color a vivid deep blue. It is quite disease-free and should be good for any larger garden. '**Starbright**' has 'Concha' for one parent; the other has been lost in a labeling mixup. This is a sturdy mounding shrub to 6-8 feet high and wide, with dark green textured leaves about 1 inch long. Full clusters of bright blue flowers emerge from masses of pink buds in spring. It seems decidedly more garden tolerant than 'Concha'. Finally '**Sunbird**' combines 'Tilden Park' and 'Concha' to produce a dense, rounded shrub with dark green, shiny textured leaves, larger than those of either parent. Long clusters of bright blue flowers develop from rose pink buds in spring. Again, the plant has proven quite trouble-free. All should be hardy to 15 degrees F. or less.

thyrsiflorus, Blue blossom, is one of the larger California ceanothus, often becoming a small tree. It is distinguished by bright green stems, shiny leaves and medium to large, compound clusters of deep true blue or lavender to white blossoms. '**Arroyo de la Cruz**' is low and mounding (around 4 feet high by 6-10 feet wide) and has exceptionally bright, shiny leaves and medium-blue flowers. '**Skylark**' is a stouter, very compact shrub with dark, lacquered leaves and bright blue flowers, appearing as late as June. '**Snow Flurry**' varies from a 6 foot shrub to a 20 foot tree, according to heat, drought and fertility. It has extremely bright, shiny leaves and masses of pure white flowers. All are hardy to 10-15 degrees F.

thyrsiflorus var. griseus (former *C. griseus*, *C. griseus* var. *horizontalis*). Carmel ceanothus. Though the actual plants are old standbys, we are all having to learn new names for these ceanothus. Those at hand are all lush, fast ground covering shrubs. They have glistening leaves that are larger, broader and more intricately veined than those of typical *C. thyrsiflorus*. Flowers are, on the average, carried in smaller clusters and paler blue in color. The old '**Carmel Creeper**' (both an old common name and a cultivar name, possibly the same as 'Hurricane Point') is a huge plant, spreading to 20 feet and more and sometimes piling up to over 6 feet if at all crowded. Leaves are up to 2 inches long and nearly round. It has typical pale blue flowers. '**Yankee Point**' is taller, a little less widely spreading (still easily 10-15 feet), and narrower-leaved. It also has darker flowers, and perhaps a little more tolerance of hot summer weather. '**Diamond Heights**' is a total anomaly. The plant is much slower growing (mostly because of its lack of chlorophyll) and ultimately smaller, and has broad, light yellow leaf margins. Flowers are pale true blue. It is often planted in part shade to take advantage of the brightening effect of its leaf color and may burn when planted in hot sun. All are hardy to 15-20 degrees F.

'**Tilden Park**'. This Wayne Roderick selection has a pleasing, arching habit and smallish dark green leaves. A profusion of chalky blue flowers grace the plant in spring.

'**Wheeler Canyon**'. An introduction by the Santa Barbara Botanic Garden. It is similar to 'Concha' in habit, growing

around 6 feet in height and broader than tall. The sturdy stems are closely lined by 2 inch narrow, textured leaves, dark green in color. In spring it bears an abundance of bright true-blue blossoms in crowded clusters. Thus far it has exhibited good tolerance of heavier soils and routine watering, as well as of summer drought. Probably hardy to 15-18 degrees F.

CENTRANTHUS ruber. Valerian. Europe, Asia Minor. An old fashioned, semishrubby perennial, now seen mostly where it has naturalized on roadcuts around the Bay Area. It is closely branched and nearly dome shaped as an older plant, with large oval bluish green or grey-green leaves. For several weeks in spring and summer it produces a succession of tiny blossoms, crimson to white, in large clusters at the shoot tips. There are three popular seed strains, named for their color: '**Coccineus**' (red); '**Rosenrot**' (rose pink); and '**Albus**' (white). *C. lecoqii* is similar though not quite so bold. It has similarly dense, though generally greyer leaves and produces clouds of lavender pink flowers in spring and summer. These are pleasant and at times extremely showy plants for borders and open spots, such as bank plantings, though they may self-seed around the garden as they have already done (fortunately not to great excess) in the wild. Sun, nearly any soil, moderate to no supplemental watering when established. Hardy to 0 degrees F. or less.

CERASTIUM tomentosum. Snow-in-summer. This easy and attractive perennial forms compact low mats of light grey foliage. Clusters of small white round-petalled flowers blanket the plant in June. It is attractive between stepping stones and larger perennials and shrubs. Sun, reasonably well-drained soil, moderate to occasional watering when established. Hardy to 0 degrees F. or less.

CERATOSTIGMA griffithii. Burmese plumbago. An arching shrub growing up to 2 feet high. The shoots are lined with attractive oval blue-green, one inch leaves, often tinged with red in cooler weather. In late summer and fall many clusters of true blue flowers, flaring widely from a narrow tube, appear at the shoot tips. It can be evergreen in mild winters. Sun or light shade, most soils, moderate to occasional watering. Hardy to 10 degrees F. or less.

CERCIS occidentalis. Western redbud. A California native shrub or multitrunk small tree, growing 6-15 feet tall. It is beautiful in winter with crooked, purplish-brown branches. Covering the bare branches in early spring are masses of pink to rose-purple blossoms. The 2-3 inch leaves that follow are nearly round, bluish green to deep green above, changing to anything from pale yellow to brilliant scarlet in fall. Our **Dark Lake County Strain** includes seedlings from populations of shrubby habit, with very dark flowers. The seed for '**Firefall Strain**' was collected from plants with dark flowers as well as brilliant fall leaf color. All are beautiful specimen shrubs, of all-season interest. Sun or light shade, reasonably drained soil, occasional summer water. Hardy to 0 degrees F. or less.

CERCOCARPUS. Mountain mahogany. Western North America. This is an interesting group of shrubs and small trees of the rose family, often distinguished by picturesque form and silvery bark. Their leaves are simple-oval in form, often prominently and neatly veined, and usually dark green on at least the upper surface. Their small, creamy flowers are pleasant but not showy. However, their styles develop after flowering into silky plumes that glisten in the sun. These are interesting and (in most cases) easily grown specimen shrubs and shrub-trees for the garden, thriving in sun, with reasonably well-drained soil, and only occasional watering once established. Their hardiness varies.

betuloides. Mountain mahogany. A generally vase-shaped shrub, openly branched and developing silvery bark at an early age. The leaves are usually small, dark green on their upper surface, paler beneath. Plants produce a wealth of flowers in spring, followed by masses of silky seed-plumes that can remain showy for a long time. Hardy to 10 degrees F. or less.

ledifolius. Desert mountain mahogany. Desert mountain mahogany is always a striking sight for hikers in the high Sierra. It is a slow growing shrub-tree, often beautifully contorted (in the garden careful pruning can yield the equivalent of torture by the elements in the wild). It has small, thick, twisted, dark green leaves and prominent pale bark. The seed-plumes are spectacular when backlit by the afternoon sun. Coming from generally harsh environments, this species is exceptionally drought and heat tolerant. Hardy to below 0 degrees F.

CHASMATOPHYLLUM musculinum. Yellow mountain mesemb. A dense, flat mat with deep grey-green succulent leaves that are triangular in shape. Summer flowers open in the afternoon and are bright yellow from red buds. It is attractive on banks and even in the rock garden. Sun, reasonably drained soil, occasional watering. Hardy to 0 degrees F. or less.

CHEILANTHES covillei. Rock fern. This choice rock fern prospers in a semi-shade situation with good air circulation and well-drained soil with moderate to little watering. It needs to be kept free of leafy debris if planted under trees or shrubs. Furry new fronds are creamy white and present nice contrast to the black stems and grey older fronds. Useful under oaks and attractive in containers. Well-drained soil, occasional watering when established. Hardy to 15 degrees F. or less.

CHILOPSIS linearis 'Purple Splendour'. Desert willow. Deserts of California and the Southwest. Desert willow is a heat loving shrub that can also be grown as a small tree. It grows up to 10 feet high, with arching, sometimes contorted branches. Its leaves are bright green and narrow, suggesting those of a willow. Large mauve purple trumpet shaped

flowers appear in the summer months. This dark-flowered selection was introduced by Herb Kelly. Sun, reasonably drained soil, moderate water is best but occasional watering will keep it going. Hardy to 10 degrees F. or less.

CHIONOCHLOA rubra. Red tussock grass. New Zealand. A colorful perennial grass, growing 2-4 feet high and making sturdy, dense clumps. It has very narrow reddish brown leaves that provide a year round presence in mixed plantings. This tussock grass moves gracefully in any breeze and looks great mixed with other perennials. It can take dry situations and will grow in sun or part shade, with occasional watering. Hardy to 10 degrees F. or less.

CHONDROPETALUM (Elegia). South Africa. The restio family has aroused considerable interest here. *Chondropetalums* (now reclassified as *Elegia*) are among the most dramatic and interesting of the group, somewhat resembling our rushes (*Juncus*). They have dense clumps of more or less erect, dark green, leafless stems (or rather, the leaves are reduced to bracts, which dry quickly). Elongated clusters of chaffy brown to nearly black flowers, either male or female, presented at the shoot tip are actually quite ornamental, though they don't fit the conventional image of "flowers". Culms can be compared to those of a smooth-stemmed *Equisetum*, though they do not have the root-wandering habit of that group. New growth on the smooth round stems has ornamental chestnut colored leaf sheaths, which show bright, silky golden undersides as they fall from the stems. These are valuable plants for poolside, borders and even large tubs. They thrive in sun or light shade and many non-alkaline soils. In South Africa, these plants often grow in seasonally wet soil. In California they have been grown in diverse situations, with abundant to only occasional summer watering. Hardy to 15-20 degrees F.

elephantinum has more robust culms, and can reach 5-6 feet in height with a somewhat more erect habit. New culms are produced at the outer edges of the clumps of *C. elephantinum* and create a strong vertical effect. The clumps can eventually spread to over 4 feet across at the base.

tectorum will make clumps to 3-4 feet high, with more slender culms and flowers. It has a narrow base and arching habit. Recent selections from seedling batches at Suncrest have yielded plants with especially dark green stems decorated by shining red brown bracts in younger shoots.

CHRYSOCEPHALUM 'Silver and Gold'. This UCSC/Koala Blooms introduction is one of several shrubby daisies most of us once knew under the genus *Helichrysum*. It is a profusely branched, trailing shrublet, forming a broad mat in time. Thickly cloaking the slender stems are soft, silvery narrow-oval leaves. Small golden yellow strawflowers are clustered at the branch tips in spring and summer (or nearly throughout the year near the coast). Use it in low borders and mixed perennial plantings or on banks. It thrives in sun or part shade, with non-alkaline, well-drained soil and moderate watering. Hardy to 25-30 degrees F.

CISTUS. Rockrose. Tough and attractive shrubs of the Mediterranean region. They have interestingly textured leaves, often fuzzy and sage-like. Their large spring blossoms, colored white to reddish-purple, resemble single roses. According to their size and habit, they are used in shrubby borders, mixed plantings, on banks and for ground cover. Hedging is generally not an option, as few will tolerate heavy pruning for long. Sun, well-drained soil, little or no supplemental watering when established. Hardiness varies, though all selections listed will tolerate bouts of 10-15 degrees F.

x aguilarii. This is a natural hybrid involving *C. ladanifer*. The particular clone in question has been widely circulated as *C. 'Blanche'*, a smaller and more compact plant. It is quite upright in habit and can reach 8 feet in height, with straight, sturdy stems lined by lance-shaped leaves up to 4 inches long. The leaves have conspicuously wavy margins and are dark green above, fuzzy and paler beneath. This selection is particularly notable for its very large snow-white flowers.

x bornetianus 'Jester'. A very neat 3 foot shrub that almost invites petting. The whole plant is thickly dressed in soft, furry grey-green leaves. Medium pink flowers over 2 inches across are carried in abundance in spring. This is a fine bank or dry border plant for full sun and drought.

x hybridus (corbariensis). The best-known of the rockrose group, partly because it is a nearly indestructible shrub. It is round and bushy, growing 5 feet high or more when left to its own devices but easily sheared and shaped. It has reddish stems and deep green, wavy-edged 1-2 inch leaves. The flowers are white, just a little over 1 inch broad but liberally dotting the plant for several weeks in late spring and summer. It is the one cistus commonly and successfully used as a hedge, and probably the most adaptable to heavy soils.

incanus 'LASCA Select'. Rockrose. This rockrose was selected by Ken Montgomery from a seedling batch started at the L.A. State and County Arboretum. It is a broadly mounding shrub, up to 3 feet high and 8 feet broad. The stems are crowded with broad 1½ inch greyish green leaves. In spring, mauve flowers nestle among the leaves.

'Jessamy Beauty'. A 2-3 foot, loosely mounding shrub, with dark green leaves. It flowers heavily in spring, displaying white blossoms over 2 inches across, each with a red spot at the base of each petal.

ladanifer. This is a highly variable species, usually sold as one of several unnamed selections. Most have narrow, very dark green, resinous and aromatic leaves, as well as large white flowers in spring and early summer. **'Bashful'** is a

dwarf selection, making mounds 1-2 feet high and 2-3 feet broad. Its large snow-white flowers open from red-tinged buds. **'Paladin'** is a compact, rounded shrub, growing 4 feet high, with typical resinous foliage. Its large flowers are pure white overall, with deep purplish red spots at the bases of the petals.

x purpureus. Orchid rockrose. One of the now-standard landscaping shrubs in California deserves its popularity. This hybrid, of which only one, unnamed clone seems to be grown much in California, has a nearly round profile, growing 3-5 feet high and wide. It has narrow, slightly wavy-edged leaves up to 2 inches long, dark green above and greyish beneath. The broad-petalled flowers are up to 3 inches broad, purplish rose overall with a darker eyespot near the base of each petal. All regenerate poorly after hard pruning and tend to be short-lived in the landscape.

'Ruby Cluster'. A mounding shrub, up to 2 feet high and 6 feet wide. The sage green leaves are furry and closely set. 1-2 inch spring flowers are white with a small ruby spot on each petal.

salviifolius 'Prostratus'. Dwarf sageleaf rockrose. A 1 foot high by 6 foot wide mound with fuzzy leaves covered in spring by small pure white blossoms. It is used extensively as a luxuriant ground cover.

'Santa Cruz'. A selection or hybrid of *C. creticus*. We decided that it deserved a distinguishing name. It is an erect-oval, compact shrub of about 3 feet, with bright grey, scallop-edged leaves and 2 inch blossoms colored purple-rose.

x skanbergii. A natural hybrid of *C. parviflorus*, forming a compact 1-3 foot high by 3-6 foot wide mound of soft, grey-green foliage. It is adorned in spring by many small coral pink blossoms.

'Sunset'. An interesting and showy hybrid, useful particularly on banks and other exposed sites. It usually remains under 3 feet tall but spreads widely. The stems are packed with large, soft grey-green leaves. 2 inch magenta blossoms decorate the plant much of the summer.

'Victor Reiter'. An erect habit distinguishes this rockrose from many other selections. Hot salmon pink flowers have paler centers, set against light grey-green leaves. This was a sport selected from a planting of *C. 'Doris Hibberson'*.

CLEMATIS. Worldwide, temperate regions. The clematis range from rampant vines with huge, flat blossoms to tidy bell flowered perennials. Most have 3 to 5 (or more) parted, long-stalked leaves with roughly oval, pointed and often toothed leaflets. The flowers have petal-like sepals in place of true petals, and a distinctive brush of stamens at their centers. Interesting puffs of silky-tailed seeds develop as the flowers wither. The two species that follow are tough, easily grown California natives, one a denizen of hot chaparral, the other usually found at streamside, clambering through shrubs and trees. Their culture varies accordingly. Both are hardy to 10 degrees F. or less.

lasiantha. Chaparral clematis. California. This vine is often seen in spring in the form of mysterious cream-white flowers massed over shrubby oaks and manzanitas in the chaparral. It has large 3 to 5-parted leaves, and white to moonlight yellow 1-2 inch blossoms. These are followed by beautiful silvery seed heads in summer and fall. It needs only occasional watering when established.

ligusticifolia. Virgin's bower. This is another California native clematis, distinguished from *C. lasiantha* by larger, more intricately divided leaves and many-flowered clusters of much smaller (under 1 inch) flowers. This is a streamside plant, both shade-tolerant and needing a little more water than *C. lasiantha* for good growth and bloom.

CONVOLVULUS. Morning glory (See also *Ipomoea*). Widespread; Mediterranean Region in the following examples. These are close relatives of the common morning glories (*Ipomoea*). We offer two very different members of this genus, both with funnel shaped blossoms flaring into broad saucers at the face. Sun or light shade, well-drained, not-too-rich soil and moderate to little watering when established. Hardiness varies.

cneorum. Bush morning glory. A dense 2-4 foot shrub with remarkably silvery leaves. It bears 2 inch white flowers from spring to fall. Used in mixed plantings and borders. Hardy to 10-15 degrees F.

mauritanicus. Ground morning glory. A perennial with slender, trailing stems lined by roundish grey-green to dark green leaves. It bears many clusters of lavender 1½ inch blossoms at the branch tips in summer and fall. Attractive as ground cover or in hanging baskets, hardy to about 10 degrees F.

CORDYLINE australis. Giant dracaena. Beginning as a large crown of tough, leathery leaves up to 3 feet long, this shrub slowly develops a slightly contorted trunk, which eventually branches at odd intervals. Old plants bear large sprays of tiny, fragrant white blossoms, which develop into white to bluish berries. The leaves of **'Jive'** (PP#25123) are green with chartreuse striping. **'Torbay Dazzler'** has broad cream edges on tannish green leaves. These are striking, almost surreal plants for display in larger gardens. Sun or light shade, reasonably well-drained soil, moderate to occasional watering (drought tolerant when established). Hardy to 15 degrees F. or less.

COREOPSIS. The Americas, Africa. Tough, vigorous daisies with bright, cheery flowers of yellow to red. They vary considerably in size, form, and foliage. They are classic plants for perennial borders, meadows and flower gardens. Mostly winter deciduous. Sun, reasonably well-drained soil, moderate to occasional watering when established. Hardy to 0 degrees F. or less except as noted.

gigantea (Leptosyne g.). Giant coreopsis. California. This species often has more the appearance of a cartoon character than of a familiar native plant. It forms thick, often sparsely branched and contorted trunks, darkened by the

remains of old foliage, each with a "topknot" of large lacy leaves. Many 3 inch yellow daisies are held above the leaves in spring. Hardy to 20-25 degrees F.

grandiflora. Eastern U.S. This is a pleasant enough perennial, though it reminds one of some of the bedding marigolds. It grows 1-3 feet tall, with many leafy stems from the base. The leaves are up to 4 inches long, simple or divided (especially above) and usually bright green in color. Held above the foliage on individual stalks are showy yellow flower heads, up to 2 inches broad. They have a single row of 8 rays in the wild forms, but most of the modern seed strains have pompom-like heads. **'Early Sunrise'** features compact, floriferous 18 inch plants and semidouble gold flower heads.

verticillata. Eastern U.S. Threadleaf coreopsis. An erect, bushy perennial up to 2 feet (sometimes more) tall. Its finely divided, bright green leaves form a lacy backdrop for showers of brilliant yellow (in our typical selection) daisies in summer and early fall. **'Grandiflora'** is a particularly dense and floriferous representative of the typical form, growing about 2 feet high. **'Moonbeam'** is distinguished by more spreading growth, dark, purple tinged stems and leaves, and lovely pale yellow blossoms. **'Sweet Marmalade'** (PP#20702) combines soft orange and golden shades for a soft peach effect.

COTONEASTER. Cotoneaster. Europe and Asia. A large group of shrubs and small trees of the rose family, some of them among the most tried and true (and at times overused) of all landscape shrubs. They offer a wide range of size and habit (usually dense), clean dark foliage, small white flowers, and highly ornamental red to yellow berries. The lower-growing types are widely used for ground cover. They revel in sun, though some are shade-tolerant, tolerate a wide range of soils and can take a similar range of watering regimes. All of the following are hardy to 10 degrees F. or less.

congestus 'Liaking'. Pyrenees cotoneaster. Low, spreading evergreen ground cover with sturdy stems and small dark green leaves. It is decorated by white flowers in spring, red berries in fall.

dammeri 'Lowfast'. Bearberry cotoneaster. This is valued as a durable ground cover, fast-growing, low and neat. Leaves are evergreen and shiny; flowers are white, and followed by red berries.

microphyllus var. thymifolius. Dwarf rockspray cotoneaster. Growing only about 2 feet high, this cotoneaster is notable for compact form and stiff, upright branches lined with tiny dark green leaves. White flowers become clusters of long-lasting red berries in fall.

COTYLEDON orbiculata var. oblonga. Finger aloe. Finger aloe is a South African succulent, forming showy dense clumps of thick, greyish white leaves. Its flowering stems rise to 2 feet or more and carry large drooping peach bells, most heavily in summer. It is attractive in mixed succulent plantings and containers. Sun, well-drained soil, occasional watering. Hardy only to 25-30 degrees F.

CRASPEDIA globosa. Drumsticks. This perennial daisy from eastern Australia forms tight clumps with crowns of narrow, silvery 8-12 inch leaves. Slender 2 foot flowering stems appear at almost any time of year, each bearing a single ball-like, yellow flower head, about an inch in diameter. Flower stems are excellent for dried arrangements. Sun, most soils, moderate to occasional watering. Hardy to 20-25 degrees F.

CUPRESSUS. Cypress. The cypresses are a small group of conifers, scattered widely around the Northern Hemisphere, largely in mountainous regions. They range from large shrubs to trees over 100 feet high, variously shaped but usually closely branched. Their bark is sometimes colorful and usually flaky or shredding. The twigs of the new growth are slender and cylindrical to flattened, with neat rows of tiny, pointed scales, often flecked with resin. The cones are round to oval, often remaining closed for several years. They are widely used either individually, for dramatic display, or along property lines and avenues. Sun, reasonably well-drained soil, moderate to almost no watering (several are notably drought tolerant when established). Their hardiness varies.

glabra (arizonica) 'Blue Pyramid'. Arizona cypress. A dense blue-grey pyramid, perhaps 25 feet high at maturity. This is a striking foliage specimen and useful, like other cypresses, in property borders and the like. Good in low water landscapes.

macrocarpa. Monterey cypress. Seen in its natural setting along California's central coast, this is a dark, wind-sculptured mass with picturesque contorted trunks. Released from the torturing elements, it can become a gigantic tree, sometimes outgrowing its roots and toppling in most undignified fashion. It is basically pyramidal in form, with long "arms" of side branches. The foliage is bright green on young trees, darkening as they mature. The cones are decorative, if they can be seen among the foliage mass. **'Aurea'** is a selection with permanently (or nearly so) feathery, juvenile foliage of lime yellow and a dense "flame shape" habit. **'Citriodora'** is a compact and relatively slow-growing cultivar with brilliant yellow new growth, changing over the course of its first year to deep green, giving a nicely bicolored effect. It is also quite noticeably fragrant, as the name suggests. **'Saligna Aurea'** is challenging even to describe. The main trunk grows generally upright, but the side branches and long branchlets weep in irregular patterns like some of the pendulous cedars. Added to this is the bright golden color of all but the oldest shoots, usually hidden well inside the gold. It is a spectacular front-yard and container specimen.

All forms of Monterey cypress are at their best close to the coast, where summers are cool. They are prone to some root rots and disfiguring foliar diseases and pests in the hotter interior. All should be hardy to around 10 degrees F.

CYCLAMEN. Europe, the Middle East and Africa. Nearly everyone is familiar with the florist's cyclamen, derived from *C. persicum* and sold especially for strategic holidays. But there are many more choices. These are perennial plants of the primrose family, growing from long-lived tubers. They have crowns of usually long-stalked, round to heart-shaped basal leaves. These are often patterned with white or silver on the upper surface and tinged with red or purple beneath. The flowering stems are produced separately from the tubers, each carrying one beautiful nodding, often fragrant blossom with five broad, swept-back petals. The flowers of some species (including the original *C. persicum*) are delightfully fragrant. Some will tolerate full sun near the coast. However all are most at home in light shade, where they will self-seed and naturalize over time. They are also fine subjects for large pots. It is best, and in some cases essential, to let them go dry when dormant—which is usually in summer, making it possible to plant them under oaks and in other untended spots. They need well-drained soil and moisture during the growing season, which usually coincides with our rains. Their hardiness varies widely.

gaecum. Greece and Turkey. This is our personal favorite of the group. It has broad leaves, with angled lobes in this form, held close to the ground. They are beautifully and quite variably patterned with silver-grey on the upper surface. The flowers are about 1 inch long, pink to white with darker base and delightfully fragrant. It is one of the more tender species but should still take bouts of around 20 degrees F.

hederifolium. Mediterranean region. If you know any but the florist's cyclamen (hybrids of *C. persicum*), it will probably be this one, since the tubers are sometimes available on the fall bulb market. It often flowers from the bare tubers in fall, carrying $\frac{3}{4}$ -1 inch, usually pink and sweetly fragrant flowers on 3-6 inch stems. Then come leaves in a wide variety of shapes, sizes and color patterns (some are of nearly metallic silver), sometimes lying nearly flat on the ground. Nearly all are beautiful. This is one of the best species for naturalizing, and is hardy to about 0 degrees F.

persicum. Iran to northern Africa. This is the ancestor of the florist's cyclamen. Sadly some of its best features have been lost in the process of creating larger, more vividly colored flowers and more controllable growth. In this material, which includes collections from northern Africa, the plants are of quite variable size, though usually 8 inches or less in height. The leaves are large and heart-shaped, with a wonderful variety of markings; some are silvery nearly throughout. The flowers are up to 2 inches long, in this material mostly white or light pink with purplish red centers, and delightfully fragrant. Its only drawback is its tenderness to cold. Plants should be protected at temperatures below 20 degrees F.

DANTHONIA californica. California oat grass. With a range from California through western North America, with populations also in Chile, this modest bunchgrass can be expected to be fairly adaptable. It develops into a low, dark green mound that sends up foot-long, arching stems tipped with triangular seed heads in spring. Leaves may develop a purplish flush, and plants are fully dormant with summer drought. Often found in meadows and at forest edges, this grass does well in partly shaded dry gardens. Sun to part shade, most soils, moderate to little watering. Hardy to 0 degrees F. or less.

DASYLIRION wheeleri. Desert spoon. A sculptural perennial from the southwest U.S. and Mexico. It forms a stately hemispheric clump, with long tough grey leaves with sharp serrated margins. It can produce an 8-12 foot spike studded with whitish flowers in summer. Desert spoon is widely planted in dry climates, both as a large specimen plant and in groups on larger banks. Occasional summer watering will encourage faster growth. Sun, well-drained soil, occasional to little watering. Hardy to 10 degrees F. or less.

DELOSPERMA. Hardy iceplant. Southern and East Africa. Delospermas are a group of succulent perennials related to the common iceplant, formerly known mostly for the carpeting ability and day-glow flowers of some species. More recently a few have begun to be appreciated for their hardiness. The following are low mats with small, succulent leaves, excellent small-scale ground cover and controllable enough for rock gardens. They delight in sun, reasonably well-drained soil, with moderate to occasional watering. All of the following are hardy to 10 degrees F. or less.

congestum. This species makes very dense low cushions of rounded green leaves, dotted with bright yellow flowers in the summer months.

lavisiae. This one forms broader mats, up to 2 feet wide. It has densely packed, narrow green leaves and is covered with bright magenta flowers in spring.

sutherlandii. A similar mat, with medium green succulent leaves. It flowers in spring and summer, the flowers colored a vivid red violet.

DENDROMECON. Bush poppy. California. These are definitely not your grandmother's poppies. To begin with, they are true shrubs or even small trees, with greyish to straw-colored bark and thick oval to lance-shaped (or even narrower) leaves. The leaves range in color from dark blue-green to ghostly grey-green. During spring and summer (unless an end is forced earlier by extreme drought), they carry a profusion of brilliant yellow, broad-petalled blossoms,

followed by long, beak-like seed pods. The bush poppies are plants of sunny habitats, usually on slopes or with rocky or sandy soils, dry in summer, and need similar sites and treatment to thrive in the garden. However, they're well worth the extra effort. Few shrubs are more unusual or colorful as these. Hardiness varies as shown.

harfordii. Island bush poppy. This is the giant of the genus, seen as a large shrub or even small tree on California's Channel Islands. Its distinctive features include 3 inch pointed-oval, blue- to greyish green leaves, and a profusion of 2-3 inch blossoms, first appearing in spring and only gradually dwindling through summer and fall. It is the easier species to grow in the garden. Hardy to 20 degrees F. or less.

rigida. Bush poppy. A sturdy, erect shrub found in dry chaparral habitats nearly throughout California below 5000 feet. It has narrower, sometimes greyer leaves than *D. harfordii*, and a generally shorter flowering season during spring and early summer. Ours will probably be hardy to 10 degrees F. or less.

DICHELOSTEMMA. Wild hyacinth. California and the West. This is one of a trio of genera formerly included in *Brodiaea* (some species still reside there) and includes some of our most familiar (and welcome) native "bulbs". These are cormous perennials that quickly form dense colonies—or would, if they were not eaten in the wild by everything from humans to field mice. Their leaves appear in late winter and spring; they are narrow and often long (up to a foot or more), with a ridge or "keel" below. Slender flowering stems rise to varying heights above them in spring, carrying clusters of bell-shaped or cylindrical blossoms. The flowers are beautifully colored and often show a crystalline sheen. These are perfect bulbs for container culture, fine in the rock garden and for naturalistic meadows, if protected with rocks or hardware cloth from predation by rodents. Sun, most soils, complete summer drought after the plants have died down for the summer. The following are hardy to 15 degrees F. or less, in some cases much less.

capitatum. Blue dicks. This is the one native "bulb" familiar to nearly everyone who visits the California wilds in spring, and found from coastal woods to desert hills. The plants are robust, with leaves up to a foot long and flower stems rising as much as two feet to display dense, long-lasting lavender to violet (occasionally rosy or white) flower clusters. A strain from the Channel Islands identified as "**giant form**" is exactly what the name implies, with prolific growth and flower stems to at least two feet. In years with abundant rainfall, plants of this species continue to produce new flowering stems for many weeks.

multiflorum. Wild hyacinth. This northern California species inhabits foothill grassland and open woodland habitats. It produces rounded, many-flowered clusters of dark lavender blue flowers on 12-18 inch stems in spring.

DIETES. Africa. A group of evergreen perennials formerly included in *Moraea* (which is now restricted to cormous species). All resemble the iris in foliage and flower. The blossoms are short-lived but produced in lengthy succession on branched stems. They are much used (and abused) in low-maintenance mixed plantings and borders. Sun or light shade, most soils, moderate to little watering. Hardy to 15-20 degrees F. except as noted.

bicolor (*Moraea bicolor*). This species has narrowly erect, 2 foot leaves, slightly exceeded by the branched flower stems in summer. The 2 inch blossoms are a lovely pale yellow marked with dark brown. '**Liz's Selection**', introduced by San Marcos Growers, produces abundant crops of unusually large flowers.

iridioides (*D. vegeta*, *Moraea iridioides*). Fortnight Lily. A vigorous grower, producing many narrow 2 foot fans of bluish green leaves. Branched flower stems may rise as much as 4 feet to display an almost continual succession of short-lived 3 inch blossoms, white with gold and lavender markings. '**Variegata**' is distinguished by pale cream-yellow leaf margins. A recent addition for us is an unnamed, **gold-variegated** selection, with otherwise the same features as 'Variegata'.

DIGITALIS x mertonensis. Strawberry foxglove. Strawberry foxglove is a reputed hybrid of *D. grandiflora* and *D. purpurea*, much resembling the second parent. It has broad, deeply veined leaves, dark and shiny on their upper surface, paler and hairy beneath. In summer it bears several 2-3 foot stems, each crowded with broad rose pink bells, marked inside with white and brown. This is an attractive plant for flower gardens and mixed perennial plantings. Sun to part shade, most soils, moderate to occasional watering. Hardy to 0 degrees F. or less.

DUDLEYA. Live-forever. Odd succulents inhabiting rocks and cliffs in California and parts of the Southwest. They have single or branching, ground-hugging rosettes, sometimes elevated in older plants on short trunks. The leaves are large (to 6 inches or more), flat to cylindrical and often covered with white, waxy powder. Small bell shaped flowers, painted cream or yellow to red, are carried in open clusters above the foliage in spring and summer. They are ideal subjects for containers of various sizes, according to their size and habit, and some are fine bank and rock garden plants. With so many good features, we have gotten a bit carried away with the dudleyas, as you can see below. Sun, well-drained soil, only occasional summer watering when established. Hardiness varies from below 10 to 25 degrees F.

brittonii. A robust species, native to Baja California. It forms dense crowns of tapered leaves up to nearly 1 foot long, completely covered with white, waxy powder. The flowering stems are 1-3 feet tall and bear clusters of pale yellow blossoms in summer. A spectacular container plant. Hardy to 20-25 degrees F.

caespitosa. As it is seen on our central and southern coast, this is a highly variable species which hybridizes and intergrades with several others. Plants of the current material can make just a few or many shoots from a narrow base. Each consists of a tight rosette of grey-green, rather narrow leaves up to 8 inches long. The flowering stems are branched and 1-2 feet high, with many bright soft creamy yellow flowers. Probably hardy to 15 degrees F. or less.

cymosa. This plant is a common sight on cliffs and rocky hillsides in northern California. It has compact rosettes with relatively broad, nearly flat leaves. Bright yellow to scarlet flowers are carried in open sprays on 4-8 inch stalks in late spring and summer. Usually hardy to 10 degrees F. or less. The subspecies *pumila*, low canyon dudleya, is smaller overall. It has broadly triangular greyish leaves, often flushed with purple, and reddish orange flowers. It may be generally a bit more tender than the species at large (assume 15-20 degrees F.).

edulis. San Diego dudleya. Also known as the string bean dudleya, this southern California species has round light green leaves in a dense starburst-style rosette. Branched flower stems with creamy white flowers arch over the foliage in spring and summer. Hardy to around 15 degrees F.

hassei. A native of Santa Catalina Island. It has short, closely branched trunks and densely clustered, narrow leaves. As in the last species, the leaves are covered with whitish powder. Nearly white flowers are carried on 8-12 inch stems. This species is attractive as a small scale ground cover. Hardy to 20 degrees F. or less.

lanceolata. Lanceleaf dudleya. This is one of our local natives on the Central Coast, often seen along the summits of sand dunes. Its narrow grey-green leaves form a low rosette, but flower stems can rise a foot or more above the foliage. Flowers are typically a striking bright yellow. Probably hardy to 15 degrees F. or less.

pulverulenta. A southern California native with spectacular large rosettes. The leaves measure individually up to 10 inches long and are quite broad. They are densely covered with white powder. Openly branched stems over 1 foot tall bear many attractive light red flowers. This is a fine plant for walls and rockery, where it can grow facing out, with water draining away from the crowns; otherwise, it needs some protection from winter rains. Hardy to 15 degrees F. or less.

DYCKIA 'Morris Hobbs'. South America. An unusual perennial forming stiff rosettes that measure a foot or more across. The spine-margined leaves are narrow and tapering, thick and dark green in color, heavily tinged with purple when exposed to full sun. The marginal spines are thick, curved and greyish, forming striking margins around the leaves. The branched flower stalks rise 2-3 feet. Crowded, bright orange blossoms open in succession along the side shoots. This is a plant of exposed and arid places and makes a showy specimen for open banks and for containers (though dividing them when they outgrow their pots is not a pleasant task). Sun or light shade, well-drained soil, moderate to occasional watering. Hardy to 15-20 degrees F.

ECHEVERIA. Hens and chicks. Mexico and Central America. These are showy succulent perennials, related to and generally resembling our native dudleyas, described above. They have a devoted—some would say fanatical—following. Those of ornamental interest form low rosettes of broad, often colorful leaves. Short tubular flowers are carried in spreading clusters on stalks above the leaves in various seasons, mostly summer. These are excellent subjects for pot culture and in plantings with other succulents; the smaller ones are interesting, too, in rock gardens. Sun or light shade, well-drained, preferably sandy or gravelly soil, occasional watering. Many are quite tender (their chief drawback).

cante. One of the most striking for foliage, this species from Mexico makes single rosettes of pale grey-green leaves, often shaded or lined with red on the leaf margins. Orange and yellow flowers are held on 18 inch stalks, mostly in summer. Hardy to about 25 degrees F.

'Imbricata'. Hens and chicks. This is an old "grandmother's garden" plant, of easy cultivation. Broad succulent blue-grey rosettes with rose pink edges produce offsets to make a wide patch. Small yellow flowers are held on coral pink stems that arch over the tight foliage. Hardy to 20-25 degrees F.

ECHIUM. Mostly the Mediterranean region. These interesting plants are related to, but of much bolder texture than, the common forget-me-nots. Most have heavy stems, large hairy leaves and display quantities of small blossoms in intricately branched clusters. The following include one shrubby species and a spectacular biennial. Sun, well-drained soils, occasional to no supplemental watering when established. Hardiness varies.

fastuosum. Pride of Madeira. A widely branched shrub of 3 feet or more, carrying its long greyish leaves toward the branch ends. In late spring it is crowned by huge, dense spikes of tiny deep to medium blue or purple flowers. **'Cielo del Sur'** was selected for its particularly bright, true-blue flowers. Hardy to 20 degrees F. or less.

wildpretii. Tower of jewels. This striking biennial has two distinct stages of life. It passes its first year as a large ball of silvery, sword shaped leaves. Early in its second year it begins to elongate into a 4-8 foot tower of tiny buds, which open in late spring and summer into rose pink blossoms. Hardy to about 15 degrees F.

ENCELIA. Bush sunflower. California and the West. A small group of shrubby daisies, ours found from the coast to the deserts in southern California. They have roughly oval to lance-shaped leaves that range from deep green to nearly

white in color. Their most distinctive features (in the species that have ray flowers, the "petals" of common daisies) are large yellow flower heads usually carried well above the foliage. They are particularly well suited for banks and berm plantings, thriving in full sun, with well-drained soil and occasional to very little watering when established.

californica 'El Dorado'. Bush sunflower. This is a common shrub in large areas of southern California, lighting up the chaparral in spring and early summer. It is round to dome shaped, up to 5 feet high, dressed with dark green lance shaped leaves. The flower heads are carried singly above the leaves, 2-3 inches broad and colored bright yellow with dark centers. Of the two species described here, it is clearly the easier to grow. Hardy to 20 degrees F. or less.

farinosa. Brittlebush. It is always a treat to see this plant on spring drives and hikes through the California desert. Brittlebush is one of our showiest desert shrubs, making a compact dome up to 2 feet tall. Broad, silvery leaves with 2-3 inch blades make a striking display. Sprays of golden yellow daisy flowers are held on long stalks above the foliage from March to May. Hardy to 15 degrees F. or less.

EPILOBIUM. Fireweeds and California fuchsias. Nearly worldwide overall; the following are native to California. California fuchsias are showy perennials that spread by underground rhizomes, the feature being much more pronounced in some species and individuals than in others. Some have woody, trunk-like bases, while others produce seasonal shoots directly from the ground. The leaves are usually narrow and hairy, thickly clothing the stems. In late summer and fall, they put forth a dazzling display of clustered tubular, usually scarlet blossoms. They are striking features of mixed plantings and borders and are unsurpassed as attractors of hummingbirds. Sun, most soils, moderate to little or no watering when established. Hardy to 0-10 degrees F. in most cases, though the southern forms might be a bit more tender.

canum ssp. canum. California fuchsia. As now conceived, this subspecies includes what were formerly known as *Zauschneria californica*, of northern California, and *Z. cana*, of the south. It is an extremely variable entity, at least in vegetative habit. It may be matting, mounding or shrub-like, though in cultivation most forms spread vigorously by rhizomes. **'Catalina'**, selected by Mike Evans of Tree of Life Nursery, is the showiest of the taller (to 5 feet or more) forms yet introduced. It has unusually broad, nearly white leaves and large, brilliant flowers. **'Carman's Gray'** forms a dense, spreading mat with erect shoots up to 18 inches, lined by narrow bright grey leaves. **'Cloverdale'** is a prostrate, slightly mounding selection with particularly broad, bright grey leaves and typical flowers. **'El Tigre'**, our own selection from El Tigre Peak on Santa Cruz Island, forms broad, dense mats with small, narrow, greyish green leaves. These form a beautiful foil for the 1½ inch scarlet blossoms displayed in September and October. **'John Bixby'**, a Rancho Santa Ana introduction, has particularly soft greyish green leaves on low spreading stems, and large scarlet flowers. The name of our **'U.C. Hybrid'** has been disputed by the good folks at the U.C. Botanic Garden but has been grown and sold that way for so many years that a change hardly seems appropriate. This is a bushy plant with grey-green leaves, often blooming from July to October and bearing large clusters of scarlet 1½ inch blossoms. **'Sierra Gold'** is a sport of 'Sierra Salmon'; it does not flower profusely, but is best appreciated for its bright creamy yellow margined leaves. **'Silver Select'** has amazingly bright grey foliage and typical bright red flowers.

canum ssp. latifolium. Mountains of California and the Southwest. This is another diverse entity. Sometimes it is encountered as a few sprigs of foliage, poking up only a few inches from the ground. Sometimes it is seen as an 18-24 inch dome. **'Everett's Choice'**, selected long ago by Everett Butts, is a dense furry mound, up to a foot tall and 2-4 feet broad. It has exceptionally brilliant red flowers.

septentrionale. Plants of this species make silvery mounds or mats, otherwise similar to *E. canum*. **'Wayne's Silver'** is the best of a group of seedlings raised from seeds collected by Wayne Roderick. It makes a tight mound under 1 foot tall, with a metallic silver sheen to the leaves, and has large flowers of the usual glowing scarlet.

ERICAMERIA ericoides. Goldenbush. A twiggly California native shrub from coastal areas, growing 1-3 feet high. It has tiny green leaves and displays bright yellow daisy flowers in summer and early fall. It attracts beneficial insects and butterflies when it blooms. Prune it periodically to maintain good form. Sun to part shade, well-drained soil, occasional to little watering. Hardy to 15 degrees F. or less.

ERIGERON. Distributed mostly over North America. Perennial daisies of easy culture, though their requirements and uses in the landscape vary somewhat. Sun or light shade, reasonably well-drained soil, moderate to occasional watering as noted. Hardiness varies, though the following should endure 10 degrees F. or less.

karvinskianus. A trailing plant with many slender, leafy dark green stems, making broad mats or spilling over walls in dense curtains. It is seldom out of bloom and produces impressive displays of ¾ inch flower heads, the rays white above and pink beneath, in spring and fall. A useful plant for small-scale ground cover, walls and containers.

x moerheimii. A hybrid similar to (and probably derived from) the previous species, but somewhat more compact. It also has larger blossoms shaded with soft pink.

'W. R.' A chance hybrid involving *E. glaucus* and another anonymous native, found by Wayne Roderick. It is similar to *E. glaucus* in foliage, but the leaves are longer and packed more densely in basal rosettes. Several-branched

flower stems rise in summer, displaying large lavender flower heads with yellow centers. It appears to be more heat-tolerant than *E. glaucus*. This is a useful perennial for banks, meadows and mixed borders.

ERIODICTYON californicum. Yerba santa. Spreading by underground roots, this California shrub grows to 3-6 feet high. It is openly branched, often with nearly black stems. The tapered 2-4 inch leaves are deep green in color, shiny and resinous. Clusters of bell shaped lavender flowers are carried at the shoot tips in spring. Useful to stabilize soil on banks, in dry borders or for naturalizing. It is a valuable nectar source for many butterflies and native bees, as well as the larval food for a few. Sun to part shade, occasional to little watering. Hardy to 15 degrees F. or less.

ERIOGONUM. Wild buckwheat. North America. This is an immense group of western natives, encountered from coastal bluffs to mountain peaks and the desert floor. The following are California native shrubs with decorative, often woolly leaves and tiny, brightly colored blossoms borne in dense clusters. They have a wide variety of uses in the landscape, from ground cover and the rock garden to bold specimen shrubs, according to size and habit. Most are attractive to beneficial insects and butterflies. Sun, well-drained soil, little or no watering when established. Hardiness varies considerably.

arborescens. Santa Cruz Island buckwheat. A gnarled, tree-like shrub of about 5 feet, with attractive cinnamon trunks and narrow bluish green leaves. It is decorated much of the year by broad, flat heads of creamy flowers, turning rust-colored in age. Hardy to 15-20 degrees F.

crocatum. Saffron buckwheat. A 1-2 foot shrub remarkable for white stems and foliage and contrasting heads of chartreuse-yellow blossoms, opening from brown buds in summer and fall. It demands excellent soil drainage. Hardy to about 15 degrees F.

elongatum. Wand buckwheat. This interesting shrublet holds its foliage close to the ground. In summer, however, slender silver stems rise as much as 3 feet and carry rounded clusters of light pink flowers along their length. Hardy to 15 degrees F. or less.

fasciculatum. California buckwheat. The typical form of this species makes broad mounds usually 1-3 feet tall, with clustered, very narrow leaves. The compound flower clusters are creamy white to pink, turning an attractive rust color in age and giving a rich, rusty glow to the chaparral in fall. We offer plants from selected seeds of the variety ***foliolosum***, with deep green to grey-green foliage and masses of white to light pink flowers. These should be hardy to 10 degrees F. or less. The variety ***polifolium*** hails from our interior mountains and deserts. It is similar in habit to the type species but has broader, usually grey-green leaves. Our material should be hardy to 0 degrees F. or less. Less hardy, but useful as a bank cover, **'Warriner Lytle'** is completely prostrate, making a broad, ground-hugging mat. It should be hardy to 20 degrees F. or less.

giganteum. St. Catherine's lace. A striking shrub of 4 feet or more, clad with large woolly, grey leaves. In summer and early fall it carries huge flat clusters resembling those of some giant yarrow. They are cream colored, turning rust red in age. The natural hybrid ***x blissianum***, combining this species and *E. arborescens*, above, is intermediate between the two in its features. It has soft grey, narrowly oval leaves; its broad flat flower heads are white. Hardy to 20-25 degrees F.

grande var. rubescens. Red buckwheat. Red buckwheat is a low, spreading shrub, usually 1-2 feet tall when not in bloom. The leaves are fairly large, crinkled, medium green above and covered with white wool beneath. In summer many ball shaped heads of pink to rose-colored blossoms are carried above the foliage. **'Rosy Cushion'** is a bee hybrid or genetic deviant of this species selected at Suncrest, with very congested growth, forming a tight mat or mound. The flower stems rise only 6-12 inches, displaying many dark rose flower clusters. Hardy to 15-20 degrees F.

latifolium. Coast buckwheat. Coast buckwheat is a common local native, growing on and near coastal dunes. The main body of the plant is usually a foot or less tall. The crinkly leaves are broadly oval and can be green to light grey. Flower stems rise to 18 inches carrying "pompons" of cream to pinkish flowers. Bloom is abundant in spring and summer, attracting all manner of beneficial insects, bees and butterflies. Hardy to around 15 degrees F.

parvifolium 'Moss Landing'. Cliff buckwheat. Another coastal California buckwheat, found on bluffs and dunes near the sea. This selection grows 1-2 feet tall and about 3 feet broad. It has wedge shaped green leaves with white undersides and round heads of light pink flowers in summer. Stems are intertwined to form a dense low mass. Hardy to 15-20 degrees F.

umbellatum var. polyanthum 'Shasta Sulfur'. Sulphur flower. A beautiful grey-green mound, growing 1-1½ feet tall and about 3 feet broad. It is adorned in spring by many round heads of sulphur-yellow flowers. Other, dwarfer selections are in and out of production. All may need some supplemental watering in hot summer areas. Hardy to below 0 degrees F.

umbellatum [var. subalpinum]. This is our best guess regarding the identity of a beautiful little buckwheat. It forms a flat mat that roots as it spreads, with oval green leaves. Short stems carry round heads of creamy white flowers, adopting rosy hues as they age, in spring. This variety does not appear in California, but is from the intermountain

region of the western U.S. Hardy to 0 degrees F. or less.

wrightii var. subscaposum. It is impossible to hike the high Sierra without seeing and enjoying this little shrub. Sometimes it is so abundant that, from a distance, it creates a grey haze over rocky slopes. It lies close to the ground, sometimes mounding to a foot or so after several years. The stems are slender and (usually) closely branched. They are lined by narrow, grey-green to nearly white leaves ½ inch or less long. In later summer and fall it produces airy, often intricately branched sprays of tiny white to pink flowers, which take on an attractive rusty shade when they finally wither. This is a fine plant for rock gardens and sunny banks. Hardy to below 0 degrees F.

ERIOPHYLLUM. Golden yarrow, sunshine daisy. Western North America. Annuals, perennials and shrubs, nearly always showy and often dazzling in flower. Most branch freely to make compact mounds and mats, generally with woolly stems. Leaves are often toothed or divided, and often conspicuously white-woolly at least on their lower surface. They are beautiful on banks, in meadows and in mixed perennial plantings. All thrive in full sun, with moderate to infrequent watering when established. Hardiness varies as described below.

confertiflorum 'Lucia's Gold'. Golden yarrow. A low shrublet forming a compact mound, with lobed grey-green leaves with white undersides. Flowering is profuse in spring and early summer, with packed heads of small yellow daisies providing a bright display. The show may be extended through summer by shearing and a little irrigation after each wave. This is a candidate for the rock garden and dry border, or an interesting addition to a sunny bank. Hardy to 10 degrees F. or less.

lanatum 'Siskiyou'. Woolly sunflower. Woolly sunflower is among the classic "roadbank plants" of California. It is mounding in habit, with grey-green lobed leaves and nearly white stems. The bright yellow daisy flower heads are of variable size. The cultivar 'Siskiyou' is especially vigorous and floriferous, spreading quickly and producing sunshine yellow flowers for a long period in spring and summer. The flowers are nearly 2 inches broad. Hardy to 10 degrees F. or less.

staechadifolium. Lizard tail. You may have passed this shrub many times on visits to the coast, noticing it only for its dense habit and oddly bitter aroma. During the summer, however, its rather quiet character is transformed by generous displays of clustered yellow daisies. The plants are round to spreading in form, quite densely branched and up to 3 feet high. Stems are white-woolly but often nearly hidden by the foliage. The leaves are deeply divided and greyish at first, dark green when mature. It presents its golden half-inch flowers in dense, often many-flowered clusters, reminiscent of those of the yarrows. Plants of our material are probably hardy to 10 degrees F. or less but may be less tolerant of summer heat than other species.

ERODIUM. Crane's bill. Europe, Asia, Africa. These geranium allies include some noxious weeds, many rather plain plants and several really showy ornamentals. The latter come in a wide variety of shapes and sizes, their common features including attractively lobed or dissected leaves and generally small, geranium-like blossoms. **Erodium chrysanthum** features tightly clustered crowns of silvery, narrowly dissected leaves. These form a lovely background for sprays of large, soft yellow blossoms, produced throughout the year. It is suitable for rock gardens and containers, delighting in a sunny spot, with well-drained soil and moderate to occasional watering. Hardy to 10 degrees F. or less.

ERYNGIUM maritimum. Sea holly. Central and Eastern Europe. Sea holly is a perennial of almost otherworldly appearance. The entire body, excepting the flowers, is colored a ghostly blue-grey. It has broad, crisped and spine-toothed basal leaves, leathery in texture, which form a low crown. From this, in summer, issues stout flowering stems, up to 2 feet high, topped by circles of showy, spiny bracts. These surround light blue flower heads. Sea holly is a striking addition to the border and to mixed perennial plantings. Sun, most soils, moderate watering, hardy to 0 degrees F. or less.

ERYSIMUM. Wallflower. Widespread in temperate regions. Showy perennials and subshrubs of the mustard family, varying widely in habit. They have narrow, usually toothed leaves and fragrant four-petaled blossoms painted white to yellow, orange, red or purple. They add a bright spot of color to the perennial border, and some are sufficiently well-behaved for the rock garden. Sun, reasonably well-drained soil, moderate to little watering when established. Hardiness varies.

concinnum. Pt. Reyes Wallflower. A coastal native with short, stout stems, tipped in spring by clusters of white to pale yellow, delightfully fragrant blossoms. Hardy to 15 degrees F. or less.

hieraciifolium (previously listed as *E. asperum*). Siberian wallflower. There is rampant confusion about the correct identity of this plant, and even the latest designation is dubious. However, it remains as beautiful as ever. It grows erect, with closely branched trunks, to 1-2 feet. The leaves are quite narrow and toothed. Masses of bright orange flowers grace the plant in spring and summer. Shearing off spent flower stems will promote further waves of bloom. Hardy to 0 degrees F. or less.

ESCALLONIA 'Fradesii'. Escallonia. This is surely one of the most used and abused shrubs in California. It is unusually bushy, even without pruning, and carries a lush coat of deep green, slightly convex leaves. It flowers most

heavily in summer but is seldom entirely out of bloom, producing medium-sized clusters of bright pink flowers. Though most attractive as a free-standing shrub, it is sufficiently tolerant of pruning to serve in large hedges. Sun to part shade, most soils, moderate to occasional watering. Hardy to 15 degrees F. or less.

ESCHSCHOLZIA californica [var. *maritima*]. California poppy. This coastal selection of the California poppy is distinct in both flower and habit. It is a short-lived perennial, spreading from a central crown to form a mat of divided blue-grey leaves. Vivid golden yellow flowers with orange centers can appear from spring to fall with occasional watering. This coastal form of California poppy is a tidy garden plant. As the summer progresses, it is less inclined to develop mildew than the common brilliant orange flowered California poppy featured in wildflower packets. Sun, reasonably drained soil, moderate to little watering. Hardy to 15 degrees F. or less.

EUPHORBIA. Spurge. Nearly worldwide. A vast genus ranging in plant type from annuals to trees. Many have milky--usually poisonous--juice. The flower clusters are often showy, but what appear to be the flowers are usually the bracts below them (the actual blossoms are without petals and usually not obvious). It is impossible to make many other generalizations about a group so large. However, the following are hardy and easily grown, delighting in sun or light shade and reasonably well-drained soil, with moderate to occasional water. Wear gloves and a long-sleeved shirt when handling them, and don't plant them where children play! The juice of species like *E. characias* and *E. myrsinites* nearly leaps out of cut stems and can raise blisters and damage the eyes.

amygdaloides. Wood spurge. Europe and western Asia. This is a perennial with clustered, erect stems from a narrow base. It can grow over 2 feet high, though the cultivated forms are usually smaller. Deep green leaves up to 4 inches long are loosely set around the stems. The flower clusters are open and rise well above the foliage, showing bright lime-green "flower leaves". '**Purpurea**' is a relatively short, dense form with reddish stems, beautifully purple-tinged leaves and some purple shading in the flower clusters. The flowering season extends from mid-spring into summer, at least along the coast. The **subspecies robbiae** is a rhizomatous perennial, making thick colonies. The individual stems are erect, 12-16 inches high and have broad, whorled leaves. The leaves are thick and leathery, deep green and shiny above, paler beneath. Flower clusters are rather open, with light green leaves and bracts. Hardy to 10 degrees F. or less.

ceratocarpa. Italy and Sicily. This is a more open plant, growing nearly erect, with several slender stems rising two to five feet from a common base. It has rather loosely set, narrow pale green leaves, up to 3 inches long, with conspicuous lighter midribs. It has a long flowering season beginning in late spring, displaying broad floral sprays with cheery yellow leaves and bracts at the shoot tips. Altogether, it gives an unusual and beautiful impression. Hardy to 20 degrees F. or less.

characias. Mediterranean Region. One of the true spectacles of the group, though it is definitely not for everyone. The plants are nearly shrubby, sending up several thick, leafy stems, 2-5 feet high, from a woody base. The leaves are up to 4 inches long, rather narrow and colored an unusual blue- or grey-green. In late winter and early spring the flower clusters unfold at the tips of second-year stems, becoming broad towers as much as a foot long. The floral leaves and bracts are painted brilliant chartreuse to yellow and hold their color well for several weeks after the flowers have gone. The little flowers themselves are bright green, making a pleasant contrast. The subspecies **wulfenii** is even larger, in all its parts. The cultivar '**Portuguese Velvet**', evidently from the type species, is considerably smaller and distinguished by darker, greener leaves with a strikingly velvety surface. It also has the odd habit of producing small plantlets at the ends of the flower stems, providing an easy means of propagation. '**Glacier Blue**' (PP#19027) is a mounding perennial having very distinctive frosty grey leaves with creamy edges; spring flower heads also combine misty grey and cream. '**Tasmanian Tiger**' (PP#15715) has creamy grey-green leaves with broad cream edging. Flowers are cream-colored. All are hardy to 0-10 degrees F.

cyparissias. Cypress spurge. Europe. Cypress spurge travels slowly in all directions by rhizomes and makes broad, billowy mounds up to a foot (or slightly more) high. The slender stems are well branched and lined by brushes of very narrow 1-2 inch leaves, giving a delicate appearance. The leaves are bright to light green or blue-green in color. For several weeks in late spring and summer it is nearly covered by umbrella-shaped flower clusters showing bright greenish yellow bracts. '**Fen's Ruby**' is a particularly short, dense selection with blue-green leaves, strongly tinged with purple in new growth. All forms are winter-deciduous in colder climates. These are delightful plants for borders, ground cover and open banks, in sun or light shade. While it performs best with moderate watering, it is fairly drought tolerant. You will probably have to rogue out some volunteer shoots and seedlings in unwanted places. Hardy to 0 degrees F. or less.

x martinii. This is a hybrid between *E. amygdaloides* and *E. characias*, both described above. The sturdy, upright stems and thick, narrow leaves resemble those of *E. characias*, but their beautiful reddish purple shading when young and the smaller plant size suggest the second parent. The flower clusters are elevated well above the foliage and are several inches long, with bright green to chartreuse leaves and bracts. For those of us cursed with heavy soil, this hybrid is easier to grow than *E. characias*. It is hardy to 10 degrees F. or less.

mauritanica. Pencil milkbush. An erect succulent shrub from South Africa, with rounded light green stems that exude white sap when injured. The actual leaves are small and held only briefly; clusters of yellow flowers appear on stem ends. Hardy to 20-25 degrees F.

myrsinites. Southern Europe. A striking low mound. Its thick, prostrate stems radiate from a narrow base. They are crowded with nearly triangular silvery leaves. In spring large yellow flower clusters are presented at the shoot tips. It will survive with little summer watering. Hardy to 0 degrees F. or less.

EURYOPS. Golden daisy bush. Africa. This is a genus of evergreen shrubby daisies, best known through one species, *E. pectinatus*, common in landscapes throughout central and southern California. They have bright green to grey-green leaves, sometimes divided, and showy yellow flower heads, often large and elevated above the foliage on stalks. Most are easily grown, thriving in sun and various soils, with moderate to occasional watering. They are useful in mixed plantings and shrubby borders. Hardiness varies considerably according to their origin.

tysonii. A neat, mounding shrub up to 3 feet tall, with small bright green leaves. Cheery half-inch, bright yellow daisy flowers are abundant along the upper stems in summer and fall. It is reputedly hardy to 10 degrees F. or less.

virgineus. Honey euryops. This is an intricately branched shrub growing up to five feet high. Tiny green leaves are closely held along thin flexible stems. Clusters of sweet smelling, bright yellow daisy flowers are massed at the stem tips in late winter and spring. Hardy to 20 degrees F., possibly less.

FALLUGIA paradoxa. Apache plume. Apache plume is a deciduous shrub native to mountains of higher deserts in California, the southwest and northern Mexico. It has arching branches with pale tan bark. Small creamy white flowers in spring are followed by feathery, pinkish seed heads that are particularly showy when backlit. This is an interesting shrub for the native garden, especially good for open banks. Give it sun, well-drained soil, occasional to little watering. Hardy to 0 degrees F. or less.

FEIJOA sellowiana. Pineapple guava. Brazil. A decorative shrub or small tree of the myrtle family, growing 10-20 feet tall. It has attractive tan to cinnamon trunks and is closely branched above. Deep green oval leaves with white undersides, up to 3 inches long, are paired along the younger stems. In early summer it makes a dramatic show of 1-2 inch flowers, each with a brush of red stamens, the reddish petals inrolled to show their white undersides. From these develop greyish green, thick-skinned fruits which, at their best, have a wonderful spicy flavor. There are several selected clones with various plant and fruit characteristics. 'Unique' is an incredibly productive selection with fruits of moderate size and excellent flavor. It is also entirely self-fertile (random seedlings may not bear well without others nearby for cross-pollination). Apart from the fruits, these are popular foliage shrubs. Sun, most soils, moderate to occasional watering when established. Hardy to 20 degrees F. or less.

FESTUCA. Worldwide, in temperate regions. Except for the lawn fescues and the ubiquitous blue fescue, *F. glauca*, this genus was long ignored for ornamental use. In the last couple of decades they have joined the horticultural mainstream. The following species make thick hummocks of narrow leaves. Their slender, wand-like flowering stems bear airy sprays of flower and seed heads. Though attractive for border use, most are best appreciated *en masse* on banks and hillsides, where they can also assist in erosion control. Sun or (for some species) light shade, well-drained soil, moderate to no supplemental watering when established. The following should be hardy to 10 degrees F. or less.

amethystina 'Superba'. Central and Eastern Europe. A beautiful small fescue, making tight 8-12 inch clumps. The leaves are quite narrow and dark bluish green in color. In late spring and early summer it bears feathery, pink-tinged flower clusters on 12-18 inch stems.

californica. California fescue. California fescue is one of the largest of the clan, broadly distributed in California. It is an elegant tall bunchgrass, clumping tightly at the base, with leaves arching to 2 feet or more. Graceful flowering stems rise 3-4 feet (or more) in summer, displaying open sprays of large flower heads. This fescue is among the most shade-tolerant of the genus and is perfect for planting under oaks. Our original selection, 'Blue Fountain', has been replaced by a whole race dubbed 'Gabilan Blues'. These are distinguished by beautiful pale blue leaves. A similar but unnamed group of seedlings with bright to deep green leaves is also offered, and some specific selections of outstanding form and color are on the way.

glauca (F. ovina var. glauca, cinerea). Blue fescue. Europe, especially Mediterranean region. Long before gardeners developed their current passion for the grasses, blue fescue was used in vast quantities in borders and banks for its bright spots of blue. Recently it has been displaced to some extent by the dozens of other ornamental grasses and sedges now available. However, at the same time, selected forms with particularly desirable features have appeared. These make leafy hummocks 6-12 inches high. The leaves are narrow and rolled. The flowering stems, rising well above the foliage, are decorative but often not freely produced. Both the stems and the flower clusters often have a blue or silvery cast, changing gradually to pale straw color. 'Elijah Blue' is an old standby, well known to many gardeners. The blue fescues are rugged grasses, reveling in full exposure, well-drained soil, and moderate to only occasional summer watering. Hardy to 0 degrees F. or less.

idahoensis. California and the West. This is a good example of the joys of prowling the backcountry of California. It was just one of many small treasures encountered on a trip to the Warner Mountains, one of our true botanical wonderlands. '**Warren Peak**' is our original selection, making 6 inch hummocks of very narrow leaves, bright green at first and becoming greyish green in age. The 1-2 foot blooming stems are silvery to pale pink in color. Both these and the glistening seed heads are most attractive. '**Muse Meadow**' is a more petite plant, with very fine, dark blue-green leaves. '**Stony Creek**', introduced by the Tilden Botanic Garden, is a more robust selection, with longer leaves of bright blue-grey and silvery flower stems.

mairiei. Atlas fescue. North and Central Africa. A popular species for naturalistic meadows in California, making fountains of narrow, pale green leaves. These are accented by slender, airy flower stems from spring into fall. This is one of the best grasses for all but the hot desert regions of California. Good in groups and masses and a tidy accent in mixed plantings.

rubra. Red fescue. California has many clumping forms of red fescue, whose spreading forms are used as lawn grasses. Typically ours are mop-like in habit, with limp, narrow, dark green leaves. '**Jughandle**' is distinguished by relatively short, sturdy stems and leaves but even more by its chalky bluish green color. '**Molate**' is more spreading, with soft, narrow blue-green leaves. It can be used in broad drifts for natural lawns and informal meadows. Both should be considered as one of the more shade- and water-tolerant of the fescues.

FRAGARIA vesca ssp. californica. Woodland strawberry. Our native subspecies of woodland, or alpine, strawberry spreads quickly to form a wide cover in shade. Small white flowers appear in spring, and tasty red berries can follow the flowers. Fast easy ground cover for sun or part shade near the coast, part shade inland, most soils, and occasional watering. Hardy to 10 degrees F. or less.

FRAXINUS dipetala. Flowering ash. In the interior hills of California, one finds many plants which hover at the borderline between tree and shrub. This is one such plant, related to many substantial street and shade trees in cultivation. It can grow up to 20 feet high but is often much less. The trunks are sturdy and usually upright, with upcurved to spreading branches and attractive smooth bark. Three- to seven-parted leaves with bright green, shiny leaflets up to 3 inches long are paired along the stems. Its most remarkable feature is its lacy panicles of small, glistening white flowers. These are followed by winged fruits resembling those of the maples, each about an inch long and decorative until they shatter in late fall. This is an attractive shrub-tree for individual display or use in group plantings with other dryland natives. Sun, most soils, moderate to only occasional summer watering. Hardy to 10 degrees F. or less.

FREMONTODENDRON. Flannel bush. Spectacular native shrubs and small trees, generally too large for the home garden, but amenable to some restraint through pruning. They have stout, sometimes gawky branches, fuzzy lobed leaves, and beautiful 2-4 inch blossoms varying in color from lemon yellow to burnt orange. These are spectacular specimen shrubs and small trees. They demand sun, very well-drained soil, and little or no watering when established. They are highly susceptible to a canker-like disease favored by moist conditions, especially with overhead watering. Hardy to 15 degrees F. or less.

'**California Glory**'. The most popular of a trio of hybrids introduced by Rancho Santa Ana Botanic Garden many years ago. It grows in a broad V to 20-30 feet if unpruned, though it can be restrained by early and frequent pruning (by all means avoid making cuts into old, heavy stems, which are slow to heal). In spring and early summer it bears a wealth of large, cupped, lemon yellow blossoms. '**San Gabriel**' is a similar member of the trio, with more widely open yellow flowers. Both are spectacular alone or in combination with other shrubs, like the larger ceanothus.

californicum. We are growing seedlings of this species, just to see what may turn up. The plants are generally arching in habit, with nearly horizontal side branches and pale greyish bark. The leaf blades are mostly around 2 inches long, furry on both surfaces. Flowers are smaller than those of the more familiar hybrids, but quite showy. Most are colored bright yellow. They tend to be borne in a short, intense burst. Hardy to 10 degrees F. or less.

'**Ken Taylor**'. This was a hybrid between *F. 'California Glory'*, above, and *F. decumbens*, an odd low-growing species with very hairy leaves and tawny orange-shaded flowers. '**Ken Taylor**' is considerably lower growing than the Rancho Santa Ana hybrids. It has arching stems covered with short hairs and grey-green, shallowly lobed leaves. Tawny orange and yellow flowers decorate the plant in spring and early summer.

'**Pacific Sunset**'. Another outstanding hybrid by the Rancho Santa Ana Botanic Garden. Like '**California Glory**', above, it grows upright to as much as 30 feet. It carries deep golden yellow 3-4 inch blossoms all along the stems in spring, or well into summer on actively growing plants. It seems to be the most resistant to disease of the Rancho Santa Ana hybrid trio.

'**Sungold Hybrids**'. This is our own seedling strain, originating with seedlings of '**Dara's Gold**', a beautiful pendulous hybrid from Santa Barbara Botanic Garden, which we could never successfully propagate on a commercial scale (we are still working on that). These plants produce dense, mostly spreading (sometimes prostrate) shrubs with smallish,

dark green leaves and gold to tawny orange flowers in spring and summer. It is an interesting group, from which further selections are being made.

FURCRAEA longeva. This yucca relative makes individual or multiple crowns, each with many narrow, pointed, arching leaves up to 4 feet long. They are toothed but not spiny along the margins. When each crown matures, after several years of growth, it sends up a widely branched candelabrum bearing hundreds of small greenish white flowers. More dramatic are the plantlets which develop at the nodes of the branches and hang on for several months. These give the plant an otherworldly appearance. It is easily grown in full sun or light shade, in most soils, with moderate to occasional watering. Hardy to around 20 degrees F, with some damage at 25 degrees and below.

GALVEZIA (GAMBELIA) speciosa ['Boca Rosa']. Island snapdragon. A charming native shrub whose branches arch to form a dome or mound usually 3-4 feet tall, dressed in satiny oval pale green leaves. It is further decorated in summer and early fall by clusters of bright red 1 inch blossoms resembling narrow snapdragons. *Gambelia* is the new genus name for this plant that has been well known as *Galvezia*. Sun, well-drained soil, little watering when established. Hardy to around 20 degrees F. or a little less.

GAILLARDIA aristata. Blanket flower. Southwestern states. This is a deciduous perennial daisy, rather plain-looking when not in bloom, that makes hummocks of narrow leaves. From these the flowering stems rise as much as 2 feet in summer and fall, displaying large, very colorful "daisies" on long stalks. They typically combine shades of yellow and red, with dark or bicolored centers. 'Amber Wheels' produces masses of flowers with golden yellow fringed rays surrounding a red center. They are easy to grow in flower gardens and borders, but best in lean soils in sun, with moderate to occasional watering. Hardy to below 0 degrees F.

GARRYA elliptica. Coast silktassel. California. Silktassels are vigorous native shrubs, mostly upright in habit and usually well-branched. Mature plants may reach 10 feet in height and produce thickets of shoots from the base. The dark green 2-3 inch leaves somewhat resemble those of a live oak in their shape and wavy margins. In winter and early spring heavy clusters of pale green, often purple-tinged catkins appear at the branch tips and elongate into pendant tassels up to 1 foot long. 'Evie' is an outstanding selection by Wayne Roderick, with leaves more closely spaced along the stems than in the better-known 'James Roof'. They are otherwise quite similar. Both respond well to pruning and may be used in large hedges and screens as well as free standing shrubs. Sun or light shade, reasonably well-drained soil, moderate to little supplemental watering when established. Hardy to 10 degrees F. or less.

GAULTHERIA shallon. Salal. A Pacific Coast native shrub, creeping or arching up to 5 feet tall, with considerably greater spread. The leaves are broadly oval, up to 4 inches long, and colored a deep, lustrous green, bronzy in new growth. The cut branches have long been popular as florists' greens. White to pale pink urn shaped blossoms are presented on 4-10 inch stems in late spring, developing into black-purple berries by fall. This is a beautiful shrub for planting with other woodland natives, like the huckleberries (*Vaccinium*). It prospers in part shade (or even sun near the coast), in loose, preferably peaty soil, with moderate to occasional watering. Hardy to 10 degrees F. or less.

GAURA lindheimeri. South-central States. One of the most elegant, and certainly among the toughest, of the evening primrose alliance. It is a many-stemmed perennial, the stems held quite erect and growing up to 5 feet tall. They are lined below with narrow bluish green leaves and branched above into long wands of narrow-petalled white blossoms, each about 1 inch broad. These open in succession throughout the summer months from light pink buds. 'Siskiyou Pink' is a bushy, lower growing selection by Siskiyou Rare Plant Nursery, with heavily red-tinged leaves and masses of medium to deep pink flowers. Further work with this plant has given rise to many other recent cultivars. Our own offering is a pure white-flowered sport of the original dubbed 'Siskiyou Snow'TM, retaining its bushy and floriferous qualities. All are beautiful in perennial borders and mixed plantings. Sun, most (even very poor) soils, moderate to no supplemental watering. Hardy to below 0 degrees F.

GENISTA lydia. This low tough shrub hails from Turkey and Syria. It is densely mounding, with nearly leafless arching, wiry stems. Vivid clear yellow flowers smother the branches in spring. This durable plant for dry gardens can be useful as ground cover, on banks or in dry borders. Sun, reasonably drained soil, occasional watering. Hardy to 0 degrees F. or less.

GERANIUM. Crane's bill. Worldwide, temperate regions. These are mostly smaller, slender stemmed perennials with rounded, often dissected leaves and—unlike the pelargoniums often sold under their name—regular (wheel shaped) flowers. Colors include some vivid purples and blues and wild magentas, as well as more subtle shades. They have a variety of uses in the border, for small-scale ground cover and sometimes for containers and rock gardens, according to size and shape. Most are easily grown in sun or light shade and most soils, with moderate to regular watering. Those described below are even fairly drought tolerant.

incanum. This South African perennial is a widely spreading plant with a decidedly fluffy appearance. The slender stems and undersurfaces of the leaves are nearly white with silky hairs. The long-stalked leaves are about an inch across and completely and narrowly parted. Reddish purple flowers, each a little over 1 inch across, decorate the plant

most of the year. It makes a beautiful ground cover, thriving in full sun and requiring only occasional watering when established. Hardy to 20 degrees F. or a little less.

palmatum. Mediterranean Region. This unusual geranium grows 2-3 feet high and gives a bold, tropical impression. Around the thick, upright stems are arranged very large (to 8 inches or more), five-parted and dissected leaves. These have a highly polished surface and are held on long, sturdy stalks. In the summer months broad clusters of 1-2 inch purplish red blossoms are carried at the branch tips. Sun or part shade near the coast, part shade inland (it combines beautifully with ferns in shady spots). Surprisingly drought tolerant, and hardy to around 20 degrees F.

GLADIOLUS. Europe, Africa, Madagascar. The plants described here are as distinct from the modern garden glads as species roses are from today's hybrid teas. They have erect, narrow leaves and carry several large, often beautifully colored, trumpet shaped blossoms on each slender stem. These are fine subjects for containers and in meadows (if predation by rodents and rabbits is not too severe). Sun or light shade, most soils, little or no watering after the leaves wither in spring. Hardy to 20 degrees F. or less; those which grow actively through the winter months are the more vulnerable to hard freezes.

x colvillei. These are hybrids between *G. cardinalis*, a spectacular red flowered species, and *G. tristis*, described below. They are of moderate size, with the slender stems and leaves of *G. tristis*. Flowers vary from white to deep red or purple, often with beautiful markings in the throat. The late Dara Emery, who was better known for his work with California natives, repeated this cross and outcrossed it with other species like *G. carmineus*, with some wonderful results. A seedling selection dubbed '**Grape Delight**' has reddish purple flowers with white markings. '**Rose Delight**' has rose pink flowers, dramatically marked with maroon. '**Painted Tips**' has pale pink flowers, each segment tipped with purplish red.

'Lemon Moon'. This plant is something of a mystery, having simply "appeared" in a group of seedlings of *G. x colvillei*, above. It is clearly derived from *G. tristis*, having that species' grassy leaves and slender stems. However, the flower segments are broader, the flowers open more widely, and they are a beautiful lemon yellow in color.

tristis. This has long been a favorite spring blooming bulb. Its grass-like 2 foot leaves appear in fall from tightly clustered corms. They are followed in early spring by slender 2-4 foot wands of cream-colored blossoms which are deliciously fragrant at night (put a pot of them by your doorstep for an evening treat). Our own selection, '**Moonlight**', is particularly floriferous and has moonlight yellow blossoms.

GLAUCIUM flavum. Horned poppy. Mediterranean Region. Having ignored this plant in seed catalogs for many years, we found it in full glory at the Denver Botanic Garden and were properly amazed. These are short-lived perennials or biennials that self-seed freely and perpetuate themselves in the garden. They form tight low crowns of deeply cut, pale blue-grey leaves, from which thick, branched stems issue in the second and succeeding summers to display a long succession of spectacular "poppies". The flowers are about 2 inches broad when fully open and have a silky sheen. Those of the typical form are bright yellow in color. The variety *aurantiacum* has vivid, deep orange flowers. These are striking subjects for mixed perennial plantings, wherever space permits. Sun, reasonable drainage, moderate to occasional watering. Hardy to 0 degrees F. or less.

GOMPHOSTIGMA virgatum. River star. A many stemmed evergreen shrub from southern Africa, dense and rounded in form. Its short, narrow grey leaves are closely held along flexible branches. Spikes of small white flowers appear at stem tips in spring and early summer. Sun to part shade, moderate to occasional watering, hardy to 10 degrees F. or less.

GRAPTOPETALUM paraguayense. Ghost plant. Mexico. An odd succulent perennial related to *Sedum*, ghost plant is sprawling in habit though well-branched. The leaves are up to 2 inches long, quite thick and pointed at the tips. They emerge with a distinct rosy cast, becoming grey-green with bronze undertones. In early spring it displays waxy pale yellow $\frac{3}{4}$ inch blossoms, spotted with red. This is an interesting plant for rock gardens, succulent menageries and containers. Sun or light shade, well-drained soil, moderate to occasional watering. Hardy to 20 degrees F. or less.

x GRAPTOSEDUM 'Vera Higgins'. This unusual succulent is a hybrid between plants of two different genera--*Graptopetalum paraguayense* and *Sedum stahlii*. It displays traits of both parents. Small reddish bronze rosettes are held at the tips of short stems and form a dense spreading mat. The yellow flowers in summer are not especially showy. Protect from hard frost. Sun to part shade, well-drained soil, occasional watering. Hardy to 25-30 degrees F.

x GRAPTOVERIA 'Debbie'. A hybrid between *Graptopetalum* and *Echeveria*, making tidy rosettes of thick succulent blue-grey leaves, flushed with smoky purple. Spikes of peach colored flowers rise over the leaves in summer. Probably best in part shade, with well-drained soil and occasional watering. Protect from hard frost, hardy to 25-30 degrees F.

GREVILLEA. Spider flower, toothbrush plant. An incredibly varied group of mostly Australian woody plants, ranging in habit from large trees to ground-hugging mats. Their leaves may be needle-like to nearly round, entire to lobed or dissected in many different ways. Flowers are presented in round to comb-like clusters and are often quite showy. They are irregular in form, shaped almost like little elephant heads. The Arboretum of the University of California, Santa

Cruz, has long been a source of new species and selections of this group, most recently through its Koala Blooms program. There are candidates here for nearly every shrubby use, from dramatic individual display to ground cover. Sun, well-drained soil (usually the poorer, the better), and occasional to no supplemental watering when established. Many grevilleas are sensitive to phosphorus, as well as to lime; *never* use high-phosphate fertilizers and, in general, feed them sparingly if at all. Their hardiness varies considerably.

'Bonfire'. One of the showiest of recent hybrid grevilleas, 'Bonfire' displays vivid red flowers among very narrow green leaves in spring and summer. Habit is erect. It is only suited to mild winter areas, as it is probably not hardy below 25 degrees F.

'Canberra Gem' ('Canberra'). A popular shrub for large landscapes, growing 8 feet tall or more, with larger spread. Its stiff branches are closely lined by dark green, needle-like leaves. It displays an abundance of cherry red flowers in spring. Hardy to around 15 degrees F.

'Constance'. Perhaps even more robust than the last, with broader leaves which are dark green above, nearly white beneath. It bears large clusters of orange-red flowers all along the stems in spring, often again in fall. Hardy to around 15 degrees F.

x gaudichaudii. One of the most unusual of the grevilleas suited for use in ground cover. It spreads to a diameter of 15 feet or more, its long, willowy stems lying flat on the ground. They are lined with 3 inch deeply lobed leaves, maroon in new growth and dark green when mature. Brushes of dark red flowers are borne along the stems in winter and spring. Probably hardy to 20 degrees F. or less.

***lanigera* 'Coastal Gem'**. *G. lanigera* has been in California for many years in one form or another, usually unnamed. 'Coastal Gem' is clearly the most interesting to date. This is a ground-hugging shrub, normally 1 foot or less in height and 5 feet or possibly more in breadth. The limber stems are crowded with furry, grey-green leaves, narrow in outline and ¼-½ inch in length. Crowded clusters of pinkish buds develop by early fall, opening gradually into deep rose-pink and cream-colored flowers. The show may last until March or April. This is a fine low-maintenance ground cover. This was one of the first selections available under the U.C. Santa Cruz/Koala Blooms introduction program. A taller cultivar with larger, otherwise similar leaves and larger but paler flowers has been widely marketed as **low form**. This one also deserves a place in the landscape, particularly where there is more ground to be covered or competitive weeds pose a problem. A more recent addition is **'Mt. Tamboritha'**, with greener leaves and pink and white flowers in spring. All are hardy to 20 degrees F. or less.

***lavandulacea* 'Billywing'**. One of the gems of the group, forming a dense mound of narrow, fuzzy grey leaves. The plant is nearly covered in winter and early spring by clusters of bright, nearly maraschino-cherry-red blossoms. It is one of the fussier of the grevilleas about soil drainage but fairly hardy, taking sudden bouts of 18 degrees F. or less when established. From the UCSC collection.

'Long John' (once listed as *johnsonii x longistyla*). This is a nearly round though openly branched shrub, growing 10 feet or more tall and spreading 15 feet or more (not a candidate for the postage stamp yard!). It has dark, upsweeping stems and deep green leaves up to 8 inches long, each divided into several long, narrow lobes. In early spring it carries clusters of large, showy red and pink blossoms at every node. Often there is a scattering of flowers through summer and fall. This is a spectacular shrub, easily grown and hardy to 20-25 degrees F.

'Noellii'. Until the flood of new grevilleas from the UCSC Arboretum, this was for many Californians "the" grevillea. It is a bushy shrub, growing 3-5 feet high, with arching branches. The soft bright green needle-like leaves have sharp tips. Rose pink flowers are clustered among the shoots in spring and summer. Hardy to 18 degrees F. or less.

'Poorinda Signet'. Another recent UCSC/Koala Blooms introduction, 'Poorinda Signet' is a dense rounded shrub to 6-8 feet high, with narrow green leaves, silvery grey beneath. Light pink flowers with dark pink styles decorate the plant in late winter and early spring. Hardy to around 20 degrees F.

'Robyn Gordon'. One of the most spectacular of the hybrid grevilleas, though unfortunately too tender without protection for inland gardens. It grows quite large, probably at least 5 feet high by 10 feet wide, and has large light green, deeply dissected leaves. Blooming almost continuously, it carries spectacular comb-like, bright red flower clusters along the stems. Probably hardy only to 25 degrees F.

***rosmarinifolia*--dwarf pink**. In spite of its lack of a catchy name, this has been among the most popular of the UCSC grevilleas, quite distinct from other selections of this species sold in California. It is a compact shrub, probably under 4 feet tall and broader than tall. The stems are clothed in short, bright green needle-like leaves and covered from fall to early spring by dense clusters of pink and cream flowers. Their color deepens nearly to red as the weather chills in winter. Exceptionally disease-resistant. Hardy to 15-20 degrees F.

***rosmarinifolia* 'Scarlet Sprite'**. This is another radical departure from the forms of *G. rosmarinifolia* originally circulated in California. It is quite low and dense, with closely set, bright green, needle-like leaves. The flowers are a striking bright red in color. Hardy to 15-20 degrees F.

'**Ruby Clusters**'. A bushy shrub growing at least 6 feet tall and generally broader than tall. The trunks are profusely branched, the twigs closely lined by narrow, pointed 3 inch leaves, colored a deep, rich green above and paler beneath. Though seldom completely out of bloom, it gives its most lavish display in early spring, with large deep red, pendant flower clusters. Easily grown and hardy to 18 degrees F. or less.

victoriae. These are erect shrubs of 6 feet or more, more like olives than most other grevilleas in appearance. Their twigs are silky grey and display narrowly oval leaves which are green above, grey beneath. Large pendant clusters of orange-red flowers line the branches in spring and summer. Though the plants are drought tolerant, the flower buds may drop before opening under dry conditions. '**Marshall's Seedling**' is a plant selected by the late Marshall Olbrich at the old Western Hills Nursery for its cold hardiness and free flowering nature. Hardy to 15 degrees F. or less.

HELIANTHEMUM nummularium hybrids. Sunrose. Europe. Smaller cousins of the rockroses, with tightly packed narrow leaves of green to grey. They are lavishly decorated in late spring, and sometimes again in fall, by clusters of cheery blossoms resembling little roses. Though each lasts only a day or two, many are produced in succession from each cluster. '**Mesa Wine**' has dark green foliage and deep wine-red flowers. '**Stoplight**' is an old favorite with grey-green leaves and brick-red blossoms. More possibilities include '**Belgravia Rose**', with blue-green leaves and striking rose pink blossoms; '**Annabel**', featuring unusually dense growth and soft pink double flowers; '**Wisley Primrose**', exceptionally tight and flat, with greyish green leaves and primrose-yellow blossoms; '**Wisley Pink**', with similar foliage but lovely soft pink flowers; '**Henfield Brilliant**', combining silvery grey leaves and large coppery flowers; and '**The Bride**', with tightly packed, dark grey-green leaves and white flowers. The large bright yellow flowers of '**Single Yellow**' are vivid over dark green leaves. These are excellent subjects for dry, exposed banks. Sun, well-drained soil, little watering when established. Hardy to below 0 degrees F.

HELICTOTRICHON sempervirens. Blue oat grass. Europe. One of the most striking of the ornamental grasses. It produces many stiff, more or less erect stems, growing about 2 feet tall, from a narrow base. The similarly rigid, narrow leaves are held nearly erect. Both leaves and stems are colored a bright blue-grey. Slender wands of rather unexciting pale flower heads are borne well above the leaves in summer. '**Sapphire**' (one of several "Americanese" translations of the original German name) is distinguished by broader-than-average leaf blades, darker blue leaf and stem color, and better resistance to rust and other fungus diseases, though these afflict the species more in areas of high humidity and summer rainfall than in California. All are good plants for banks and meadows. Sun or light shade, most soils, moderate watering. Probably hardy to 0 degrees F. or less.

HERMANNIA. Widely distributed, especially in Africa (South Africa in the following). These are shrubs and herbaceous perennials recently moved from the cacao family (Sterculiaceae) to the mallow family (Malvaceae). The following are well-behaved shrublets, nice on banks and in mixed plantings. They thrive in sun near the coast, sun or light shade inland, with well-drained soil, and moderate to occasional watering. Hardy to 20 degrees F. or less.

verticillata. Honeybells. A delightful little shrub, usually under 2 feet high but spreading to 4 feet or more. It has slender, trailing stems and small, narrowly dissected, bright green leaves. It blooms in winter and spring--actually, most of the year along the coast. Small yellow bells with a delightful honey scent nod along the younger stems.

flammea. A soft, dense shrub with trailing vegetative stems and small, dark green leaves. The slender flower stems are more or less erect, rising to about 18 inches. Pendant orange red bells are carried along the stems, the show lasting much of the year.

HESPERANTHA baurii. A South African "bulb" (cormous perennial, actually), this elegant, small perennial has closely clustered corms, from which the seasonal shoots appear in late fall. Each carries a narrow fan of 6-10 inch grasslike leaves. In early spring one or more slender, arching stems issue from each fan and carry several star-like blossoms, white on the inner surface and pink on the outer. This is a charming plant for rock gardens and containers. Sun or light shade, well-drained soil, drying completely from late spring to early fall. Hardy to around 18 degrees F.

HETEROMELES arbutifolia. California toyon. A prominent member of the California chaparral, toyon is a large shrub or small tree, rounded and densely foliated in better specimens. It has sturdy, spreading branches and large narrowly oval, serrated leaves. Its broad clusters of cream-colored flowers are presented in late spring and develop by late fall into even broader clusters of brilliant orange to red berries. '**Davis Gold**' is a cultivar with exceptionally bright, narrow leaves and bright orange berries. We have also made a few of our own selections for ornamental features and apparent disease resistance, both from the wild and in the nursery. '**Barrel Springs**' is one of the wildlings, a massive plant with sturdy, very clean foliage and broad, dense clusters of bright red berries. '**Bountiful**' was an outstanding seedling from an already superior seed batch, also with large, very dark, shiny leaves and unusually heavy production of flowers and (again) bright red berries. Though often planted in large shrubby borders and screens, toyons are most beautiful displayed as dramatic individuals. Sun, well-drained soil, little or no watering when established. Hardy to 10 degrees F. or less.

HETEROTHECA sessiliflora ssp. bolanderi '**San Bruno Mountain**'. Goldenaster. *Heterotheca sessiliflora* is a low

perennial of the aster family, scattered over much of the West. This cultivar hails from its namesake mountain south of San Francisco. It makes a dense mat of trailing stems, each lined by fuzzy narrow, dark green leaves. It begins to flower in late spring and can continue, if irrigated and sheared once in a while, until fall, with many almost 1 inch wide golden yellow "daisies" nestling over the foliage. Unlike its annual cousin, the telegraph weed, this has been a well-behaved plant in the garden, useful in mixed plantings and as a small-scale ground cover. Sun or light shade, most soils, moderate to occasional watering. It has been known as both *Chrysopsis villosa* and *Heterotheca villosa* in the past. Probably hardy to 10 degrees F. or less.

HEUCHERA. Alum root. North America, Mexico. Tightly clumping perennials with round, scalloped or lobed basal leaves. The blooming stems are more or less erect and carry airy clusters of tiny bell shaped blossoms, white to deep red in color. We are pleased to see a new wave of interest in these plants, coupled with some serious effort on the part of various growers and hybridizers in reselecting for patterned leaves, showier flowers and other features. Their uses are as varied as planting under oaks, gracing the rock garden and growing in decorative containers. Sun near the coast, part shade inland, reasonably well-drained soil, moderate to little watering when established. Watch for mealybug! Their hardiness varies.

Canyon Series. A number of years ago, at the Santa Barbara Botanic Garden, the late Dara Emery began to cross *H. sanguinea*, the coral bells of Arizona, with some of our small mountain natives of the *H. rubescens* complex (see below). Within a short time, his work produced dozens of beautiful hybrids which combined the dense, small hummocks of the natives with flower colors ranging from white to deep, rosy pink. All have smaller flowers than *H. sanguinea*, but usually many more of them. The first round of introductions included four selections, all with closely packed, deep green leaves and 6-12 inch flower stems. '**Canyon Delight**' offers an incredible wealth of rose-colored flowers, while those of '**Canyon Pink**' are bright pink, with lighter centers. After a quiescent period of several years, the Garden released a new round of selections, including perhaps the showiest to date. '**Canyon Belle**' (PP#13413) offers an incredible wealth of bright rose red flowers over low, particularly shiny green leaves. '**Canyon Duet**' (PP#13280) is as dense and small-leaved as the high mountain natives, with dozens of flowering stems per plant. The flowers give a glittering impression with their combination of intense dark rose and white. '**Canyon Melody**' (PP#13276) is similar, with flowers not as dark. Hardy to 0 degrees F. or less.

maxima. Island alum root. This is a native of our Channel Islands and one parent of the Rancho Santa Ana hybrids. It is a robust plant, with large, long-stalked leaves of dark green with lighter marbling. Its intricately branched clusters of white to light pink flowers rise 1½ to 3 feet above the foliage, in our climate through spring and summer. This is a particularly good plant for dry shade, for example under native oaks. Probably hardy to 15 degrees F.

maxima hybrids. In spite of their tiny flowers, heucheras have long been favorite subjects for plant hybridizers. *H. maxima* offers vigor, a dramatic impression and vast numbers of flowers. Work began many years ago at Rancho Santa Ana Botanic Garden, combining it with *H. sanguinea*, coral bells. The results included several outstanding hybrids that are with us to this day, all of them large and floriferous, often blooming for several months. '**Santa Ana Cardinal**' has dark, shiny leaves and stems 2 feet or more tall, carrying a profusion of large rose-red blossoms. '**Susanna**' is similar in all respects. '**Wendy**' is distinguished by large light green leaves and stems about 2 feet tall carrying hundreds of light, rather fleshy pink blossoms. A plant of similar parentage but not from Rancho Santa Ana is '**Old La Rochette**', with dense clumps of large, soft green leaves, 2 foot stems and light pink flowers opening from darker buds. All are probably hardy to 15 degrees F.

micrantha. The species itself is a common native, usually found on shady cliffs and roadbanks and distinguished by its sharply lobed leaves and exceptionally tiny, slender-stalked creamy white, sometimes fragrant blossoms. '**Martha Roderick**', one of several horticultural treasures from Mrs. Roderick's garden, is a robust plant with more typical, bright green leaves and tall stems bearing hundreds of rose pink blossoms. Hardy to 10 degrees F. or less.

rubescens complex. There are several similar species in this group. At various times we will have limited quantities of *H. elegans*, *H. hirsutissima* and *H. rubescens* itself. All are matting plants with small, dark green leaves and short (under 1 foot) stems of white to pink flowers. *H. elegans* '**Bella Blanca**' is an especially nice selection by Bart O'Brien, with dense, bright green foliage and pure white flowers. All are delicate in appearance and ideal for the rock garden. Hardy to 0 degrees F. or less.

sanguinea. Coral bells. This popular species from Arizona is distinguished by tightly packed clumps of bright green leaves, often patterned with white, and a wealth of normally pink to red blossoms presented on 1-2 foot stems in spring. '**Firefly**' is a particularly floriferous seed strain with relatively short (1 foot) stems of rose-red blossoms. Hardy to 0 degrees F. or less.

HIBBERTIA. Mostly Australian shrubs of matting to vining habit, with attractive evergreen foliage and cheery 5 petalled, usually bright yellow blossoms. Unfortunately, many are too tender for most northern California climates, but there are some happy exceptions. The following delight in a sunny site with well-drained soil (an exposed bank is ideal)

and moderate to occasional watering when established. They are hardy to around 20 degrees F.

aspera. A variable shrub, low and mounding in this form. We would expect it to be under 2 feet high and 4 feet or more broad at maturity. It has dark green, narrowly oval leaves and a nearly constant sprinkling of bright yellow flowers, though it blooms most heavily in spring. It seems to be one of the least touchy of the group.

pedunculata. An erect to prostrate, slender stemmed shrub with narrow, nearly heath-like leaves. This unnamed cultivar is prostrate and closely branched. It is dotted much of the year with brilliant yellow flowers, about 2/3 of an inch across.

***vestita* 'Coff's Harbor'**. This cultivar is one of the prettiest plants yet from the U.C. Santa Cruz Arboretum. It makes a low, spreading carpet with short, profusely branched stems and tiny oval, dark green, shiny leaves. Bright yellow 1 inch blossoms nestle among the foliage for several weeks each spring (blooming may also be repeated in fall).

HOLODISCUS. Cream bush. Western U.S. to South America; California for the following. A group of slender-stemmed shrubs of the rose family, with several ornamental features. Those listed here are California natives, varying considerably in habit and scale. Both have picturesque trunks and attractive grey-brown bark. Both have toothed, deeply and neatly veined leaves, deep to bright green during the growing season and coloring beautifully before dropping in fall. Drooping clusters of tiny white flowers are carried at the shoot tips in late spring and summer. They take on attractive rusty hues after the flowers fade and hang on until late fall. These are attractive both for naturalizing and as specimen shrubs. They have year-round interest, which includes their twiggy framework in winter. Both thrive in sun or light shade and well-drained soils, with moderate to occasional watering once they are established. Their hardiness varies.

discolor. Ocean spray. This species is a frequent sight in the hills and canyons of coastal California, though its range extends also to British Columbia and Mexico. It grows generally upright, to about 8 feet in our material, with graceful, slightly contorted branches. The leaves are broadly oval to nearly round in outline and 1-3 inches long. The flower clusters extend to as much as 10 inches. This is a substantial shrub but one easily pruned and shaped as desired. Hardy to 10 degrees F. or less.

microphyllus* var. *glabrescens. Rock spiraea. This is a high mountain native, spreading to nearly matting in habit. The furry leaves are from under ¼ inch to about an inch long, the flower clusters up to 3 inches and quite dense. Both the old clusters and leaves make a striking sight in fall. This is one for banks and other exposed spots with excellent soil drainage. It is small and pretty enough for larger rock gardens. Hardy to well below 0 degrees F.

HOMOGLOSSUM huttonii. South Africa. *Homoglossum* has been dismantled and combined with *Gladiolus* in some treatments. The species at hand has tightly clustered corms, from which shoots with erect grass-like, 1-2 foot, dark green leaves appear in fall. Bloom begins in late winter and early spring, with several large, long-tubed, dark orange red blossoms opening in succession along an erect to arching stem. Adaptable to pot culture and useful in rock gardens. Sun or light shade, well-drained soil, moderate watering during growth and bloom, summer drought. Hardy to around 20 degrees F.

***IPHEION uniflorum* (*Triteleia uniflora*)**. Spring star flower. Argentina, Uruguay. This is one of the best small bulbs for California's varied climates. Its cylindrical, profusely branched corms form dense colonies up to 1 foot broad. Ground-hugging, bluish green leaves appear in fall and persist until late spring. Light lavender-blue, star shaped blossoms a little over 1 inch broad nestle among the leaves in winter and early spring. '**Wisley Blue**' is particularly floriferous and has larger, darker flowers than the norm. '**Rolf Fiedler**' is distinguished by very dark, nearly true blue flowers. '**Album**' has (as you might guess) pure white flowers, though with a light blue blush during cloudy weather. '**Alberto Castillo**' features exceptionally large, snow-white flowers. These are nice additions to meadows and rock gardens. Sun or light shade, most soils, little or no watering during the summer dormant period. Hardy to 10 degrees F. or less.

IPOMOEA acuminata. Blue dawn flower. Blue dawn flower is a vigorous, vining perennial morning glory with profusely branched stems growing 10 feet or more long, blanketing anything from nearby banks to overhanging trees. It is thickly clad with dark green, velvet-textured leaves varying from entire to distinctly lobed. Clusters of 3 inch bright blue blossoms decorate the plant in summer and fall (nearly year-round in mild climates). Sun, reasonably well-drained soil (avoid heavy feeding), moderate to little watering when established. Root-hardy to around 15 degrees F., though the foliage is damaged at 20-25 degrees F. It can be invasive in mild winter areas.

IRIS. Northern Hemisphere, temperate regions. For years we have had a special interest in this diverse group of colorful perennials. The following include several native species and their hybrids, as well as a species from the Mediterranean region. All have the flattened fans of leaves and general floral form typical of the genus. Our native species are useful for grouping under oaks. All will prosper in sun or part shade near the coast, part shade inland, in reasonably well-drained soil, with moderate to little watering when established.

chrysophylla. Yellow flowered iris. This uncommon species can be found in the Klamath Ranges of far northern

California, as well as in western Oregon. It is smaller in scale than the better-known Pacifica hybrids, and makes neat clumps of narrow, bluish green leaves. Light yellow flowers with dark veining are borne profusely in spring. Hardy to 10 degrees F. or less.

douglasiana. California. One of the most attractive and easily grown of the natives, this species has been used extensively in the Pacific Coast Hybrids (see below). It forms compact clumps with evergreen, arching leaves of variable height, usually dark green and shiny on one surface and light green and duller on the other. The spring flowers generally range in color from pale lavender to deep violet. '**Canyon Snow**' is an outstanding selection by the late Dara Emery of Santa Barbara Botanic Garden, with broad, exceptionally shiny leaves and branched stems of large, pure white blossoms with yellow markings. '**Portuguese Beach**' is a selection from broadly matting populations along the northern coast with smallish lavender flowers. '**Point Reyes**' is a larger but profuse plant with larger flowers of deep blue purple. Hardy to 15 degrees F. or less.

innominata. California and Oregon. One of the species most used in the Pacifica Hybrids, below. It forms dense neat clumps under 18 inches tall, with very narrow, usually shiny leaves. The proportionately large flowers come in many colors, ranging from purple to yellow to white. '**Ed Wood**' has flowers colored vivid violet with white markings. Hardy to 10 degrees F. or less.

macrosiphon. California. A rugged native species of deceptively delicate appearance. It forms neat, fountainlike clumps with narrow, arching bluish green leaves. Graceful narrow-petalled blossoms colored white to deep violet decorate the plants in early and mid-spring. Our own selection, '**Mt. Madonna**', has violet falls and lighter standards. Plants should be kept fairly dry in summer. Hardy to 10 degrees F. or less.

Pacifica or Pacific Coast Hybrids. This is a diverse group derived from various California and Oregon natives, particularly *I. douglasiana*, *I. innominata*, and *I. munzii*. All form handsome clumps with 6 inch to 2 foot leaves, shiny or dull in surface and blue-green to dark green in color. The large flowers are borne in spring, two or more per stem. They include nearly a rainbow of hues, from purple or deep blue, maroon or mahogany to yellow and white. Our offerings began with selections from the noted hybridizer Joseph Ghio and now include both a number of his more recent crosses and some of our own. There are too many to describe here individually, except to give a few examples of their diversity. Of Joe's hybrids, some of these are '**Bubble Wrap**', up to 15 inches high, with velvety brown falls and lighter standards in the flowers; '**da Vinci Code**', a smaller plant with predominantly white flowers, beautifully veined and outlined with blue-purple; '**Deep Blue Sea**', a mid-sized plant with large flowers of incredible deep blue purple; '**Night Crossing**', whose purple flowers have yellow centers and white halos on the falls; and '**Ocean Blue**', one of the closest of the Pacificas to true blue, with darker veining. Some recent Suncrest hybrids, with *I. macrosiphon* in their background for smaller plant size and more profuse growth, include '**Black Frills**' a compact plant with full blackish violet flowers with frilled edges and a deep reddish central patch; '**Dark Eyes**', whose flowers have rosy lavender petals and a dark purplish red eye; '**Deep Dusk**', with glossy dark green leaves and an abundance of shiny red violet flowers; and '**Violeta**', an exceptionally pretty plant with narrow, deep green leaves and dark violet flowers with a white and gold spray pattern. Two larger hybrids made at the nursery by Patrick Worley, using parents from Joe Ghio's group, are '**Patrick's Gold**', a robust plant with especially full bright gold flowers; and '**Lavender Frills**', whose flowers are distinguished by pinkish lavender petals and a diffuse yellow signal veined red violet. A recent addition to the mix by the Santa Barbara Botanic Garden is '**Canyon Sunshine**' a robust selection with an abundance of large, rich butter yellow flowers in spring. Mostly hardy to 15 degrees F. or less; the "big blues" may be a bit more tender.

unguicularis. Winter iris. Mediterranean Region. This lovely iris from the Mediterranean region brings the gardener a bit of spring cheer in the depths of winter, blooming with the daffodils. It makes dense evergreen thickets with dark, shiny narrow leaves up to 2 feet long. Nestled among them on short stems but elevated on long tubes are lightly fragrant lavender blue flowers with white markings, up to 3 inches broad. The segments are held erect for half their length, then spread abruptly. It can grow in sun or shade, with moderate to little summer watering. Hardy to 15 degrees F. or less.

ISOMERIS (PERITOMA) arborea. Bladderpod. A rounded evergreen shrub, up to 5-6 feet high, from dry habitats in southern and central California. It has silvery green divided leaves with a pungent (many would say unpleasant) aroma when bruised. Bright yellow flowers in spring mature to ornamental dangling, round to teardrop shaped fruits. Sun to part shade, moderate to little watering. Hardy to 15 degrees F. or less.

ISOPOGON formosus. Drumsticks. Drumsticks is an Australian shrub of the protea family, with several unusual features. It grows erect, probably to 5-6 feet in this selection. The stems are set with 2 inch long, finely dissected, bright green leaves resembling those of some of the grevilleas. In spring the plant is transformed by large pincushion-like heads of lavender-rose blossoms. A beautiful specimen shrub for sunny, well-drained sites, given occasional deep watering when established. Hardy to 18 degrees F. or less.

IXIA. South Africa. Most gardeners are at least passingly familiar with this group by way of the unnamed, star

flowered hybrids available on the fall bulb market. However, several species virtually unknown here are at least as deserving of our attention. All grow from corms, which multiply freely, and have narrow, grass-like leaves. Slender, sometimes branched flower stems bear many star shaped blossoms, in a variety of appealing colors, in spring. They perform particularly well in containers. Planted out, they require well-drained soil and summer drought. They bloom best in full sun, though light shade is acceptable. The following are hardy to 20 degrees F. or less.

monadelpha. A dainty species, upright in habit, with slender, grassy leaves. The flowers are a little over an inch broad in this strain, varying in color from white to lavender, with contrasting green centers.

paniculata. A more robust species, growing, in this selection, 1-2 feet tall and producing multiple, branched flower stems from each corm. The flowers resemble those of a phlox, the cream-colored segments spread flat at the ends of narrow 2-3 inch tubes. The show lasts for several weeks each spring.

JUNCUS patens. California grey rush. California and Oregon. A dense fountain of slender, bluish green stems, about 2 feet tall in our material. The flowers are mostly brown and inconspicuous. '**Elk Blue**', selected by Randy Baldwin, has particularly bright blue-grey stem color. These are durable plants for meadows and low-maintenance borders. Hardy to 10 degrees F. or less.

KNIPHOFIA. Poker plant, torch lily. South Africa. These are rugged, interesting perennials of the lily family. All form tight basal clumps, each individual shoot being a fountain-like rosette of narrow, pointed leaves. In summer (or in some cases, much of the year), torch-like clusters of long, tubular flowers rise above the foliage on naked stalks. Flower colors include various combinations of red, orange, yellow and white. They may be displayed individually or used in large borders in neglected areas. Sun, most soils, moderate to occasional watering when established. Hardiness varies.

caulescens. A rugged, distinctive species with compact clusters of soft blue-grey leaf-crowns. Thick flower stems rise to as much as 3 feet in midsummer carrying dense "torches" of coral buds that open to pale yellow flowers. The leaves in this species are quite ornamental all year. Hardy to 10 degrees F. or less.

uvaria is the classic red hot poker of old fashioned gardens, highly variable even in wild forms. It has been combined by hybridizers with other species to increase flower size and color range, giving us the present array of named cultivars. Some of our current selections are '**Alcazar**', with brilliant red flowers on 3 foot stems; '**Ice Queen**', with upright 2-3 foot grey-green leaves, and creamy yellow flowers in spring; '**Green Jade**', with 3-4 foot stems and light green flower buds opening into greenish cream flowers; '**Inferno**', an even taller selection with broad clusters of fiery red-orange flowers; '**Shining Sceptre**' is a 3 foot selection with glowing apricot buds that open to soft yellow flowers. Hardy to around 0 degrees F.

LACHENALIA. South Africa. Cape cowslip. Lachenalias are winter blooming bulbs of the lily family, often forming profuse clumps over time. They have spreading, usually thick and often spotted basal leaves and erect spikes of tubular to bell shaped flowers in a variety of attractive hues. They are mostly rather tender and best kept as potted plants, protected during the winter. Summer deciduous. Sun or light shade, reasonably well-drained soil, moderate watering during active growth and bloom, little or no watering during summer dormancy. The following are hardy to around 25 degrees F.

aloides 'Pearsonii'. One of the most striking of the lachenalias. Its 8-12 inch leaves are heavily spotted with maroon. The flower stems are 6-12 inches tall, each carrying many nodding 1½ inch blossoms with an unlikely but pleasing combination of hues: red at the base, golden yellow along the tube, and green at the tip.

bulbifera (pendula). This species is of about the same dimensions as *L. aloides* with, in this selection, unspotted dark green leaves and coral red 1½ inch blossoms.

'Late Flowering Orange'. Lacking a better name, we are using the one under which this plant was received from Wayne Roderick. It resembles *L. aloides*, though the leaves are broader and even more heavily spotted with maroon. The bright orange blossoms appear quite late--often in March and April.

LANTANA montevidensis (sellowiana). Trailing lantana. Uruguay. Trailing lantana is a popular shrubby ground cover, spreading rapidly to several feet. It has trailing branches covered in dark green toothed leaves. Clusters of rosy lavender flowers decorate the plant in most months. Sun to light shade, most soils, moderate to occasional watering. Hardy to 15-20 degrees F.

LAURUS nobilis. Grecian laurel, bay laurel (the latter name also applied to our native *Umbellularia*). This is a plant that challenges any neat distinction between shrub and tree. It is multitrunked, growing 30 feet or more high if unchecked, often holding its branches nearly erect. Its most admired feature is masses of dark green, thick-textured pointed-oval leaves, each up to 4 inches long. The leaves are pungently scented when broken or bruised, and used commercially as a powerful seasoning for foods (this is "the" bay one sees in the herb and spices racks of markets). Flowers are small, greenish and inconspicuous, later producing black berry-like fruits (also not particularly showy). This is a clean, durable, and beautiful shrub-tree for use as a specimen shrub or, in groups, as a giant hedge. It responds well to pruning and shaping. '**Aureus**' is distinguished by golden new growth, turning medium green as it matures. Our

own **compact form** is exactly that—a very neat, dense selection with deep green leaves. '**Saratoga**' is reputedly a hybrid between this species and *L. canariensis*. It grows to about 25 feet high, is more openly branched than most and has very large, broad leaves. All thrive in full sun but tolerate light shade, in reasonably well-drained soil, with moderate to occasional watering. Hardy to around 15 degrees F.

LAVANDULA. Lavender. Mediterranean region to India. Though they have been with us for many years, the lavenders continue to gain new fans. Their combination of compact habit and moderate size, grey foliage and contrasting flowers, as well as pleasant aroma are all endearing features. One can only hope that gardeners are not ignoring their limitations: Intolerance of poor soil drainage and winter wet. These are useful shrubs for sunny borders and open banks, and widely used in a gardening style one could describe as Mediterranean Menagerie. Sun, well-drained soil, moderate to occasional watering. Hardiness as noted below.

angustifolia (*spica, vera, officinalis*). English lavender. Compact shrubs varying from under 1 foot to 4 feet in height. All have rather tightly packed, narrow grey leaves with a spicy perfume. The purple to white flower clusters are borne well above the foliage in summer. '**Hidcote Superior**' is an improved version of an old seed strain, making dwarf plants (usually around 1 foot) with bright grey leaves and deep purple flowers. '**Martha Roderick**' (selected by Mrs. Roderick) is a particularly dense plant of about 18 inches with greyish green, sweetly scented foliage and bright lavender flowers. '**Twickel Purple**' is taller, with bright grey foliage and vivid purple flowers. Hardy to 0 degrees F. or less.

'**Goodwin Creek Grey**'. Hybrid lavender. This lavender hybrid captures some of the best qualities of French lavender, *L. dentata*, but apparently without some of its liabilities. It is bushy and nearly upright, growing 2-3 feet tall. Both stems and leaves are densely hairy, creating a beautiful bright grey cast overall. The leaves are scalloped in the manner of *L. dentata* only along their outer half. Flowers are small but of deep lavender color, approaching violet. They are clustered on wand-like stems, well above the foliage. Hardy to 20 degrees F. or less.

x **intermedia**. This is something of a catch-all name for hybrids between *L. angustifolia*, above, and *L. latifolia*. Nursery and garden cultivars belonging to this group are generally characterized by the relatively short stems of *L. angustifolia*, considerably longer leaves and tall flower stems. '**Fred Boutin**' is named for an outstanding horticulturist, formerly of Huntington Botanical Gardens, who made the selection. It makes congested mounds, under 12 inches tall excluding the blooming stems, with nearly white leaves up to 3 inches long. The slender, branched flower stems rise about 2 feet, displaying small, typical lavender blossoms. A better-known selection, with greener leaves and taller stems, is '**Provence**'. The whole plant is richly aromatic and used in the commercial manufacture of perfumes. Still another, most valued for its hardiness but attractive, too, for its rather bright lavender blossoms, is '**Grosso**'. All are probably hardy to 0 degrees F.

'**Lisa Marie**'. Most hybrid lavenders have been chance volunteers in mixed plantings or selections from seedling crops in commercial nurseries. This one resulted from deliberate crosses by Ken Montgomery, using *L. lanata* and *L. angustifolia* 'Martha Roderick' as parents. It is a bushy plant, growing about 18 inches high, with striking grey leaves. Bright purple flowers with white centers complete a fine display. Hardy to 15 degrees F. or less.

'**Silver Frost**'. This hybrid lavender combines the best attributes of both parents—*Lavandula angustifolia* and *L. lanata*. It forms dense mounds of thick, silvery white leaves. Wands of bright violet blue flowers rise to 2 feet in summer. Hardy to 15 degrees F. or less.

stoechas. Spanish lavender. Dense shrubs of about 3 feet, with narrow blue-grey leaves. In the typical forms they are liberally dotted in summer by short clusters of lavender flowers, each cluster topped by a crown of showy purple bracts. Our own representation is '**Wings of Night**', selected by Ted Kipping. It is distinguished by exceptionally bushy growth, heavy flowering and large, dark floral bracts. Better known is '**Otto Quast**', equally compact but slightly more upright, with smaller but similarly dark bracts. '**Avonview**', belonging to the subspecies *pedunculata*, is a somewhat larger plant with longer flower stalks above the foliage. The flower clusters are also distinguished by particularly long rosy purple "flags". In recent years there has been nearly a riot of new introductions with varying plant habits and flower colors, some quite showy but many somewhat disappointing in the garden. Probably hardy to 10 degrees F. or less.

LAVATERA. Plants of the mallow family (some of them now put in *Malva*), mostly European in origin. They range from annuals to shrubs. Our interest is in the shrubby species. These are vigorous and bushy, with a lush covering of lobed, vaguely maple-like leaves and colorful blossoms similar to those of the hibiscus and hollyhocks. They are useful either individually or for shrubby borders, informal hedges and screens. Sun, reasonably well-drained soils, and moderate to occasional, deep watering will suit them. Their hardiness varies.

assurgentiflora (*Malva assurgentiflora*). Channel Islands, California. An erect shrub, often growing 10 feet tall or more but amenable to pruning and shearing. The leaves are 2 to 6 inches broad, usually smooth and lustrous in surface and dark green in color. It blooms from spring to fall. The flowers are up to 3 inches broad and colored various shades

of pink, with darker veining. This species is most useful for screens and tall hedgerows, though not one of the hardiest, tolerating lows to 15-20 degrees F.

bicolor (*Malva subovata*). France. An openly branched shrub up to 6 feet tall, with equal spread. Both stems and leaves are covered with tiny hairs, giving them a soft grey cast. The current selection has flowers a little over 2 inches across, light lavender pink in background with dark reddish purple veining and centers. The main show is in fall, with a scattering most of the year in coastal climates. Hardy to around 15 degrees F.

x clementii (*thuringiaca*). Caucasus region. This species is close in appearance to *L. bicolor*, though generally a bit more compact and with somewhat greener leaves. The flowers are often 3 inches across and have an attractive silvery sheen. Flower colors range from pale pink nearly to crimson. **'Barnsley'** is a bushy 5-8 foot plant with distinctly greyish leaves. The flowers are shaded from bright pink to nearly white. **'Kew Rose'** is a taller, more open plant with darker green, somewhat crisped leaves and large rose pink flowers. Hardy to 15 degrees F. or less.

LEERSIA monandra. Cut rice grass. Texas to Florida. A soft light green grass, spreading to form a broad, loose carpet. It tolerates poor soil and drought and is especially useful in dry shade. Cool sun to shade, reasonably drained soil, moderate to little watering. Hardy to 0 degrees F.

LEONOTIS leonurus. Lion's tail. Lion's tail is an unusual South African shrub of the mint family, growing quite erect to 6 feet or more. Tapered, toothed dark green leaves are neatly paired along the stems. Tight bud clusters form at intervals along the upper stems in summer, producing tubular dark orange blossoms for several weeks. It makes a dramatic spectacle in the garden. Sun, well-drained soil, little or no watering once established. Hardy to around 20 degrees F.

LEPECHINIA. Pitcher sage. California, Mexico to South America, and Hawaii. An interesting group of shrubs and woody-based perennials of the mint family, some of them quite ornamental. They vary in habit but have large paired, usually hairy and aromatic leaves and irregular flowers with broad tubes and 2-lipped "faces". The following are good plants for the background of a perennial border and for banks and open slopes. They are easy to grow in sun or light shade, planted in well-drained soil, with moderate to occasional watering. Their hardiness varies as shown.

fragrans 'El Tigre'. Fragrant pitcher sage. This is an upright shrub from southern California, growing 4-6 feet tall. It has softly furry grey-green, pleasantly scented leaves. The flowers are a little over an inch long and pale pink in color, borne in loose clusters at the shoot tips in spring and summer. Hardy to 20 degrees F. or less.

hastata. Mexico. This is a shrub about 4-6 feet tall, spreading by underground rhizomes to make small thickets. The stems are stout and set with very large, densely furry, arrow shaped grey-green leaves. These have a sweet, pungent fragrance. During summer and fall large, openly branched clusters of reddish purple blossoms are borne at the shoot tips. Occasional hard pruning helps keep the plant looking its best. Hardy to 15 degrees F. or less.

LEPTOSPERMUM. Tea tree. Interesting shrubs and small trees of Australia and New Zealand, far more variable than currently popular selections would suggest. They have attractive corky, usually light colored bark, round to needle-like leaves and showy--though often small--five-petaled flowers with dark centers. They are beautiful as individuals and are used, according to their habit, in shrubby borders and for ground cover. Sun, well-drained soil, moderate to little watering when established. The following are hardy to 20 degrees F. or less, except as described.

continentale 'Horizontalis'. Formerly classified with *L. scoparium*, 'Horizontalis' is distinctive in several respects. It lies flat on the ground, forming a dense mat of branches. The leaves, unlike those of typical *L. scoparium*, are nearly triangular, dark green, and rather shiny. Flowers are single and snow white in color. Spring bloom is profuse.

laevigatum. Australian tea tree. These are large shrubs or small trees, growing 20-30 feet high if unrestrained and easily developing a picturesque form in age. They have attractive pale bark and gracefully drooping branches lined with 1 inch oval grey-green leaves. Showers of white flowers develop along the branches in spring. **'Reevesii Compacta'** is a dwarf selection, slowly growing to 3-4 feet. It is much less floriferous than the typical species.

scoparium. New Zealand. This is the common tea tree of commerce. It is usually a bushy, nearly erect shrub, with many slender stems closely lined by lance-shaped to needle-like leaves (softer than they look), usually under 1 inch long. They may begin their flowering season anytime from October to March, displaying masses of waxy 5-petaled flowers, 1/2-1 inch broad. The petals are white to crimson in color, the centers usually darker, and shiny, like tiny pools of liquid. They are useful for individual display or in large shrubby borders and screens. Hedging eventually results in a tired, woody look.

Of the taller cultivars (usually 8-10 feet in mature height), **'Apple Blossom'** is distinguished by masses of light pink flowers, gradually fading to white. **'Candy Cane'** is distinguished by almost fully double, bright pink flowers with darker outlining. **'Crimson Glory'** and **'Ruby Glow'** have heavily maroon-tinged leaves and deep red semidouble flowers. **'Helene Strybing'** is more open, with longer, greyer leaves and exceptionally large pink single flowers (they are rather dark during cool weather, lighter with more warmth and sunshine); and **'Pink Pearl'** has greener foliage and fully double white flowers opening from soft pink buds. A selection by the late Ray Collett at the UCSC Arboretum is

'**Silver and Rose**'. This is exceptional in its combination of compact habit, bright grey-green foliage and rose pink flowers.

Among the so-called dwarf selections, '**Gaiety Girl**' was the first to arrive in California. It is a pretty, compact plant, upright-oval in form, and growing about 6 feet high (considerably more than originally stated). It has red-tinged leaves and deep pink semidouble flowers. '**Nanum Tui**' is smaller, rounder and very dense. It has lighter green leaves and pale pink flowers with a darker midrib on each petal. A few cultivars are fully prostrate. '**Pink Cascade**' is actually weeping in habit and—true to its name—will cascade nicely over rocks and banks. It has large single pink flowers which open deep pink, lightening as they age. '**Wiri Kerry**', selected at the Auckland Botanic Garden, is a 3-4 foot shrub, very densely branched, with small, shiny, heavily red-tinged leaves. Flowers are double in form and deep red in color.

turbinatum (*L. nitidum*) '**Flat Rock**'. Australia. Shining tea tree. A bushy, spreading shrub, probably 6 feet high at maturity, received from the UCSC Arboretum. It has silky grey-green leaves, bronze-tinted in new growth. These are lance-shaped and a little over 1 inch long. The flowers are white and about ½ inch broad. 'Flat Rock' will require more moisture than many leptospermums but should be a few degrees hardier.

LESSERTIA montana. Mountain cancer bush. An airy shrub from the Drakensberg mountains in southern Africa. It has small divided grey leaves and clusters of vivid red "parrot's beak" flowers dangling from the stems in spring. Showy bright rose inflated fruits follow the flowers. Best in sun, with well-drained soil and moderate to occasional watering. Hardy to 10 degrees F. or less.

LESSINGIA (*Corethrogyne*) *filaginifolia* '**Silver Carpet**'. California, widespread. This is doubly a new name for an old friend, once offered as *Corethrogyne leucophylla*, and introduced by the Santa Barbara Botanic Garden. It is a prostrate, closely branched shrublet, with toothed, grey-green 1-2 inch leaves. In summer and fall the plant is dotted with lavender pink daisies. It is particularly attractive on banks and in low borders. Sun, well-drained soil, moderate to occasional watering. Probably hardy to 15 degrees F. or less.

LEUCADENDRON. Cone bush. South Africa. Showy trees and shrubs of the protea family, with several interesting features. Some have relatively few, heavy stems and are stark and dramatic in effect; others are slender-stemmed and bushy. The leaves are simple, usually lance-shaped to oval and often quite hairy. Their flowers have most of the parts of conventional flowers reduced to small scales, but their dense, cone-like clusters are surrounded by circles of leafy bracts that can be highly colored, almost like those of the proteas themselves. Male and female flowers are normally borne on separate plants. The following are attractive, sometimes spectacular plants for the garden, their major limitation being tenderness to cold (though this varies). They also require a sunny spot and well-drained soil (it can be quite poor; in fact they resent heavy fertilizing). Watering is a negotiable matter, most species being fairly to remarkably drought tolerant. The following are hardy to 20-25 degrees F.

hybrids. A group of extremely showy selections resulting from crosses of *Leucadendron salignum*, *L. laureolum* and others. They vary considerable in size and habit. All have large, bold leaves and strikingly colored circles of bracts around the flower cones at the stem ends, holding their color for several months in fall and winter. '**Rising Sun**' has dark green leaves and floral bracts shaded from cream to red. '**Safari Sunset**' has dark, particularly dramatic foliage, strongly tinged with bronze in new growth; the floral bracts are dark red overall, shading to cream-yellow at their bases. '**Sylvan Red**' has narrower leaves and mixes shades of green, rosy red and cream in the bracts. '**Wilson's Wonder**' is distinguished by bright yellow bracts. '**Yaeli**' is an exceptionally dense, more slender-stemmed shrub with smaller, greyer leaves and rosy shades in both the winter bracts and younger leaves beneath them.

salignum. These are compact shrubs with more slender stems and narrower leaves than most of the hybrids described above. We offer two selections, both usually 5 feet or less in height. '**Summer Red**' has red new growth, gradually shifting to green as the leaves mature, and combinations of cream and rosy shades in the floral bracts. '**Winter Red**' has shorter, blunt leaves colored with rich purplish red tones in cool weather.

LEWISIA. Western U.S. and Canada. Lewisias are beautiful though often temperamental native succulents for rock garden and pot culture. They produce crowns of spatula shaped to cylindrical leaves and carry umbrella-like flower clusters above the foliage in spring and early summer (also sometimes in fall, in coastal climates). The several to many-petalled blossoms range in color from white through pink, yellow and salmon shades to reddish purple. Lewisias are much admired both as potted plants and in the rock garden. Sun or light shade near the coast, light shade inland, perfectly drained soil dressed with gravel around the crowns of older plants, and watering only when dry. Hardy to 0 degrees F. or less.

cotyledon. Cliff maids. This highly variable species is one of the great treasures encountered in the natural rock gardens of the mountains of northern California. It forms flat rosettes of roughly strap shaped leaves 2-6 inches long. The flowers are held well above the rosette, many to a spray, and can measure individually 1 inch or more across. The typical form has smooth-edged leaves and candy-striped blossoms, each petal showing a pink to red central band on a lighter background. '**Dark Cloud**', '**Pink Cloud**' and '**White Cloud**' are our own floriferous seedling strains, the result

of backcrossing one of the reddest 'Sunset Strain' selections with a large pink *cotyledon howellii*. Like 'Sunset Strain', they bloom at nearly any time of year in a coastal climate. Most plants have 6-10 inch stems, each bearing many large blossoms. Flowers of 'Dark Cloud' are purplish red, those of 'Pink Cloud' are bright pink, and those of 'White Cloud' are snow-white. **'Rainbow'** is a diverse seed strain that produces single to semi-double blossoms with a broad range of color from white through pink, yellow and salmon shades to reddish purple.

LEYMUS (Elymus). Widespread in temperate regions. Mostly perennial grasses with erect leafy stems, usually colonizing by means of underground rhizomes. The flower spikes are narrowly cylindrical and often borne well above the foliage. Their chief ornamental features are their bold texture and often bright stem and leaf colors. They also have considerable value in erosion control. The following are tough and easily grown. Sun or light shade, most soils, moderate to occasional watering when established. These should be hardy to 10 degrees F. or less.

arenarius 'Findhorn'. Blue lyme grass. This robust European perennial grass makes dense thickets of seasonal stems. It grows erect, with erect leafy grey-blue stems up to 2 feet high, and equally blue-grey leaves. The flower spikes are narrowly cylindrical and often borne well above the foliage. Hardy to 0 degrees F. or less.

condensatus 'Canyon Prince'. Giant wild rye. *L. condensatus* is a familiar plant along the California coast. This particular selection by the Santa Barbara Botanic Garden is in the 2-3 foot range, though it can be 4 feet or more with regular watering. The leaves are stout, up to 1 foot long and vivid bluish green in color. Flower clusters, when produced, are elevated well above the foliage. It is better behaved in the garden than most *Leymus* species.

triticoides 'Grey Dawn'. California. Creeping wild rye. "Galloping" might be a more appropriate title than "creeping" for this species, as it can form very broad thickets. However, all parts of the plants are more slender and delicate in appearance than in other species. In this selection, made near the old Wintergreen Nursery site, the leaves have a beautiful silvery cast. **'Hedgerow Short'** is a greener plant overall, supposedly shorter than most (not so up to now in the nursery). Both can be mowed. Useful for erosion control, summer dry meadows, and large scale plantings.

LIATRIS spicata 'Kobold'. Gayfeather. Gayfeather is a tough, beautiful prairie plant springing up each year from an underground tuber. It begins the season as a 1 foot fountain of bright green, shiny, grass-like leaves. In the compact selection **'Kobold'**, a stout, leafy flowering stalk emerges in late spring, rises to 2-3 feet and displays a dense plume of small rose-lavender flower heads over several weeks. It is particularly attractive in groups in the perennial garden, and in meadow plantings. Sun, most soils, moderate to occasional watering. Hardy to below 0 degrees F.

LIMONIUM perezii. Sea lavender. A popular perennial from the Canary Islands. It has wide green leaves that form tough low clumps to 18-24 inches broad. Branched flower heads can appear throughout the year, carrying clouds of what appear to be papery lavender purple flowers on 1-2 foot stalks. The actual flowers are white and poke out of the showy lavender purple calyces. This is an odd and dramatic "front yard" plant, especially in groups. Sun, reasonably drained soil, occasional watering. Hardy to around 25 degrees F.

LINUM lewisii. Blue flax. California and the West. Blue flax is a mountain perennial of deceptively delicate appearance. It has slender stems rising about 1 foot, closely lined by very narrow, blue-green leaves. Lavender blue flowers with a silky sheen are loosely clustered at the shoot tips in summer and fall. Each lasts only a day or two, but many more open in succession for several weeks. It is an attractive rock garden and meadow plant. Sun, well-drained (preferably sandy) soil, occasional to no supplemental watering when established. Hardy to 0 degrees F. or less.

LITHODORA diffusa 'Grace Ward'. Well suited for California climates, this evergreen perennial from southern Europe forms a dense mat with fuzzy, dark leaves suggestive of rosemary. For several weeks in spring, and sometimes again in fall, it stages a dazzling display of half inch electric blue blossoms. Lithodora is a fine plant for rock gardens and bank plantings. Sun, well-drained (preferably sandy) soil, occasional watering when established. Hardy to about 0 degrees F.

LOMANDRA longifolia. Mat rush, basket plant. Australia. An iris-like perennial (in foliage, definitely not in flower) valued for its dense clumps of bright, clean, evergreen foliage. Its small sprays of white flowers in spring are insignificant. It is used, like various grasses and sedges, for naturalistic meadows and large-scale ground cover.

'Breeze' (PP#15420) is the most popular of several current selections available in the U.S. It grows 2-3 feet high and makes profuse clumps with bright, shiny green leaves. **'Gary's Green'**, selected by the late Gary Hammer, is a larger plant—probably up to 4 feet tall—with more erect shoots and darker leaves. Both are adaptable to a wide variety of planting situations. Sun or light shade, many soils, moderate to occasional watering. Reported to grow under eucalyptus. Hardy to 15-20 degrees F., perhaps less.

LONICERA. Honeysuckle. Widespread, Northern Hemisphere. Known primarily for just two or three species, this is a large and highly variable group of shrubs and vines. Their common features are paired, more or less oval leaves and tubular two-lipped flowers, often strikingly colored. The following will thrive with sun or light shade, most soils, and moderate to occasional watering. Hardiness varies as described below.

etrusca. Etruscan honeysuckle. A scandent shrub from the Mediterranean region with attractive blue-green foliage. It

bears masses of pale yellow fragrant flowers in spring; these develop into red berries in fall. This plant can also be grown as either a free-standing shrub or a vine. It can be deciduous with hard frost. Hardy to 10 degrees F. or less.

hispidula. A California native for the wild garden, not wildly showy but pretty in a quiet way. It has slender stems 6-20 feet long, which clamber through and over nearby trees and shrubs without strangling them, spilling out into the sun. The leaves are usually from one to two inches long, broadly oval in outline, blue-green in color and furry. At the shoot tips in summer it bears open, often large, widely branched flower clusters. The flowers are only about ½ inch long and pale to deep pink in color, usually lighter on the inner surface. Following these are bright coral red, shiny berries which make a striking show. This species is particularly attractive as it is seen in nature, spilling over neighboring shrubs and small trees. It will be hardy to 10 degrees F. or less, in our material.

***interrupta* 'Parkfield'**. Another California native, shrubby in form. It can make sturdy, almost treelike trunks, from which the main stems arch out in a broad fountain. The leaves are around an inch long, rather broad, and bright blue-green to light green in color. It carries many clusters of small, pale yellow flowers in the summer months and displays showy red berries, much like those of *L. hispidula*, in the fall. Our offering is particularly bushy and floriferous. Hardy to 10 degrees F. or less.

japonica. Japanese honeysuckle is one of those things everyone grows up with (remember smelling the fragrant flowers and sucking their nectar?); however, its rambling habit and tendency to overwhelm nearby shrubs limit its use in these days of smaller yards. It still excels in covering ugly fences and other structures with a lush blanket of foliage and filling the air with sweet perfume. It has dark, satiny leaves up to 3 inches long and a continuous sprinkling of white blossoms which turn gold as they age. The cultivar '**Halliana**' is the typical, familiar, green-leaved form.

'Purpurea' has leaves strongly tinged with purple, particularly beneath, and purplish backing on the flowers. These are nearly indestructible vines, used on fences, walls and trellises. Hardy to 0 degrees F. or less.

LOTUS (*HOSACKIA*) *crassifolius* var. *otayensis*. Otay mountain lotus. A tidy California native perennial. Its most striking feature is the furry grey divided leaves set along erect, arching 18-30 inch stems. Clusters of bright red violet and white pea flowers are displayed in spring. Shiny ornamental chestnut-colored seed pods follow the flowers. This is an attractive and novel plant for open banks. Sun, well-drained soil, moderate to occasional watering. Hardy to 20-25 degrees F.

LUMA (*Myrceugenella*) *apiculata*. Arrayan. Chile and Argentina. A shrubby myrtle ally with many uses in California. Left alone, it is a roughly vase-shaped shrub or small tree, growing 10 to 20 feet or a little more. Its smooth, tan bark stands in dramatic contrast to the deep, glossy green of the leaves. The latter are about 1 inch long, broadly oval in outline and convex. They show attractive bronze tints in new growth. In summer it is sprinkled with small 5-petalled cream-white flowers which show the same dense brushes of stamens as the true myrtles (*Myrtus*). These are followed by small berries which turn nearly black when mature. '**Glanleam Gold**' is slower growing than the typical form, unusually dense and smaller-leaved. The leaves are tinged with red in new growth and mature to light green with wide gold edges. *Luma* is a plastic shrub, easily formed by judicious pruning but well-behaved with little maintenance. It can be an impressive specimen shrub, patio tree or part of a tall shrubby screen or border. It thrives in sun and most soils, with moderate to occasional watering. Hardy to 20 degrees F. or less.

LUPINUS. Lupine. North and South America, Mediterranean area. A large group including some of our most beloved annuals, as well as perennials and shrubs, all well represented in California. The stalked leaves are usually divided hand-like into several leaflets. Pea shaped blossoms are scattered or arranged in whorls along flowering stems at the shoot tips. Often they are highly colored and delightfully fragrant. The following are native shrubs, beautiful on banks and as centerpieces in meadows. Sun, well-drained soil, occasional or no watering when established. All should be hardy at least to 15 degrees F. The following are all California natives.

albifrons. A rounded shrub up to 5 feet tall, eventually developing a picturesque trunk. Both young stems and leaves are covered by silky hairs, giving the plant a silvery sheen. The leaves are of variable size, the leaflets usually narrow. In spring it gives a dazzling display. Spikes up to 1 foot long carry richly fragrant purple blossoms, marked with white and yellow. This is a perfect plant for dressing up bare banks and it often colonizes roadcuts on its own. Hardy to 10 degrees F. or less.

var. *collinus*. One of the most beautiful of all lupines, though best handled with benign neglect. It forms a silvery, deep-rooted mat from which incredible towers of violet to maroon blossoms, marked with white or yellow, issue in spring and early summer. Apart from the rock garden, this variety has its ideal site on bare banks, with no summer watering when established.

arboreus. Bush lupine. A coastal species often growing 6 feet or more tall, usually more openly branched than *L. albifrons*. It has reddish hairy stems and leaves which are dark green above, greyish green beneath. The flowering stems may be 1 foot long or more, displaying blossoms painted golden yellow or lavender to white. Blooming season is mostly late spring and summer. The flowering stems should be removed before seed is set; otherwise the plant can self-

destruct after a particularly heavy flowering.

chamissonis. This is another coastal native, though quite distinct from the others. It usually grows 2-4 feet high in the wild, a little larger in cultivation, and is closely branched. Both the stems and the leaves are clothed in soft, silvery hairs. The flower clusters are shorter than those of *L. arboreus*, usually 6-8 inches long, but they are crowded with beautiful blossoms. These are colored a soft chalky lavender and are beautifully framed by the foliage. It performs best near the coast and needs a sandy, fast-draining soil.

sericatus. Cobb Mountain lupine. Cobb Mountain lupine has large and broad silvery leaves and makes a low mound to 12 inches high. Spikes of mauve pink flowers rise about 12 inches over the leaves in spring.

LYGEUM spartum. False esparto grass. A slowly spreading evergreen grass from the Mediterranean region, with beautiful silver-grey, rush-like foliage. Distinctive showy flowers look like flecks of cotton; the dried persistent floral bracts are handsome on the plant from summer into fall. Useful in groups or as a spreading ground cover. Sun or light shade, adaptable to a wide variety of soils, moderate watering, drought tolerant when established. Hardy to about 10 degrees F.

LYNOTHAMNUS floribundus ssp. asplenifolius. Catalina ironwood. Native to the Channel Islands off the southern California coast, this is a most unusual tree. It is generally taller than broad, with erect cinnamon-colored trunks and shreddy bark. The younger branches carry sprays of divided and dissected 6 inch leaves, dark green above and pale beneath. Broad clusters of cream-colored flowers decorate the tree in early summer, developing into brown seed capsules which persist for several months. It grows best near the coast. Sun or light shade, well-drained soil, occasional to no supplemental watering when established. Established trees are hardy to around 15 degrees F.

MAHONIA (Berberis). North and Central America, Asia. Botanists now classify these with *Berberis*. However, they are still almost universally known by their older name, which may yet rise again. These are rugged evergreen shrubs, often creeping by underground rhizomes to form broad colonies. All have leathery leaves divided lengthwise into pairs of toothed or spiny leaflets. They bear clusters of yellow flowers which develop into decorative, usually dark blue berries, often showing a waxy "bloom" like real grapes. They are beautiful in shrubby borders, hedges of various sizes, and for individual display.

Most mahonias prefer full sun near the coast, light shade inland, reasonably well-drained soil, and moderate to occasional watering when established. Watch for and control the small loopers (a type of caterpillar) which attack and skeletonize the leaves. Their hardiness varies.

aquifolium. Oregon grape. California and Oregon. The best known of the group, these are 3-6 foot shrubs native to California and Oregon. The stems are lined by large, shiny, dark green leaves, usually bronzy in new growth. Many 3 inch sprays of flowers are clustered at the shoot tips in spring, forming sweet, edible berries in summer. We grow the typical form from seed. '**Compacta**' is a dwarf selection, clumping profusely and seldom over 3 feet tall. It has tightly packed leaves and typical flower clusters. Hardy to 0 degrees F. or less.

'**Golden Abundance**'. This impressive cultivar was introduced in the 1970s by Rancho Santa Ana Botanic Garden, but has been surprisingly slow to capture the public fancy. It remains a valuable selection. It shows its hybrid vigor in its sturdy, well branched trunks and large size. The plant can easily reach 8 feet in height and twice that in breadth. The leaves are 6-10 inches long, with several broad, thick, deep green leaflets. Masses of bright yellow flowers adorn the plant for several weeks in spring, followed by clusters of purple berries. Hardy to 10 degrees F. or less.

nervosa. California and the Northwest. Longleaf mahonia. A forest native, quite distinct from other mahonias. It grows slowly, eventually making loose colonies of solitary stems, each usually 1 foot or less high. The leaves can be 12 inches long or more and made up of up to 20 satiny, deep green leaflets. These take on a beautiful purple cast in winter. The bright yellow flowers are borne in erect sprays up to 8 inches long. Berries are of the usual "mahonia blue". This is definitely one for shady nooks, performing better near the coast and in the mountains than in areas with hot, dry summers. Otherwise it is trouble-free. Probably hardy to 0 degrees F.

nevini. Our favorite among several large, bushy dryland species. It can grow as much as 15 feet tall but usually remains in the 6-10 foot range, and is at least as broad as tall. Younger stems are closely lined by 2-3 inch bluish to greyish green leaves, tinged with pink in new growth. Each leaf is divided into 3-5 toothed, pointed leaflets. The berries are orange to scarlet and quite decorative. One of the most drought tolerant mahonias. Hardy to 10 degrees F. or less.

repens. A mountain dweller, ranging widely over the western U.S. It is creeping in habit, producing erect shoots usually 1-2 feet tall at intervals along the rhizomes. The leaves are relatively short, with broad leaflets of dark bluish green. In winter they are brilliantly plum-colored. Flowers and berries are carried in short clusters. Hardy to below 0 degrees F.

'**Skylark**'. Our own long-ago selection from a seedling crop, this may be either *M. pinnata*, the California holly grape, or (more likely) a chance bee hybrid between it and *M. aquifolium*. It is a roundish, closely branched shrub of 5 feet or more. Its 6 inch leaves are dark green with a highly polished surface, brilliant red in new growth and purple-

tinted in winter. The leaflets are broader and less crinkled than those of typical *M. pinnata*, but nearly as spiny. The spring flowers and summer berries are borne in densely clustered 4-6 inch spikes. Hardy to 10 degrees F. or less.

MALACOTHAMNUS. California, both Alta and Baja. Native shrubs of the mallow family, interesting for both foliage and flowers. Several make sizable thickets from underground stems and roots. Individual shoots are usually erect and well branched. The leaves, like those of so many mallows, are usually lobed and more or less maple-like in outline. Both leaves and stems may be hairy, giving the plants a pleasant greyish cast. Five petalled flowers of the typical mallow form, with central tubes and brushes of stamens, are presented in clusters, mostly in summer. Common colors are white and pink. These are tough, adaptable plants, especially useful on banks and other exposed sites. Their chief drawback is a tendency to pop up uninvited in nearby plantings (young shoots are easily rogued out). Sun, most soils, moderate to occasional watering. Hardiness varies a bit.

***fasciculatus* 'Casitas'**. This is a plant we encountered near Lake Casitas, in Ventura County, making ghostly grey puffs in the chaparral. It grows strongly erect, with grey-hairy stems and sharply lobed grey leaves up to 4 inches long. In late summer and fall, long stalks with well-separated bud clusters extend from the shoot tips. Each bud unfolds into a cupped, upfacing 1-1½ inch blossom of exquisite silvery pink. Hardy to 15 degrees F. or less.

fremontii. A widely ranging, highly variable plant. The current unnamed selection is bushy and upright-oval in form, each main shoot growing 4-6 feet high and 3-4 feet broad. Before long, new shoots appear from the ground, and eventually a broad colony is formed. The individual branches are rather slender and arching, with grey-felted 2-3 inch leaves. From July to October it carries loose wands of beautiful cupped, upfacing, silvery pink flowers, each about 1½ inches broad, at the branch tips. Hardy to 10 degrees F. or less, resprouting easily after damage to the tops.

palmeri. Arroyo Seco bush mallow. This bush mallow from Monterey County is generally smaller than the preceding two, with broad lobed green to grey-green leaves and congested heads of flowers at the shoot tips in summer. **'Hanging Valley'** is a soft, large-leaved plant, grey-green overall. It has beautiful bright pink flowers in summer. **'Jolon'** has deep green leaves and pure white flowers. Probably hardy to 10 degrees F. or less.

MELALEUCA *incana*. Grey honey myrtle. Australia. This striking foliage shrub is quite distinct from other melaleucas in cultivation. It grows more spreading than erect, about 6 feet high by 8-10 feet wide in this selection. Narrow, fuzzy grey leaves are closely set around the stems, which droop gracefully in new growth. In spring the shoots are tipped by small, round clusters of yellowish cream blossoms. Sun, reasonably well-drained soil, moderate to occasional watering when established. Hardy to 18 degrees F. or less.

MELICA. Melic. Widespread in the temperate world; ours are natives of California and Oregon. They are elegant perennial bunchgrasses, making compact shoot-clumps and lasting many years. Both leaves and stems are usually slender and the flowers small, creating an airy impression. They are fine choices for meadows and banks. Sun or light shade, reasonably well-drained soils, occasional watering when established. Our material should be hardy to 15 degrees F. or less.

californica. California melic. Plants of this species form dense shoot-clumps to about 12 inches high; flower stems with green and silvery flowers rise to 24 inches. This bunchgrass is similar to small-flower melic grass, *Melica imperfecta*, but is larger in leaf and a little taller in flower. It occurs throughout California and into Oregon on rocky hillsides, in oak woodland and conifer forests. The rich green leaves and tidy habit provide a nice accent in mixed plantings. Drought will encourage summer dormancy.

imperfecta. Small-flower melic grass. This is a common member of our native bunchgrass communities--or rather, what remains of them--found in open meadows and light oak woods and chaparral. It is graceful and fountainlike, with densely clustered stems, narrow leaves and slender, arching flowering stems 18-30 inches tall. The flower spikes are open and wispy, with small individual florets. It is certainly one of the prettiest of our native bunchgrasses.

MIMULUS. Monkey flower. Nearly worldwide, subtropics and temperate regions. A large group of annuals, perennials and small shrubs, many of them native to the West. It is difficult to generalize regarding their features, though most are identified by paired leaves and similarly paired, brightly colored blossoms somewhat resembling snapdragons, with a distinct basal tube and a flaring "face". The following are small native shrubs, often seen on rocky hillsides and roadbanks or at the edges of woods. They thrive in sun but tolerate light shade, given well-drained soil and moderate to little watering (the leaves naturally shrivel under very dry conditions). They are essential elements of mixed native gardens. Flowering can be extended considerably by shearing back the plants (leaving plenty of live foliage below) after each wave of bloom. Their hardiness varies.

***aurantiacus* (*Diplacus* of older texts)**. Bush monkey flower. This species is now a sort of catch-all for what were once several separate shrubby species. Overall it spans much of the length of California and extends from the coast and offshore islands to the Sierra foothills. The plants are generally bushy and more or less erect, growing 1-3 feet (sometimes more) tall. Their leaves vary from broad to quite narrow in outline, and are usually deeply veined. From late spring to fall they carry large (generally 1-2 inch broad), colorful flowers in pairs along the stems. For the heaviest

bloom, the plants should be cut back two or three times each season. Sun, well-drained soil, moderate to occasional watering when established. Their hardiness varies considerably, though the following should all endure 15 degrees F. or less. We will describe them here according to their former species, now simply regional forms.

former (and still) *aurantiacus*. Orange (or sticky) monkey flower. This is the monkey flower familiar to nearly everyone who travels in the California wilds. It is found on coastal bluffs and meadow hillsides, oak woods and chaparral. The plants usually grow more or less erect, from 1-3 (or more) feet tall. They have narrow, resinous deep green leaves and bear bright to pale orange flowers of varying size in spring and summer, basically until flowering is stifled by drought. In addition to seedling material, we are working with several selected clones. '**Pine Canyon**', selected by Adrienne Harrold, is a 2 foot plant with unusual light yellow flowers. '**Electric Pumpkin**' is more spreading and extremely floriferous, with masses of deep orange flowers marked with white. '**Afterglow**' is more robust, growing fairly erect to 3 feet or more. It has exceptionally large flowers of lighter orange, with darker orange bands on the lower segments.

former *bifidus*. Mock-azalea. One of the most attractive in both foliage and flower. It has narrow, dark green to greyish green leaves and blossoms up to 2½ inches long and 2 inches broad, the spreading face often ruffled. They range in color from orange to cream white. '**Junipero Serra**', from the mountain of that name, is a spreading, bushy shrublet producing quantities of bright orange flowers with white markings. '**Cone Peak**' is nearly prostrate in growth, with dark, shiny leaves and large bright orange flowers outlined in white. An unnamed selection by Suzanne Schettler has cream-yellow flowers.

former *longiflorus* ssp. *calycinus*. This monkey flower is attractive in both foliage and flower. It grows about 2 feet high and has narrow, light green leaves and pale yellow blossoms up to 2½ inches long from late spring to fall.

hybrids. Given their beauty, palette of colors and ease of culture, it seems only natural that someone would want to try a hand at hybridizing the shrubby monkey flowers. And so it has happened, for many years. Some of the early hybrids, while spectacular and introducing a range of colors barely seen in the wild (like blazing scarlets and near-purples) were a bit too tender for gardens in northern California, or sometimes disease-prone due to overly lush, congested foliage. More recent efforts have addressed these problems. Richard Persoff has produced a series under the Jelly Beans™ banner that combine disease resistance, bushy habit, genuinely attractive foliage, exceptionally large flowers and some truly dazzling colors. '**Jelly Beans Lemon**' (PPAF) has ruffled flowers of vivid lemon yellow; '**Jelly Beans Orange**' (PPAF) has bright orange flowers, similarly ruffled; and '**Jelly Beans Red**' (PPAF) vivid purplish red flowers. In 2015 we were privileged to offer a new Jelly Beans generation, with some striking new colors. '**Jelly Beans Crimson**', '**Jelly Beans Scarlet**', and '**Jelly Beans Tangerine**' (all PPAF) are self-explanatory; '**Jelly Beans Cinnamon**' opens with red and orange shadings and shifts toward orange; and '**Fiesta Marigold**' has vivid red flowers outlined in gold (both also PPAF). Other hybrids now offered (as you can tell, we're a little carried away by *Mimulus*) are '**Jack**', an upright plant with bright cerise flowers; '**Pamela**', by Susan Ashley, a spreading plant with large leaves and large pale gold flowers with narrow white edging; and '**Ruby Slippers**', a UCSC Arboretum introduction of upright, bushy habit and bright red flowers.

MISCANTHUS junceus. Okavanga Delta grass. This statuesque grass from southern Africa makes stiff upright clumps up to 10 feet high. It has erect, lightly furry, grey-green rush-like leaves. Flowers emerge above the foliage in modest fluffy cream colored plumes. This is an odd, dramatic plant for individual display, though it might also be used as a tall border. Sun, most soils, moderate to occasional watering. Hardy to 20-25 degrees F.

MONARDELLA. Coyote mint. A group of annuals, perennials and subshrubs well represented in California, where all of the following live. These perennials are of quite variable habit, with paired, broadly oval aromatic leaves and bearing dense heads of tubular blossoms at the shoot tips, mostly in summer. Sun, well-drained soils, occasional watering when established. Hardy to around 10 degrees F. except as noted.

macrantha '**Marian Sampson**'. Scarlet monardella. This species forms low mats with dark green, shiny leaves. In late spring and summer its heads of large scarlet, tubular flowers nestle among the leaves. From Ed Sampson at Mourning Cloak Ranch we received the most striking form we have seen to date. We named it in honor of his late wife, Marian. It forms tight mats of small, dark leaves, with brilliant red flowers. Well suited for rock garden and container use, it is tolerant of part shade.

odoratissima. Mountain coyote mint. Mountain coyote mint is a common but always welcome sight in the higher ranges of California. It is usually around a foot high, mounding to nearly spherical in form, with narrow, wonderfully aromatic grey-green leaves. In summer it is nearly covered by tight heads of white, pink or lavender flowers. This is another excellent plant for banks. Hardy to 0 degrees F. or less.

villosa. In its typical form, this is a bushy perennial or subshrub usually 1-2 feet tall, with furry, grey-green leaves and heads of pink to lavender blossoms. An (unfortunately) unnamed selection of the variety *obispoensis* is distinguished by its bushy habit, nearly round, deeply veined grey-green leaves, and vivid reddish purple flowers. Also

unnamed is a selection of *M. villosa x purpurea*, a lower plant with greener leaves, also with bright reddish purple flowers. All are quite at home on exposed, dry banks and other neglected spots.

viminea. A slender semishrubby perennial, making loose foot-high mounds. Its ornamental features include narrow silvery green, aromatic leaves and rounded heads of bright lavender flowers in summer.

MUHLENBERGIA. North America and Asia. A large group of annual and perennial grasses, some of them having little in common except to the trained eye of a botanist. The following are all large, perennial bunchgrasses, easily grown and highly ornamental—assuming you have space for them—either individually or in larger meadows and borders. Sun or light shade, most soils, moderate to occasional watering.

capillaris. Purple muhly. Eastern U.S. A dense crown of blue-green shoots, up to 2 feet high and wide. The leaves are narrow and thick. In summer and fall, wand-like stems rise to a height of 3-4 feet, displaying airy clouds of tiny, purple tinged flower spikelets. These hang on for many weeks. '**White Cloud**' grows taller and more erect than plants of the typical species. It has beautiful white flower spikelets. Hardy to 0 degrees F. or less.

dubia. This pretty grass is a native of the southwest U.S. into Mexico. Light green shoot-clumps grow about 18 inches high, similar in form but smaller than *M. rigens*, deer grass, below. It produces similar fountains of dense, narrow flower spikes in summer and fall, rising 2-3 feet with a starburst effect. Hardy to 0 degrees F.

dumosa. Bamboo muhly. Arizona. A woody grass with slender, openly branched stems arching to 4-6 feet. The leaves are up to 3 inches long, pale green in color. One barely notices the small, purple tinged flower clusters. Overall, the plant has much the look of a small *Otatea* or other wispy bamboo. Though found on desert slopes in the Southwest, it will tolerate ordinary garden conditions. Hardy to 15 degrees F. or less.

lindheimeri. Western U.S. In spring and summer, this species is a dense 2-3 foot fountain with long, bright bluish green leaves. In fall and winter, however, it carries many narrow, feathery clusters of tiny spikelets on 3-4 foot stems. Hardy to 0 degrees F.

'**Pink Flamingo**'. An outstandingly showy hybrid, reputedly between *M. capillaris* and *M. lindheimeri*, that first appeared at Peckerwood Gardens near Hempstead, Texas. It forms upright clumps to 3-4 feet, with grey-green leaves. Feathery plumes of glistening pink flowers rise above the foliage in late summer and fall, lasting many weeks. Hardy to around 0 degrees F.

pubescens. Soft muhly. Mexico. This muhly's evergreen mounds of furry blue-grey leaves are about 2 feet tall and wide, with draping leaves. Purplish summer flowers are in airy plumes. This species brings a reliable grace to any planting; clumps stay tidy all year. Sun to light shade, reasonably well-drained soil, moderate to occasional watering. Hardy to 15-20 degrees F.

rigens. Deer grass. For those who roam the California wilds, deer grass is a frequent and impressive sight in many habitats. It forms dense, fountainlike clumps, 2-3 feet tall in leaf, up to 6 feet in bloom. The narrow light green leaves extend to nearly 2 feet long. Short flower clusters are narrowly pressed along the tall blooming stems, giving them a wand-like appearance. They persist through the winter, creating beautiful silhouettes. Sun or light shade, most soils, moderate to occasional watering. Hardy to 0 degrees F.

MUSCARI macrocarpum. Turkey and the Aegean. Pretty as it is, the common grape-hyacinth, *Muscari neglectum*, is not all this genus has to offer. *M. macrocarpum* is quite distinct. It grows from larger bulbs—sometimes 2 inches broad—though it makes similar colonies in time. The leaves are not grassy but stouter, up to a foot long and tapered, curving out and down to the soil line. They are also grey-green in color, unusual for the genus. In early spring it produces 6-8 inch stems with up to thirty half-inch urn-shaped blossoms. These are purple in bud, becoming soft yellow when expanded. They have a delicious fragrance, combining elements of citrus, bananas, and more mysterious elements. A beautiful container and rock garden plant. Sun, most soils, preferably no irrigation in summer, when the bulbs are dormant. Hardy to 10 degrees F. or less.

MYOPORUM parvifolium. Western Australia to Victoria. This is a trailing evergreen shrub, making broad mats of slender, closely branched stems. Leaves are closely spaced, narrow, and usually about 1 inch long. Small white to pale pink flowers are clustered near the shoot tips in summer. '**Putah Creek**' is a robust selection from the U.C. Davis collection, growing about 2 feet tall and spreading widely. It has dark green leaves and white flowers. An unnamed selection described simply as **red leaf form**, received from the U.C. Santa Cruz Arboretum, is much lower and slower growing. It has heavily red tinged leaves and cream-colored flowers with red centers. Another selection received from the U.C. Davis Arboretum, is '**Tucson**'. This has more slender, closely branched stems than other selections and smaller, very narrow bright green leaves. All are highly decorative ground covers for warm, sunny spots. Hardy to 18 degrees F. or less. Moderate to occasional watering when established.

MYRICA (MORELLA) californica. Wax myrtle. Wax myrtle is a large shrub or small tree of coastal California and Oregon, with smooth, light brown bark. It can grow 10-20 feet high but is easily restrained by pruning. Stems are closely branched, held nearly erect and lined with a neat brush of narrow, shiny, dark green leaves. The yellowish

flowers are tiny and inconspicuous but develop into small berries with a spicily aromatic wax, used in making scented candles. Wax myrtle is useful as a specimen foliage shrub or small tree, screening shrub or hedge. Sun or shade, most soils, moderate to occasional watering when established. Hardy to 10 degrees F. or less.

MYRSINE africana. African boxwood. Almost too pretty to be compared with a true boxwood, this is a dense, round shrub up to 8 feet tall, usually less. It has dark, reddish stems. These are crowded with nearly round, polished, deep green leaves, about a half inch long. The flowers are tiny and inconspicuous, but the small purple berries which later nestle among the leaves are interesting. This is a perfect shrub for hedging or shaping, or simply as a bright, clean mass of foliage. Its native range extends from the Azores, to the mountains of east and southern Africa, then on to the Himalayas. Sun or light shade, many soils, moderate to occasional watering. Hardy to 15-20 degrees F.

MYRTUS communis. Myrtle. Mediterranean and Western Asia. A neat, leafy shrub, long popular in California landscapes. It is densely branched, carrying a thick covering of pointed-oval evergreen leaves. These are deep green, shiny and aromatic when crushed. Small white flowers with conspicuous brushes of stamens appear along the branches in summer; blue black berries mature in fall and early winter. '**Compacta**' is a form with much smaller leaves and an even denser habit than the species. '**Variegata**' is a cultivar with somewhat more open growth, whose leaves are edged with creamy yellow. '**Compacta Variegata**' has the form and leaf size of 'Compacta' itself, but with pale yellow leaf margins. All respond well to pruning and are useful in hedges and dry borders. Sun to light shade, well-drained soil, moderate to little watering. Hardy to 15 degrees F. or less.

NARCISSUS bulbocodium. Hoop petticoat daffodil. An easy bulb from southwestern Europe, making sizable thickets over time. It has low, shiny grass green leaves. Dainty spring flowers have wide bright yellow "hoop" skirts. Great in containers and the rock garden. Sun to part shade, well-drained soil, moderate watering in winter and spring. Summer dormant and perfectly happy with summer drought. Hardy to 0 degrees F. or less.

NEPETA. Catnip, catmint. Widespread in Europe and temperate Asia. These are pleasant, sometimes quite showy perennials of the mint family, varying considerably in habit and texture. Most are closely branched, with paired, toothed, aromatic leaves. Along with some of the teucriums, these are the plants which seem to give cats a psychedelic experience. They will rub, roll on, and often destroy the plants above-ground (fortunately, nepetas have considerable powers of rejuvenation from their underground rhizomes). Small mint-like blossoms are borne, sometimes in great profusion, in summer and fall. Their colors vary from white to violet, with an occasional pink. These are cheery plants for sunny borders and banks, requiring very little care, beyond shearing off spent flower clusters to promote further waves of blooming. Reasonably well-drained soils, moderate to occasional watering. The following are hardy to 0 degrees F. or less.

x faassenii. A softly textured plant, making mounds up to 2 feet high and 3-5 feet broad. Both stems and leaves are greyish green, making a perfect foil for masses of softly colored flowers, lavender in the most common, unnamed form. '**Blue Wonder**' is lower growing than most selections, has greener leaves, and features deep lavender blue flowers. '**Walker's Low**' is not so low, mounding to 2 feet, with grey green leaves and dark lavender blue flowers. '**Snowflake**' is a low, compact selection but with pure white flowers.

'**Pink Pixie**'. Smaller in scale than most catmints, this easy perennial combines aromatic greyish green leaves and soft rose pink flowers. Flowering occurs in waves from spring through fall.

'**Six Hills Giant**'. A robust hybrid, more upright and mounding to at least 2 feet tall, with paired, toothed, aromatic leaves. Its flowers are bright lavender-blue.

NOLINA. Bear grass, nolina. Southwestern U.S. to Central America. The bear grasses are a group of perennials related and somewhat similar in impression to the yuccas. They form fountains of narrow, usually curved leaves. These may be elevated in older plants on short trunks. Flowers are small but borne in branched, many-flowered clusters. They are white to cream in color. They are used, like the yuccas and agaves, as dramatic specimen plants, or in drifts on large banks. Sun, well-drained soil, occasional to no watering when established. Their hardiness varies.

bigelovii. Desert nolina. This is a native of the Sonoran desert of southeastern California, Baja and Western Arizona, slow growing but developing a substantial trunk in time. It forms rosettes of narrow, tough, greyish green leaves. Huge branched flower clusters are held aloft on stems up to 12 feet high. Hardy to 10 degrees F. or less.

microcarpa. Bear grass. A southwestern native that forms graceful, long lasting stemless clumps, the leaves up to 4 feet long. Flowering stems three to nearly six feet high carry dense clusters of creamy white flowers in summer. Hardy to 0 degrees F. or less.

OENOTHERA. Evening primrose. The Americas. Rugged annuals and perennials of quite variable habit, prized for their abundance of broad-petalled, often fragrant flowers during the warmer months. Many open in the evening and close by mid-morning. However, most of the following are day blooming. Sun, reasonably well-drained soil, moderate to little watering when established. Their hardiness varies.

caespitosa. A high desert species of California and the West. It makes tightly clustered crowns of toothed, lance shaped, greyish green leaves. Among these nestle fragrant, broad petalled white flowers, each up to 4 inches across. A good subject for the rock garden, banks and slopes. It needs well-drained soil and resents excessive moisture. Hardy to 0 degrees F. or less.

missouriensis. Eastern U.S. A beautiful plant for the rock garden. Several short, prostrate stems radiate from the base, lined with 4 inch narrow, greyish green leaves. Each stem is tipped by a tight cluster of buds from which brilliant yellow 4 inch blossoms open successively in summer and fall. '**Greencourt Lemon**' is distinguished by more silvery leaves and pale yellow flowers. Winter deciduous. Hardy to below 0 degrees F.

speciosa. Mexican evening primrose. A carpeting species, useful for ground cover. It travels by short underground rhizomes, eventually covering an area several feet broad. Each seasonal shoot has several narrow, dark green leaves and is tipped by a cluster of large, silvery pink blossoms. It blooms throughout the summer and early fall. The basal leaves are evergreen, at least in milder climates. '**Rosea**' is a robust selection, growing up to 18 inches high, with very large light pink flowers. Hardy to 10 degrees F. or less.

OLEA europaea. Olive. Mediterranean region. These are not only the gnarled trees one sees in Central Valley orchards, producing the fruit we buy in jars. They can also be highly ornamental and extremely rugged evergreen trees and shrubs for California landscapes. Most have several arching, somewhat contorted trunks which conspire to form a round to parasol-shaped head, up to 30 feet overall unless the gardener intervenes (they are quite amenable to pruning and shaping). They have attractive grey bark and usually narrow leaves up to 3 inches long, deep green to grey-green above and grey-green to silvery beneath. The clustered flowers are small, white and fragrant. The end results, for those that produce fruits, are the olives we eat (after some exotic treatments, like lengthy soaking in solutions of lye). We still offer two shrubby selections that are grown strictly as ornamentals. '**Montra**' is a compact, arching shrub that grows slowly to 6-8 feet high. It has shiny dark olive green leaves and does not produce fruits. '**Skylark Dwarf**' grows more upright, probably to 10 feet at maturity. It has neat rows of branches set with equally neat rows of smallish leaves. It sets few, sometimes no fruits unless a different olive is nearby to act as a pollinator. Sun, reasonably well-drained soil, only occasional watering when established (olives are nearly as drought tolerant as our native oaks). Hardy to 15 degrees F. or less.

ORBEXILUM pedunculatum. Sampson's snakeroot. Clumping profusely at the base and spreading from short rhizomes, this low perennial from the southeastern United States eventually forms a broad mat. The stems are slender and prostrate, and they carry dark, lustrous leaves with triplets of 1 inch leaflets. In summer many short clusters of violet pea-flowers are produced at the shoot tips. This is a fine plant for sunny banks and other spots where a small-scale ground cover is needed. Its only drawback is that it is irresistible to gophers and rabbits. Sun to part shade, reasonably well-drained soil, moderate to occasional watering. Probably hardy to 0 degrees F.

ORIGANUM. Oregano. Europe, Asia. Semi-shrubby perennials of the mint family, some of them ornamental in both foliage and flower. Most are mounding to matting in habit, with closely set pairs of round to oval, aromatic leaves. Their mint-like blossoms are carried in dense spikes, often with large, showy bracts. These are fine subjects for the rock garden, container plantings, borders and open banks. Those selections with colored bracts retain their form and color when dried. Sun, well-drained soil, moderate to occasional watering when established. Hardiness varies, though all of the following will take 10 degrees F. or less.

'**Amethyst Falls**'. A clumping oregano with lightly furry, rounded grey-green leaves. Its 12-18 inch flower stems carry drooping hop-like heads with bracts that start out creamy green and mature to rose pink. Small bright lavender pink flowers poke out between the bracts. Hardy to 0 degrees F. or less.

'**Green Goddess**'. A densely matting low perennial selected by the late Bob Saso, with roundish green leaves. 8-12 inch flower stems carry nodding clusters of creamy bracts with tiny pink flowers poking out. This oregano can cover a wide area over time.

laevigatum '**Hopleys**'. This plant forms low hummocks of basal shoots, with small, roundish, dark bluish green leaves. In summer and fall it sends up a profusion of flowering shoots, with masses of red-purple blossoms opening in lengthy succession. Unlike some of the other species described here, it has nearly inconspicuous floral bracts.

'**Marshall's Memory**'. A hybrid of uncertain parentage, commemorating the work of the late Marshall Olbrich. It forms a dense mat, spreading to perhaps 2 feet broad. Leaves are small, roundish and dark green in color. In late summer it carries many large clusters of lavender flowers, poking out from rosy bracts, on 8-12 inch stems.

microphyllum hybrid. As the species name suggests, this plant is distinguished, among other things, by tiny leaves. The stems are slender and wiry, and the flowers small but showy. It grows a little more than 1 foot tall, with ¼ inch furry, grey-green leaves and lavender pink blossoms.

'**Norton Gold**'. It is hard to imagine an oregano for shade, but here it is. This low golden foliage mat is ornamental in all seasons. Heads of light pink flowers appear in summer. Foliage looks best in cool sun or semi-shaded gardens.

rotundifolium. This species forms a tight central root-crown from which short, prostrate stems radiate in all directions. The leaves are nearly round and colored bluish green, tinged with purple in new growth. The flower clusters, which are freely produced from spring to fall, are showy not so much for the blossoms themselves as for the large, pale, overlapping floral bracts. These dry well and are used in floral arrangements. We are growing the typical form and two named, possibly hybrid selections: '**Kent Beauty**', distinguished by even more compact growth, heavier bloom and pink-flushed floral bracts. '**Rose Beauty**' was selected by Ron Lutsko from seedlings of 'Kent Beauty' for even more striking red tints on the bracts.

'Santa Cruz'. This was a chance garden hybrid at the U. C. Santa Cruz Arboretum, possibly involving *O. pulchellum*. It forms dense clumps with leaves similar to those of *pulchellum*, and arching 8-12 inch flower sprays. These bear small lavender flowers which peek out from tightly set pink bracts. By cutting down the old stems, one can have several such shows each season.

'Virginia Saso'. A matting perennial with large, slightly furry round blue grey leaves. Large pink bracts in pendant hop-like heads are prominent features in summer and fall. The actual flowers are small and light pink and poke out between the bracts.

vulgare ssp. hirtum. Greek oregano. A low green leafy cushion. The leaves are pleasantly aromatic and can be used for seasoning; clusters of small white flowers are held over the leaves on 6 inch stems in summer.

OSMANTHUS heterophyllus. Holly olive. Japan and Taiwan. One of the best-known of the osmanthus, with many cultivars. It is a well-branched shrub, usually upright-oval in form, growing as much as 15 feet high in the larger selections. It has thick, usually sharply toothed leaves, from 1 to 3 inches in length. The flowers are white and fragrant, though not very conspicuous. '**Ilicifolius**' is listed as a synonym for the species itself, but there is a tangible, distinct cultivar here under that name. It is a bushy shrub with 2 inch deep green, shiny leaves, bronze in new growth.

'Purpureus' is a little more open and less stiff, with smaller dark, glossy leaves. Younger leaves and stems are heavily shaded with reddish purple. '**Variegatus**' is much more congested and somewhat irregular in form. It has smaller, closely packed leaves with creamy yellow margins. All are attractive either individually or in shrubby borders and hedges. Sun to part shade, moderate to occasional watering. Hardy to 10 degrees F. or less.

OXALIS. Nearly worldwide. In addition to some much-despised weeds, this group includes a broad assortment of highly ornamental perennials. They grow from underground rhizomes, which may develop bulbous structures. Most have clover-like leaves and relatively large 5-petaled flowers of white, pink to red, purple or yellow. Many are suitable for container and rock garden use. The following thrive in sun or light shade, most soils, moderate watering during growth and bloom, and little or none during their summer dormancy. Hardy as described below.

bowiei. South Africa. This oxalis appears from thick underground rhizomes, growing from fall to early spring, with shiny bright green clover-like leaves on 8-12 inch stalks. Large purplish pink blossoms are held above the foliage in umbrella-like clusters for several weeks in fall and early winter. The leaves are damaged at 20 degrees F., though the plants quickly recover.

hirta. South African oxalis are well suited to California's summer dry climate. This species grows from densely clustered bulbs, with erect 6-12 inch stems and brushes of narrowly parted bluish green leaves, appearing in early fall and lasting until spring. One-inch blossoms painted bright rose pink are clustered at the stem ends in fall and winter, creating a vivid display. Hardy to 15 degrees F.

PANICUM bulbosum. Bulbous panic grass. Clumping perennial grass found from the southwest U.S. into Mexico has relatively narrow soft grey-green leaves with swollen bases. Flower stems rise to 3 feet, carrying tiny flowers on well branched stems, creating a pleasing airy effect. The foliage turns an attractive yellow in the fall. Sun or light shade, most soils, occasional watering. Hardy to 0 degrees F. or less.

PAPAVER pilosum. Asia Minor. A pretty and undemanding poppy, received many years ago from the late Rose Williams. It forms perennial clumps with rosettes of rather narrow, toothed leaves up to 6 inches long. The leaves are light blue-green and stiffly hairy. Slender stems rise a foot or more from the base throughout the growing season, topped by nodding buds which open into bright orange four-petaled flowers, up to 2½ inches across in this strain. It tolerates sun but is particularly good in light shade, given well-drained soil and moderate to occasional watering. It will pop up here and there from seeds but is seldom a nuisance. Hardy to 10 degrees F. or less.

PARROTIA persica. Persian ironwood. Native to northern Iran, *Parrotia* is an unusual shrub or small tree of the witch hazel family, growing 10-30 feet high. It has attractive tiers of horizontal branches, lined by broad, deeply veined leaves up to 4 inches long. In fall the leaves take on wonderful gold to scarlet shades, which last for several weeks. Small, round heads of petal-less flowers with showy red stamens decorate the bare stems in early spring. This is a stunning specimen shrub/tree, easily shaped by pruning. Sun, most soils, moderate to occasional watering. Hardy to around 0 degrees F.

PASITHEA caerulea. This is a showy Chilean perennial of the lily family, making compact, many-stemmed clumps.

Each shoot consists of a spray of folded grassy leaves, up to 12 inches long, and one or more taller, well branched flower stems, appearing in early summer. For several weeks these carry a succession of starry one inch flowers, bright true-blue in color. Then the plants disappear until fall rains begin. Sun, well-drained soil, little or no summer irrigation (making it an ideal subject for naturalistic meadows and banks). Hardy to 15 degrees F. or less.

PELARGONIUM *sidoides*. Kalwerbossie. Prized for its medicinal properties, this low pelargonium is from the summer rainfall region of southern Africa. It is low and mounding. The leaves are about an inch and a half long, broadly heart shaped, wavy-edged and greyish green in color. The plant is nearly everblooming. It holds its small clusters of irregular blossoms on slender, elevated stalks. The flowers are about 1 inch long and painted a deep, velvety purplish red. Sun to part shade, well-drained soil, moderate to occasional watering. Hardy to 20-25 degrees F.

PENSTEMON. Beard-tongue. Mostly North America, Mexico. Penstemons are a large and fascinating group of perennials and shrubs placed until recently in the snapdragon family, now exiled to the company of the common plantains. Some grow narrowly erect, others are relatively broad and bushy, while still others are ground-hugging alpine mats. The leaves are also quite variable in size, shape, color and texture. Flowers are usually large relative to the plants and are often presented in dense spikes. They are tubular to bell shaped and brightly colored, usually in shades of red, blue or purple to white. The odd common name comes from the brush of hairs ("beard") lining one of the stamens in flowers of many species. They are fine subjects for open banks and meadows, as well as perennial borders; the smaller ones are beautiful in rock gardens. Sun, well-drained soil, best with moderate to occasional watering, though most are drought tolerant, some extremely so. Hardy to 0 degrees F. or less, except as noted.

azureus. A bushy native perennial found on rocky hillsides and in open forests. It grows about 18 inches high, with many slender stems lined by narrow blue-green leaves. Flowering stems rise in late spring and summer, displaying bright blue flowers that open from yellow buds. This is a great plant for open sites and banks.

cardinalis. A robust native of the Southwest, forming sizable clumps. It has crowns of narrow-oval greyish green leaves up to 8 inches long. Wand-like flower stems rise to 3 feet or more in summer, each bearing dozens of 1 inch bright red, tubular flowers. Moderate to occasional watering.

centranthifolius. Scarlet bugler. A common plant of dry places in central and southern California; this material is from the Santa Lucia Mountains. It produces several sturdy, upsweeping stems from a narrow base. Paired along these are broad, tapered leaves up to 4 inches long, clasping the stems. The leaves are strikingly colored, sometimes ashy grey, sometime bright blue-green. Loosely spaced on long stalks above the foliage are narrowly tubular, bright red blossoms. It needs particularly good drainage and full exposure and is often short-lived in the garden. However, new plants are readily started from seeds. Hardy to 10 degrees F. or less.

heterophyllus. A highly variable plant, semishrubby in some forms, herbaceous in others. The plants have attractive narrow, shiny, bluish green leaves. Dense spikes of narrowly bell shaped blossoms, varying in hue from deep blue to reddish purple, grace the plants from late spring to fall. Many seedling strains and individual cultivars have come and gone over the years. Particularly impressive is an introduction by the late Bert Wilson at Las Pilitas Nursery, 'Margarita BOP' (not a reference to '50s dance, but rather to "back of porch", where it was discovered as a chance seedling). The plants are quite full, floriferous and resistant to disease, with bright blue flowers often opening from pink-tinged buds. 'Blue Springs' is a larger-leaved seed strain, with large uniformly bright blue flowers. Hardy to 10 degrees F. or less.

neomexicanus. New Mexico beardtongue. Rare in nature, this perennial is found in a limited area of New Mexico. It is also one of the showiest of the southwestern penstemons. It forms low basal clumps of dark green shiny leaves. Flowering stems to 2 feet high carry many long-lasting tubular violet flowers along one side of the stems in summer.

***newberryi* var. *sonomensis* 'St. Helena'**. California. This is a particularly nice selection of a low-elevation subspecies of mountain pride, a dazzling perennial seen in rocky places in the Sierra Nevada. It makes low, dense clumps of thick oval greyish green leaves. Short spikes of rich red flowers are carried just above the leaves in spring and early summer. A fine (though somewhat fussy) rock garden plant for well-drained soil with moderate to little watering. Hardy to 10 degrees F. or less.

palmeri. A dryland penstemon native to southern California and the Southwest. It grows erect to as much as six feet, with several leafy stems from the base. The leaves are large, thick and grey-green in color. Long spikes of fat, fragrant pink flowers rise above the leaves in later spring and summer. It needs very well-drained soil, sun and little summer water to thrive. Hardy to 10 degrees F. or less.

***rostriflorus* (*bridgesii*)**. If you have traveled the High Sierra in summer, you have probably seen—and been suitably impressed by—this showy native. It forms broad mounds with upswept slender stems. The leaves are narrow, usually 1-2 inches long, and pale green to slightly grey-green in color. Slender 1-3 foot flower stems carry many clusters of bright red to orange-red, trumpet-shaped blossoms, each about an inch long. This is a fine perennial for neglected sunny banks.

spectabilis. Royal beardtongue. A sturdy large-leaved perennial, native to southern California and the Southwest. It branches at the base to produce several thick, upright stems ranging from a foot to four feet tall. The leaves are conspicuously toothed and thick-textured. Long clusters of large blue-purple flowers, often with lighter tubes, create a striking show in spring and early summer.

strictus. Rocky Mountain penstemon. Southwestern states. A dazzling perennial both in the wild and in the garden. It forms mats of large, shiny green leaves, from which spikes of rich blue purple flowers issue on 2-3 foot stems in early summer.

PEROVSKIA. Russian sage. Iran to Northwest India. *Perovskias* are elegant, perennial sage allies. They have become much more popular over the past few years, as awareness of their ruggedness and fine ornamental features has grown. *P. abrotanoides* is a rugged semishrubby perennial of 2½ to 5 feet. It is distinguished by whitish stems, greyish green, finely cut leaves and tall, airy clusters of small blue flowers borne in summer. '**Filigran**' is a selection resembling this species but with even more finely dissected leaves and tall graceful sprays of lavender flowers. '**Longin**' produces many upright, whitish 2 foot stems from the base, each lined by pairs of deeply toothed grey-green leaves. The flower clusters are shorter than those of other selections but freely produced throughout the summer and fall. Flowers are deep lavender in color. These perennials are a fine addition to mixed plantings and borders. Sun, well-drained soil, moderate to occasional watering. Hardy to 0 degrees F. or less.

PHACELIA. *Phacelia* includes some of our showiest native annuals, lighting up meadows and desert floors with clouds of purple blossoms in spring. The perennial types tend to be a little more subtle, but they have their own charm. They form compact clumps of shoots, with mostly hairy, lobed to divided leaves. Flowers with conspicuous stamens are borne in odd coiled clusters that unwind as the flowers develop. Their culture varies, but the following should thrive in reasonably well-drained soil, with moderate to very occasional watering, and should be hardy to 10 degrees F. or less.

bolanderi. Woodland phacelia. Low growing perennial with flowering stems 1 foot or more high. The large divided leaves are grey-green in color and rough to the touch. Lavender blue blossoms appear along the flowering stems as they uncurl toward the tips in spring and summer. They attract beneficial insects and bees. This plant does well in dry shade.

californica. California phacelia. This plant is a frequent sight on sunny roadbanks and on rocky slopes in northern and central California. Its neat clumps of divided grey leaves are attractive all year in moderately watered gardens, but it will also survive with no summer watering; it is particularly useful on banks. Flower spikes to 18 inches carry unfurling coils with many lavender to white flowers. This easy perennial can reseed, and should be sited carefully.

PHILOTHECA myoporoides. Long leaved waxflower. Australia. This is a closely branched shrub, growing 3-5 feet high and nearly round in profile. The stems are neatly lined by narrow 1-2 inch deep green, oddly aromatic leaves. The younger shoots carry profuse clusters of starry white flowers opening from pink-tinged buds over several weeks in late winter and spring. We offer two similar selections: '**Galaxy**', a UCSC/Koala Blooms introduction, and the better-known '**Profusion**'. Both are good in mixed shrubby plantings and on banks and will thrive in sun or light shade, given well-drained, non-alkaline soils, with moderate to occasional watering. Hardy to 15 degrees F. or less.

PHLOMIS. Mediterranean region to China. A large group of perennial mints, of which only a few are cultivated in California. They may be herbaceous or woody-based, with low crowns of large, textured leaves, or they may be full shrubs, as in the most popular species. The leaves are highly variable in size and shape, though neatly arranged in opposing pairs. Often they are quite woolly. The flower stems, borne mostly in spring and summer at the shoot tips, can be quite tall. Spaced along them are tight, whorled clusters of buds which open in lengthy succession into large, colorful, highly irregular flowers. Each flower has a hooded upper lip and a more open, spreading lower lip, much like some of the salvias. These are rugged and attractive plants for sunny sites. Depending on their size, they may be displayed as individual specimens or grouped in borders and mass plantings. They thrive in full exposure, with reasonably well-drained soil and moderate to little watering. Their hardiness varies.

cretica. Low and shrubby species with thick triangular light green leaves and typical bright yellow flowers in spring. Hardy to 10 degrees F. or less.

fruticosa. Jerusalem sage. Mediterranean area. A roughly textured but nevertheless beautiful semishrub. It grows erect to 4 feet or more. Stout, square stems are set with pairs of broad grey-green leaves. Large two-lipped yellow flowers are borne in a series of ball shaped clusters along the upper stems. It is seldom out of bloom, particularly if cut back as each wave of flowers finally withers. Hardy to 0-10 degrees F.

lanata. This is a charming little shrub. It is profusely branched, nearly round and 2-3 feet high. The stems and lower surfaces of the ½-1 inch leaves are covered by yellowish tan hairs; the leaves are light green above. It flowers abundantly most of the summer and well into fall, carrying several small clusters of deep orange-gold blossoms along each stem. Probably hardy to 15 degrees F.

monocephala. A compact, rounded shrub with 3 inch light green leaves covered in golden yellow hairs. Clusters of

bright yellow flowers appear at the branch tips in spring. Hardy to 10 degrees F. or less.

purpurea. Another of the lesser-known species, deserving of much more attention. This is a more open shrub than the last, with 2-4 foot woolly stems and long-stalked leaves up to 4 inches long. The leaves are slightly grey-green and hairy above, strikingly so beneath. The 1 inch blossoms range from mauve to white in color; those of the current selection are a beautiful rosy lavender. Hardy to 10 degrees F. or less.

PHORMIUM. New Zealand. New Zealand flax includes two species of evergreen perennials in the lily family and an almost overwhelming assortment of cultivars. Most earlier selections, while attractive, were too overpoweringly large and bold for a permanent site in the average garden. Beginning in the late 1970s and '80s, however, New Zealand nurseries made available a colorful line of allegedly dwarf and intermediate selections, useful in a variety of garden settings. All have the compact, clumping habit and fans of narrow, folded leaves typical of this group. Many of the showiest selections have variegated color patterns in the leaves, and in some cases these are unstable. Reverting green or bronze shoots tend to outgrow those of the desired pattern and can overwhelm the plant if not quickly removed. Needless to say, this can be (and often is) a disaster in large commercial landscapes, where aftercare tends to be minimal.

Flowering shoots, which form only on older plants, will rise above the foliage carrying clusters of interesting brownish red to yellow tubular flowers that are attractive to hummingbirds. Removing them will promote continual production of the ornamental leaves. Sun or light shade, most soils, moderate to occasional watering. Hardy to around 15 degrees F.

colensoi (cookianum). This is the smaller-growing of the two species, which means that the typical form reaches "only" seven to eight feet. From it are derived some of the best of the truly dwarf phormiums. The leaves are usually gracefully arched, making nice fountains, and softly shiny in surface. The flowering stems are only a little higher than the leaves.

'Chocolate Baby'. This is a true dwarf, growing 2-3 feet high. It makes dense clumps with narrow, arching, solidly dark, slightly reddish brown leaves. Their surface is strikingly shiny.

'Cream Delight'. A popular introduction. It grows to 3 feet or less, and has spreading, gracefully arching leaves. These show a broad, cream-yellow central band and clean dark green margins, plus some narrower, darker lines. The contrast is quite striking. It is fairly stable.

'Platt's Black' makes profuse fountains, reaching 2-3 feet high. The leaves are narrow, unusually shiny in surface and exceptionally dark, combining intense reddish brown on the upper surfaces with an odd greyish bronze on the lower for a glittering effect.

'Tricolour'. This selection arches to 3 feet or a little more. The leaves are heavily and irregularly striped with cream on a dark green background. There is a fine red pinstripe around each margin, most noticeable in the winter months. It is one of the more stable selections.

tenax and its hybrids. *P. tenax* is the better-known species, and normally the larger and bulkier. A few seed strains and clonal selections are still included with the species; others that once were listed with it are now offered (more cautiously) simply under their hybrid names.

'Apricot Queen'. Another profusely clumping dwarf (about 3-4 feet). The leaves are mostly gold with an apricot overlay and broadly margined in green. A hairline of maroon is evident along the margins in cooler weather.

'Bronze Baby'. Certainly not a baby, but a relatively small (perhaps 3-5 feet) phormium with arching, highly polished leaves. It is one of the most intensely colored of the bronze phormiums.

'Dark Delight'. This selection is always in demand by phormium lovers. It is less rampant than most, slowly increasing from a narrow base. The leaves are up to 4 feet long and colored a uniform, vivid reddish purple.

'Duet', makes clumps as dense as those of 'Cream Delight', with straighter and slightly narrower leaves, and stands more erect. The leaf colors are very similar, but reversed, so that a dark green margin surrounds a pale yellow center. It has been stable to date.

'Dusky Chief'. This is one of the most desirable bronze cultivars, with rather stiff, narrow leaves held nearly erect. Their color is a deep brownish purple on the upper surface; on the lower they have an almost chalky greyish overlay.

'Firebird', has bright rose red leaves with bronze green margins. Leaf color stays bright over time, but the tone shifts towards orange and colors soften a bit with time. The habit of this flax is firmly erect and the leaf color is stable.

'Guardsmen'. This is hands-down one of the most striking of the phormiums. It grows 6-8 feet high. The leaf-fans are narrow, the leaves quite straight and rigid. The central bands of the leaves are deep green with a strong red overlay. The edges are deep coral pink even in summer, when most phormiums fade, deepening to a vivid red in winter.

'Pink Stripe'. A prolific plant with broad, barely arching leaves, usually growing 3-5 feet high. The leaves have wide bronze-over-green central bands and narrow pink marginal stripes, most impressive in winter. The margins narrow and fade on older leaves.

'Rainbow Chief'. A robust selection, growing to 5-6 feet. The leaves are broad and thick-textured. Their color pattern includes a broad central swath of bronze-green and a rosy margin, paler in summer and vivid in winter. It has been the only stable member of the Rainbow (Maori) series here.

'Sundowner' is nearly the reverse of 'Rainbow Chief' in color scheme, though the margins are considerably broader. In this case the bright pink is on the margins, while the green forms a broad but variable central band.

'Yellow Wave'. A profuse plant, 3-5 feet high, with broad, shiny arching leaves. These have bright yellow centers and green margins.

PIPTOCHAETIUM fimbriatum. Pinyon ricegrass. Southwestern States. Pinyon ricegrass is a fine textured warm season bunchgrass, making tight clumps of very narrow light green leaves to 8-12 inches tall. Slender flower stems carry loose sprays of distinctive flowers--individual florets are rounded and awned. The plant is useful in dry shade, but can be grown in sun as well. Hardy to 10 degrees F. or less.

PITTOSPORUM tenuifolium. New Zealand. A handsome large shrub or small tree, admired for its dense growth, slender black twigs and shiny oval, wavy-edged leaves. Seed-grown plants have leaves of variable size—usually 1-2 inches—and coloring, from bright green to grey-green. Many selections have been made over the years for compact habit, ball-like or upright form, and variegated or otherwise unusually colored leaves. Most are easily sheared and shaped, leading to wide use in shrubby borders, as well as the traditional role of "specimen shrub". **'Gerd's Form'**, our own gratuitous name for a selection by propagation master Gerd Schneider, offers dense habit and shiny, unusually dark green, oval leaves. **'Gold Star'** grows fairly upright but allegedly only to 6 feet tall; it has dark green leaves with irregular gold centers. **'Marjorie Channon'** is a bushy plant once claimed to grow only 5 feet tall (10 feet is more realistic, lacking restraint by pruning), with beautiful cream-margined leaves. **'Silver Sheen'** is taller and a bit looser, with small, almost uniformly grey-green leaves. **'Silver Magic'** is similar in habit and leaf size to 'Silver Sheen', but its small grey leaves have contrasting cream and pink margins. Most recent is our own selection, **'Pirouette'** (PP#22024). This is a bold, robust plant with sturdy upswept branches and large leaves with cream margins that expand as the leaves mature. Hardy to around 15 degrees F.; however, plants are often defoliated by sudden hard freezes.

POA. Bluegrass. Bluegrass. Temperate regions. This genus includes one of our most pernicious weeds (*P. annua*) and a number of showy perennial bunchgrasses. The latter are usually dense clumps, with narrow basal leaves, often attractively colored. Their flowers are mostly quite small and borne in open panicles. The following are useful in naturalistic meadows, on banks and for hummocky ground cover. Sun, many soils, moderate to occasional watering. They should be hardy to 0 degrees F. or less.

arachnifera. Texas bluegrass. Texas bluegrass is an excellent creeping grass that spreads by underground rhizomes to form colonies. It provides excellent ground cover for large-scale situations and can be mowed if desired. Dark green leaves are topped by silky, silvery flowers in early spring, blooming even in the shade. It can be an aggressive creeper in moist soils and should be sited carefully.

colensoi. Blue tussock. New Zealand tussock grass forms tight dense clumps of narrow blue grey leaves. Flower stems are held over the leaves in late spring. This grass has a tidy starburst habit and is tolerant of some drought and poor soils.

secunda. Pine bluegrass. Pine bluegrass can be found in many habitats in California. It is also native from Canada through the western United States, with populations in Argentina and Chile. This cool season bunchgrass forms tight clumps of soft blue-green leaves to 8-12 inches; flower stems to 24 inches have a pinkish cast, with many dainty purplish flowers. Plants will go dormant with summer drought.

POLIOMINTHA longiflora. Mexican Oregano. An unusual shrubby mint, resembling the true oreganos closely in the aroma and flavor of the leaves, but otherwise quite distinct. It grows about 2 feet tall, suckering freely from the base to produce small thickets. The slender twigs are lined by pairs of shiny, deep green, pointed-oval leaves. Tubular lavender blossoms, resembling those of the salvias, decorate the plant throughout the summer months. A good choice for dry, exposed banks. Sun, well-drained soil, occasional watering when established. Hardy to 18 degrees F. or less.

POLYPODIUM californicum 'Sarah Lyman'. California polypody. A summer dormant fern species found on shady banks and cliffs nearly throughout the coast ranges of California. It has branched, creeping rhizomes, from which 1 foot fronds rise in early fall, lasting into spring. **'Sarah Lyman'** is a selected form notable for its deeply cut fronds giving a fringed appearance. It is easily grown in light to medium shade (even under oaks), with porous non-alkaline soil. Once the fronds have died to the ground, little or no water should be applied until fall. Hardy to 10 degrees F. or less.

POLYSTICHUM munitum. Western sword fern. This boldly textured California native will eventually reach 4 feet or more in height and breadth. It has long, narrow once-divided fronds which are quite leathery in texture, dark green in color. Planted in the shade garden, it needs very little attention and will even survive periods of drought. Best with moderate to occasional watering. Hardy to 10 degrees F. or less.

PROSTANTHERA. Mint bush. Australian shrubs with variably shaped, often pleasantly aromatic leaves and irregular

bell- to trumpet shaped blossoms of various colors. They are generally quite rugged and combine well with other dryland shrubs. Sun, well-drained soil, moderate to little watering when established. The following should all be hardy to around 20 degrees F.

linearis. A billowy plant, growing at a moderate pace to around 5 feet high. It is closely branched, with narrow slightly greyish green leaves lining reddish stems. Abundant sprays of lilac purple flowers are displayed in spring.

ovalifolia 'Variegata'. Bushy, rather upright, slender-stemmed shrub, probably 5-6 feet when mature. The very aromatic grey-green leaves are narrow-oval in outline and distinguished by creamy yellow leaf margins, set against light green stems. It flowers at every shoot tip in early spring, carrying masses of light purple blossoms.

rotundifolia 'Rosea'. Erect-oval in form, this selection grows at a moderate pace to around 5 feet. It is closely branched, and the slender twigs are thickly clad in small round, powerfully aromatic dark green leaves. Small clusters of half inch rose pink blossoms are carried at all the shoot tips in spring.

PRUNUS. Temperate zones, Northern Hemisphere and South America. A huge group of trees and shrubs belonging to the rose family, with an appropriately broad range of sizes, forms and colors. They include, of course, some of our most important fruit crops, like the peaches and plums, and the "flowering" versions of the same (those selected more for the show than for edibility). However, there is much more. Many have attractive smooth or patterned bark. Most have some version of lance-shaped to pointed-oval, toothed leaves. Their flowers are similar to those of the roses, though smaller, with five, usually broad petals and many stamens. Often they are sweetly fragrant. Their fruits are officially drupes—fleshy and containing a hard-shelled seed—but they can be small and berry-like or quite large. They are nearly always decorative. The larger species are often the centerpieces of gardens. The smaller, shrubbier types have a variety of uses, including borders and screens. Most prefer a sunny spot, with well-drained soil and moderate watering. Some are nearly impossible to maintain in heavy soils. Hardiness varies as described below.

ilicifolia. Holly leaf cherry. Holly-leaf cherry is one of California's most dramatic native shrubs. It is bushy and usually round to upright-oval in form. It is usually seen at 5-10 feet high in the wild but can reach 30 feet in fertile, well-watered locations. The leaves are evergreen, 1-4 inches long, broad in outline with wavy, often spine-toothed margins. It bears many slender clusters of small white flowers in middle and late spring. Half inch red to black fruits ripen in fall and are quite decorative (they are also good to eat, but there is little flesh surrounding the large seeds). The variety *lyonii* (often known simply as *Prunus lyonii*) is a native of our Channel Islands, often larger than typical *ilicifolia* and having generally larger, smooth-margined leaves. These are shrubs and small trees of many uses, beautiful individually or in group plantings, borders and screens. They are also heat- and drought-tolerant, though stress reduces their size and can give the leaves a tired, somewhat yellowish cast. Hardy to 10 degrees F. or less.

lusitanica. Portuguese laurel. Spain and Portugal. An evergreen large shrub or tree, rarely as tall as 60 feet. It is well branched and often nearly round, requiring little pruning. The young stems and leaf stalks are reddish, the 3-5 inch leaves deep green above, lighter beneath, often with a glossy surface. It bears many 4-6 inch clusters of small white flowers in summer and showier clusters of deep red fruits in the fall. This is a rugged plant, tolerant of considerable heat and drought. Hardy to 10-15 degrees F.

virginiana var. demissa. Western chokecherry. California and the West. A suckering shrub or small tree forming thickets of upright stems, with large, shiny dark green leaves. The leaves are deciduous in fall and can turn bright gold before dropping. 2 to 5 inch spikes of small sweet smelling white flowers are produced in late spring and mature to fat dark fruits that attract birds. It is very adaptable in garden plantings. Probably hardy, in this material, to 10 degrees F. or less.

PUYA. Costa Rica to Chile. This is one of those plant groups that simply stand apart from the rest of our experience. Its members are terrestrial bromeliads, like the pineapple, but far more dramatic. They form tight--though often extensive--colonies of shoots, each of which lasts for many years. Each presents a crown of long, downcurved, pointed leaves reminiscent of the yuccas (though not so succulent). They often have viciously spiny margins. At some point, which may vary from a couple of years to thirty or more, a given crown will produce a flowering stem which first suggests a giant asparagus, often later widely branched, along which several to hundreds of showy, tubular to flaring blossoms unfurl in succession. Their colors include some incredible turquoise and aqua shades, as well as reds, pinks, yellows and whites, often in interesting combinations. These are dramatic specimens for featured spots in the garden, though they combine well with yuccas, agaves and cacti. They are also good candidates for large tubs (though handling them at repotting time is an exercise in bloodletting). They thrive in sun or light shade and well-drained soil, with moderate to infrequent watering. Their hardiness varies, but several perform well near the coast.

alpestris. Chile. The best-known of the puyas, with densely clustered crowns of silvery green 2 foot leaves. The crowns branch freely to form broad clumps. In spring and summer older plants produce thick 3-6 foot stems bearing huge clusters of triangular blossoms up to 2 inches broad. These are painted deep bluish green, with orange anthers. Hardy to 15-20 degrees F.

coerulea. Chile. This species is slightly larger on the average than *P. alpestris* and similar overall. However, the crowns are even greyer, sometimes nearly white, with tiny hairs. The flowering stalk is well branched, carrying dozens of dark blue 2 inch blossoms, held erect along the stems. Hardiness uncertain; probably about 20 degrees F.

mirabilis. Bolivia. There are many more leaves per crown in this species, and they are quite narrow. Their soft marginal spines should be a relief if you who have bloodied yourself with other puyas. Many plants flower in their third year (unusual for a puya). The flower stems are erect and up to 5 feet high. Instead of the broad, branched clusters of *P. alpestris*, the flowers are arranged along the main axis. They are quite long—3-4 inches—flaring out at the tips, and colored a beautiful sea-green, with a silky surface. Hardy to 20-25 degrees F.

PYRETHROPSIS hosmariense. Moroccan daisy. Moroccan daisy is a woody-based perennial forming low, dense hummocks. The leaves are crowded around the short stems, each divided into three narrow, grey segments. The flower heads are presented singly on stalks 6-12 inches tall. Each is up to 2 inches across, with many notched white rays and a wide golden center. This is an interesting plant for larger rock gardens, sunny borders and open banks and meadows, requiring little maintenance. It thrives in sun and well-drained soil, with moderate to occasional watering. Hardy to 15 degrees F. or less.

QUERCUS. Widespread, mostly in the Northern Hemisphere; ours are Californians all. In a better world, we would not need the nursery to provide us with oaks. They would be all around us. However, for all our admiration of them as features of the primeval landscape, and all our use of their names in our settlements (Oakland, Oak Knolls, and the like), we seem to be relentlessly bent on clearing them from the path of advancing civilization. We will continue to grow them as long as anyone will take them, in the hope that some will find their way into a more or less permanent position. These are a diverse lot, ranging from majestic trees to low subalpine shrubs. They may be evergreen or deciduous, with leaves which range in shape from simple and nearly round to lance-shaped, to the more familiar and distinctive, lobed patterns. They have sometimes showy tassels (catkins, to be proper) of tiny male flowers and inconspicuous, knobby female flowers in spring. However, the female flowers become conspicuous indeed as the acorns of fall. Each has an expanded basal cap, covered with overlapping scales, and a nearly spherical to torpedo-shaped main body. Children (young and old) find them endlessly fascinating. The following are all natives of California. They have a variety of uses in the landscape according to their size, though usually as featured specimens. Because of their intricate relationship with native birds and other wildlife, they create whole habitats that would otherwise not exist in the garden. All thrive in sun and a great variety of soils, with occasional to no watering once they are established. All listed are hardy to 10 degrees F. or less, the deciduous species probably to 0 degrees F.

agrifolia. Coast live oak. This is the familiar dark, leafy mass of the coastal hills, usually seen in large numbers where it has survived the bulldozer and the chain saw. It can take many forms, from large shrub to huge (up to 75 feet), usually widely spreading tree. The trunks are often beautifully contorted, with smooth greyish younger bark and deeply fissured older bark. The leaves are evergreen (or rather, fall as a new crop is produced). They are narrowly oval to nearly round in outline, usually turned under and sharply toothed along the margins. They are softly shiny to lacquered in appearance, deep green above and paler beneath. The acorns are mostly smaller and narrower than those of other native oaks, but make an interesting show. With early, light and careful pruning, it may be maintained at a manageable size even for smaller gardens.

berberidifolia. Scrub oak. This is one of the shrubby oaks. It is usually 8 feet or less in height, spreading in habit, with attractive silvery grey stems. The leaves are usually around an inch long, broad to narrow, with usually conspicuous, sharp teeth. The acorns are relatively large and prominent in the fall. This is an interesting shrub for wild gardens and mixed plantings.

douglasii. Blue oak. This is the smaller, usually more upright tree you will see after you have left the valley oaks behind and drive into the sun-baked foothills. It grows erect to somewhat fountain-shaped, as much as 60 feet high but usually much less, with interesting bark made up of many small plates. Its branches are often upswept, unlike those of some other species. Its leaves are thick but winter-deciduous, blue-green during the growing season and often painted in pastel oranges, yellows and pinks in fall. It is an ideal tree for sunny, open hillsides and other untended areas.

garryana. Oregon oak. This is one of our favorite oaks, particularly in its smaller mountain form, which we unfortunately do not have. It is a beautiful tree, upright-oval to nearly round in form, with arching branches and attractive ridged bark. The leaves are 3-5 inches long, flat, with broad, rounded lobes, deep green and shiny above, paler beneath. Fall color includes some exquisite oranges and pinks, as well as the commoner gold shades. With careful pruning, it should be one of the more manageable of the deciduous oaks for home gardens.

kelloggii. Black oak. This is the most dramatic of our deciduous oaks. It grows up to 75 feet high and wide but is usually half that or less. Often it has a nearly round overall form, with sculptured, arching branches and beautiful dark bark. The leaves are deeply and sharply lobed and up to 8 inches long. They are often pink to orange in new growth, then deep green when expanded, turning once again, this time to vivid gold, in the fall. They are one of the things that

make fall walks in the countryside a treasured experience. The acorns are relatively short and broad. This is a spectacular tree for open hillsides. It might well be controlled forever by pruning, but that would defeat some of its natural majesty.

lobata. Valley oak. Of all the oaks, this one has probably suffered most from the advance of the human wave. It occupies exactly those sites deemed most desirable for settlement—the broad valleys where ample water collects in winter and spring (and causes our settlements endless problems). It is an enormous tree when at its best, with an upright base and arching, fountain-like trunks up to 100 feet high, perhaps even more in breadth. The bark is deeply textured and beautiful. The leaves are usually 2-4 inches long, rather flat, with deep to shallow, rounded lobes. They are deep green above, paler beneath, and take on pale to golden hues in fall, when the long, tapered acorns begin to drop. This should be a focal point of a large garden or commercial landscape, never cramped or restrained.

wislizenii. Interior live oak. A tree similar in many respects (including its variable size and form) to *Q. agrifolia*, above. It typically has somewhat flatter, more obviously pointed leaves which often lack marginal teeth or spines. It has all the uses of *Q. agrifolia* and possibly (this is not proven, to our knowledge) even greater tolerance of drought.

RANUNCULUS cortusifolius. Buttercup. Originating in the Canary Islands and the Azores, this is one of the stoutest of the buttercups. It appears in early spring, with roundish, scallop-edged basal leaves 6 inches or more broad. Sturdy 2 foot stems rise in mid to late spring, bearing large, open blossoms in broad sprays. Their petals are bright yellow with a satiny sheen. It is a winter to spring grower and may be dried out completely during its summer dormancy. Easily grown in sun or light shade and most soils. Hardy to 20-25 degrees F.

RESTIO similis. So many of the South African restios offered in the nursery trade are large scale plants--*Restio similis* is a smaller clumping species. Its foliage clumps reach 18 inches high and about 3 feet wide. The dark green culms are slender and shiny, and the overall effect is of a graceful, draping grass. Chestnut bracts appear at the stem tips and produce tiny flowers in summer. Sun, reasonable drainage, moderate to little watering. Hardy to at least 20 degrees F.

RHAMNUS. Buckthorn. Widespread. The buckthorns are a large group of trees and shrubs, many of them with spine-tipped twigs. Most have pointed-oval to lance shaped leaves, often quite decorative. Flowers are small and generally inconspicuous, borne in small clusters in the leaf-axils. However, the berries which follow can be quite showy. Most are rugged and easily grown, and have a variety of uses. Sun or light shade, reasonably well-drained soil, occasional watering when established. Hardy to 10 degrees F. or less.

alaternus. Italian buckthorn. An evergreen shrub, easily trained as a small tree, growing 10-20 feet tall. The main branches are erect to upsweeping, lined by virtual brushes of branchlets. The leaves are up to 2 inches long, pointed-oval in outline, and colored dark green above, pale green beneath, with a lacquered surface. Flowers are tiny and greenish, and many of the small blackish purple berries are hidden by the leaves. This is a nearly indestructible shrub, used in tall screens and hedges or trained as a small tree. '**John Edwards**' is a vigorous, large leaved selection. '**Variiegata**' is smaller and slower growing, with smaller leaves decorated by cream-colored margins. It is a more malleable plant for small landscapes.

californica (Frangula californica). Coffeeberry. A California native with quite variable features. It is often large (8 feet or more), but there are nearly matting forms. It can be sparsely or densely branched, with broadly oval to lance shaped leaves, dark and often shiny above, pale beneath. Hairy-leaved forms were recently carved out by botanists into separate species and are not included here. Its clusters of small, greenish yellow blossoms are fragrant but inconspicuous. However, the large berries which follow and persist into winter are often quite showy, being heavily tinged with red or purple, often black when mature. Coffeeberry is adaptable and useful in a variety of landscape settings according to size and shape. Sun or light shade, many soils, moderate to occasional summer watering when established. Hardy in the following selections to 15 degrees F. or less.

'**Eve Case**'. The most popular of the group, now almost a mainstream shrub. It is compact and of moderate growth, usually under 6 feet high. The stems are closely lined with flat 4 inch leaves, dark green and shiny on the upper surface. Its berries are unusually large, densely clustered and heavily tinged with red. Introduced by the Saratoga Horticultural Foundation.

'**Leatherleaf**'. This Roger Raiche selection is distinguished by very thick, glossy, deep green leaves with downrolled margins. The plant habit is rounded and fairly dense.

'**Mound San Bruno**'. Another selection by Roger Raiche, making a broad, relatively low mound. The plant is closely branched and has very dark leaves, narrower than those of most selections. Ultimate size is about 5 feet high and wide. It is a very good choice for large-scale ground cover.

'**Seaview Improved**'. A seedling of the old Saratoga Horticultural Foundation introduction, 'Seaview', this cultivar is the smallest yet, lying nearly flat on the ground. The leaves are only 2-3 inches long, flat, dark and shiny on the upper surface. The berries are densely clustered and red when ripe, making quite a show.

ilicifolia. Hollyleaf redberry. California. An open, angular shrub with vaguely oak-like evergreen leaves, toothed

along the margins. Its clusters of small greenish flowers may go unnoticed by us, but they attract many beneficial insects. By early fall these have developed into showy translucent red berries. It does well in either sun or part shade, under oaks. Previously known as *Rhamnus crocea* ssp. *ilicifolia*.

RHAPHIOLEPIS umbellata 'Minor'. Indian hawthorn. This is a compact shrub from Japan and Korea, growing up to 5 feet high. It has shiny dark, green leaves that turn coppery in fall. New leaves emerge reddish. Clusters of white flowers appear at branch tips in spring. This is a useful shrub, both individually and in shrubby borders and informal hedges. Sun, most soils, moderate to occasional watering. Hardy to 10 degrees F. or less.

RHODOCOMA. South Africa. These are among the many odd and ornamental *Restio* allies of South Africa, which of course one can't help trying. They make dense clumps of usually arching, slender stems, variously resembling those of a large horsetail or rush. The stems have wiry branchlets that resemble leaves. At the branch tips in summer are small brown spikelets of male or female flowers (the two sexes are borne on different plants). These are unusual plants in every way, often used like shrubs for dramatic display or featured in large containers. Their culture and hardiness vary, but the following will thrive in sun or light shade near the coast, light shade inland, in reasonably well-drained soil, with moderate to occasional watering. They have proven to be hardy to 20 degrees F. or less.

arida is a tidy plant for drier sites. Its dense clumps typically reach 5-6 feet in height, with erect narrow columns of bright blue-grey culms. Its branched juvenile foliage vanishes with time, and the thin culms resemble those of the rushes (*Juncus*).

capensis develops stately, dark green columns that can reach 8 feet in moderately watered gardens. Well branched culms droop gracefully at the tips, creating a softer effect over time. This species is adaptable to generous or low water situations. Placement in a dry garden will result in smaller stature. Small bronzy male and female flowers are very similar on this species, though in spring, female flowers bring a rosy haze to the foliage when the flowers open.

RIBES. Currant. Northern Hemisphere, temperate areas. Ours are ornamental shrubs, both evergreen and deciduous, native to the Pacific Coast. They may take many forms and sizes, though most are of manageable proportions for a home garden. Some have wicked spines at the nodes and even dense prickles in between, while others are smooth-stemmed, often with attractive, glistening bark. The leaves are commonly three- to five-lobed, sometimes resembling those of the maples. Along them, usually in late winter or spring, are carried small, colorful blossoms, either singly or in clusters. Both the frequently pendulous habit of the flowers and the combination of a basal tube, flaring sepals and more closely held petals give them much the appearance of little fuchsias. According to their scale and form, the ribes have several different landscape uses, from ground cover to specimen shrub. The following thrive in sun or shade, though part shade is preferable in the hotter interior. Most need reasonably well-drained soil and moderate watering; the following thrive with only occasional summer irrigation. Their hardiness varies.

aureum var. gracillimum. Golden currant. This is one of the most massive of the currants, growing up to 10 feet high and often spreading widely. It is profusely branched, creating a billowy profile, with slender twigs and attractive pale bark. The leaves are 1-2 inches long, bright green and smooth-textured. Appearing with them in early spring are masses of small golden yellow blossoms, borne in short clusters. This is an exceptionally floriferous form, selected by Everett Butts. Hardy to 0-5 degrees F.

californicum. Hillside gooseberry. Stiffly erect shrub with spiny stems and lobed leaves. It is decorated all along the younger stems by delicate flowers with maroon to pale green sepals and white petals in early spring. Round fruits that follow are covered with red bristles. It can be summer deciduous in drier gardens, but often develops beautiful "fall color" before the leaves drop. This shrub will thrive in sun or light shade. Probably hardy to 10 degrees F. or less.

malvaceum var. malvaceum. Chaparral currant. Chaparral currant is widely scattered in California, from the edges of coastal woods to the interior chaparral. It is sometimes drought-deciduous in the wild, evergreen to semi-deciduous in cultivation, often bushy in habit and growing 4-10 feet high. The leaves are of variable size, lobed maple-like and quite furry, usually pale green in color. In late winter and early spring, it carries clusters of deep pink to white blossoms along the younger stems; these develop into dark purple berries. **'Christy Ridge'** is an erect shrub of 5-6 feet, distinguished by dense, arching 3 inch clusters of bright pink and white blossoms. **'Dancing Tassels'** has unusually long drooping clusters of pink buds that develop into pinkish white flowers. Chaparral currant is tolerant of considerable drought, especially if lightly shaded. Probably hardy to 5-10 degrees F.

malvaceum var. viridifolium 'Ortega Beauty'. This is a southern version of the chaparral currant, distinguished, as the varietal name suggests, by deep green rather than grey-green leaves. This was encountered in the Ortega Mountains, and it has proven to be a really good shrub. It was over 6 feet high and wide in the wild, and we would expect it to grow even larger in cultivation. It has attractive reddish brown, peeling bark and large, resinous dark green leaves. In late winter it makes a striking display of large flowers, as red as those of the best forms of *R. sanguineum*, below. Hardy to 15 degrees F. or less.

nevadense. Mountain pink currant. This is another native rather closely related to *R. sanguineum* but easily distinguished in several ways. The plants are generally smaller (3-6 feet), the leaves larger (about 3 inches across in this case) and quite bright green. The flowers are borne in similar drooping clusters but they are held more nearly closed, forming narrow bells. Flower color is usually quite pale, but in this case a nice, soft pink. It should never be allowed to dry out. Hardy to below 0 degrees F.

roezlii var. *cruentum* '**Dixie Glade**'. Gooseberry. Our own selection from the mountains of northern California, this is a plant dismissed as "ungrowable" by a botanic garden friend. It has thrived with little care both in the nursery and in the garden. It resembles a smaller version of *R. californicum*, above, but has its own distinctive zigzag branching pattern. Leaves are also smaller, dark and glossy. In early spring it displays small vivid red-purple and white flowers along its spiny stems. Rounded pale red fruits covered in prickles follow the flowers. It can be evergreen or drought-deciduous. Probable hardiness 0-5 degrees F.

sanguineum var. *glutinosum*. Pink flowering currant. A coastal native, similar to the more northerly type species but frequently more graceful. In its better forms this is a well-branched, roughly vase shaped shrub, up to 8 feet tall. It has fuzzy, bright green leaves and pink flowers, displayed in pendant clusters of variable length. Our own '**Spring Showers**' is distinguished by neat, bushy habit and flower tresses up to 8 inches long. The flowers are bright pink in cloudy weather, but fade during bouts of early heat. '**Claremont**', introduced by Rancho Santa Ana Botanic Garden, is a slightly more open shrub with similarly long clusters but brighter pink flowers with lighter centers. Probable hardiness 0-10 degrees F.

speciosum. Fuchsia-flowered gooseberry. A wickedly spiny shrub with arching stems usually 4-6 feet tall. The 1/2 to 1 1/2 inch leaves are roundish and lobed, dark green and shiny on the upper surface. They disappear in summer unless the plant is well-watered, returning in late fall and winter. In late winter and early spring small clusters of pendant tubular, crimson or scarlet to pink blossoms are displayed all along the past year's stems. '**Rana Creek**' is a particularly nice selection by Suzanne Schettler, with large, dark leaves and great quantities of bright red blossoms. '**Pincushion**' was selected from seedlings of 'Rana Creek' at the nursery for its smaller size and nearly prostrate habit; it is equally floriferous. These are ideal candidates for dry shade, though they thrive equally in sun. Hardy to 10 degrees F. or less.

viburnifolium, Catalina perfume, is a spreading evergreen shrub often employed as a tall ground cover for dry shade. It has reddish stems lined with dark green, rounded, spicily fragrant leaves. The pink flowers and reddish berries are small and often go unnoticed. Hardy to about 15 degrees F.

ROMNEYA coulteri. Matilija poppy. This southern California native is a giant semishrubby perennial, spreading by rhizomes underground to form large colonies of thick, branched stems up to 10 feet tall. Both these and the divided, toothed 2-6 inch leaves are bright bluish green in color. Clusters of white blossoms with golden centers, measuring up to 8 inches across, are carried at the shoot tips in summer. Their petals are quite broad and textured like crepe paper. The selection '**White Cloud**' is distinguished by its vigor, compact size (only to 6 feet), heavy flower production and huge flowers. Sun, well-drained soil, moderate to no watering when established. Invasive shoots should be pulled or spaded out from time to time; otherwise it can overwhelm its neighbors. When planting, take care to disturb the root ball as little as possible, as fine roots are easily injured and may not recover readily. Hardy to around 0 degrees F., though active shoots are burned by sudden hard frosts.

ROMULEA. The Mediterranean to South Africa. Romuleas are diminutive relatives of the more familiar crocus, resembling them in many respects. They grow from small corms, which multiply to form dense colonies in time. Grassy leaves issue from the corms in late fall and winter, gathering strength for their spring bloom. Gaily colored "crocuses" nestle among the leaves or rise just above them in spring, often appearing in succession over several weeks. They have a peculiar habit of closing and seeming to disappear (the outer segments are often backed with green, like the leaves), then opening again when the sun shows its face. They vanish above-ground in mid to late spring and are perfectly tolerant of summer drought. These are fine "bulbs" for containers, rock gardens and naturalistic meadows. Sun, most soils, moderate watering while they grow and flower. Their hardiness varies.

bulbocodium. One of the Mediterranean species, with very narrow leaves, growing about 6 inches high. Bright violet crocus-like flowers are held among the leaves in spring. Hardy to 15 degrees F. or less.

subfistulosa. South and southern Africa. This is one of the "wildest" of the romuleas in impression. It is a robust species, quickly forming thick clumps with long thin grassy green leaves. In spring it bears many 2 inch blossoms of vivid rose purple, with bright yellow centers outlined in black. Hardy to 20 degrees F. or less.

ROSA californica '**First Dawn**'. California wild rose. One of the showiest of our native roses, quite common here along the central coast of California. It forms broad thickets from underground shoots--a useful feature for revegetation and ground cover, as well as a potentially serious problem for the smaller garden. Individual stems are slender, 4-6 feet tall and closely set with pale green to bluish green leaves. The spines are short, straight and not particularly threatening. Single pink flowers up to 2 inches broad decorate the plants most of the summer. Sun to part

shade, most soils, moderate to occasional watering. Hardy to 0 degrees F. or less.

ROSMARINUS officinalis. Rosemary. Mediterranean area. Shrubby mint allies of variable habit. Their shared features include densely packed, narrow, pungently aromatic leaves and irregular, two-lipped lavender blue blossoms. They fill several niches as ornamentals according to size and habit, most notably ground cover and shrubby borders, in addition to their role as an essential cooking herb. Sun, reasonably well-drained soil, moderate to little watering. Hardy to 10 degrees F. or less.

'**Blue Spire**'. This rosemary selection is well branched at the base, each shoot sweeping upright, with an ultimate height of about 4-5 feet. Flowers are abundant and clear blue in color, though not as dark as those of 'Collingwood Ingram' or 'Ken Taylor', below.

'**Huntington Blue**', also widely known as 'Huntington Carpet', makes an unusually dense cover. It is ultimately a little over 1 foot tall and several feet broad. Small, closely spaced, narrow leaves give it a refined appearance. Flowers are of a brighter, bluer shade than those of most selections.

'**Irene**' (PP#9124). This is a purported cross of 'Ken Taylor' and the old 'Prostratus', introduced and patented by Phil Johnson. It is trailing in habit, and nearly as dense as 'Huntington Blue', with dark, narrow leaves. It flowers most profusely in spring, carrying a scattering of blossoms in summer. Their color is a bright lavender blue at its best, in cool weather, bleaching like that of many rosemaries with more heat.

'**Ken Taylor**' is an attractive sport of 'Collingwood Ingram', introduced by the late Ken Taylor. It has weaker branches than the original and trails more like 'Prostratus' down banks and walls. The leaves are the same lustrous dark green, and the flowers the same bright lavender blue, as the original.

'**Mozart**' is a beautiful mounding rosemary selected by the late Ed Carman at his nursery in Los Gatos. It reaches about 2 feet high and 4 feet or more wide, easily cascading down walls and banks. The shorter than typical aromatic leaves are lustrous dark green and congested on the arching stems. Flowers are a vivid deep blue.

'**Roseus**'. A dense, upright plant, growing 3-5 feet high, with greyish green leaves. Flowers are soft rose pink.

'**Tuscan Blue**'. This selection is reputed to grow 6 feet tall. It is a bushy but upright shrub, with larger leaves than the prostrate selections, though similarly dark green. Flowers are bright lavender blue.

RUBUS calycinoides '**Emerald Carpet**' (COPF). This Taiwan native is a dense evergreen carpet with slender, stiffly hairy stems and nearly round, lobed 1-2 inch leaves. The leaves are dark green above, grey-furry beneath. Though the little white flowers are attractive at close range, they are not particularly impressive. It is simply a pleasant, durable, and adaptable ground cover which deserves better recognition. Sun or shade near the coast, part shade inland, most soils, moderate to occasional watering. Hardy to 10 degrees F. or less. Introduced by the University of British Columbia.

RUSCUS. Butcher's broom. Southern Europe. A nearly forgotten genus of the lily family, once rather widely used as small scale ground cover for dry shade. They form small thickets by means of underground rhizomes. Individual stems are usually branched and lined by stiff, pointed cladodes, short modified stems that resemble leaves. Small white blossoms are borne along the midribs of these cladodes, normally with "male" and "female" flowers on different plants. Where plants of both sexes are present, small red berries are produced. These are some of the best ground covers for use under oaks, as little or no summer watering is required once the plants are established. However, they also tolerate normal garden treatment. Most soils. Hardy to 15 degrees F. or less.

aculeatus '**Wheeler's Variety**'. This is a robust plant, with closely branched stems crowded by deep green, glossy cladodes. It is self-fertile and produces an amazing crop of bright red berries, a little less than ½ inch in diameter.

hypoglossum. This is the species most commonly seen in old homesteads. It grows a little over a foot high, with widely branched stems and dark green, shiny, pointed-oval cladodes. Our current material is "male" and thus produces no berries.

RUTA graveolens--compact form. Rue. Ruta is an old-fashioned medicinal shrub of the citrus family (more properly, the rue family), still used as a folk remedy for colds, coughs and other assorted ailments. It is dense, round, and rather rigid, growing about a foot high in this form. The entire plant, except the flowers, is chalky blue in color and oddly aromatic. The leaf blades are about 2 inches long, nearly triangular in outline and twice-divided, with small oval leaflets. Small yellow 5-petaled flowers are borne in loose clusters at the shoot tips in summer. This is an interesting small shrub for a sunny spot, thriving in most soils, with moderate to little watering. Read about the medicinal uses before experimenting; some people are allergic to the juices. Hardy to around 0 degrees F.

SALVIA. Sage. Worldwide. The sages constitute a huge and diverse group of mint allies, grown both for ornament and for herbal qualities. Those listed below are undemanding perennials and shrubs with usually rough-textured, aromatic leaves. Some form broad rosettes of basal leaves; others have branched, leafy stems. Usually the leaves are paired along the stems. Irregular 2-lipped flowers are borne in dense heads, whorls or spikes above the foliage. They come in nearly every floral shade, including near-black. Culture and hardiness vary widely, though most prefer a sunny spot

with well-drained soil. Many, particularly natives of California and the Southwest, are notably drought tolerant and excellent for dressing exposed banks and neglected spaces. Species included here need moderate to little watering.

apiana. White sage. This is a common sight in the hills of southern California. The main body of the plant is usually under 3 feet high, with several short, stocky stems. These are crowded with nearly white, somewhat bitterly aromatic leaves, up to 4 inches long. Above them rise openly branched, wand-like flower stems, as much as 6 feet high. These carry rather few flowers up to 1 inch in length, white overall with lavender or pink markings. They will need more sun and better soil drainage than many salvias but have nearly unlimited drought tolerance. Hardy to 20 degrees F. or less.

'Bee's Bliss'. This UC Botanic Garden introduction captures some of the best features of *S. sonomensis* (described below) with a distinctly less temperamental disposition. It makes broad, dense mats with bright greyish leaves, about 2 inches long. In spring and early summer it is decorated by many clusters of lavender blossoms, borne at the shoot tips. This is potentially a valuable ground cover for exposed banks and slopes, and a pretty plant for low borders, if full sun and well-drained soil can be provided. Probably hardy to 15 degrees F. or less.

'Celestial Blue'. This sage hybrid was derived from California species--certainly *S. clevelandii* and *S. pachyphylla*--with a possible contribution from *S. 'Poza Blue'*, which would add *S. leucophylla* to the mix. Silvery grey leaves are more oval than in the typical *clevelandii* hybrids. Bright blue purple flowers are carried in clusters over rosy bracts and calyces for a stunning show. Selected and named at Las Pilitas Nursery. Good drainage and air circulation are important. Probably hardy to around 15 degrees F.

chamaedryoides. This Mexican native is one of the prettiest of all the salvias and has gotten a rousing response from the gardening public. It is a compact shrub, growing about 2 feet tall and 4-5 feet broad in this selection. The stems are pale and greyish, and closely lined by small, broadly oval leaves, greyish green on their upper surface, nearly white beneath. Short clusters of bright, true blue flowers grace the plant most of the year. Its main drawback is a marked intolerance of excessive moisture or poor soil drainage. Hardy to 15 degrees F. or less.

'Christine Yeo'. This hybrid salvia combines good features of both its parents, *Salvia microphylla* and *S. chamaedryoides*. Textured dark green leaves are neat and upright stems to 2 feet form a dense mass. Rich purple flowers appear from spring to fall if plants receive moderate water. Spreads by underground rhizomes, but is easily controlled. Hardy to 15 degrees F. or less.

clevelandii 'Deer Spring Silver'. Cleveland sage. A California native sage selected in northern San Diego County. It is a spreading shrub, growing about 4 feet high, with highly aromatic grey-green leaves. Bright blue purple flowers are carried in dense whorls on 18 inch stems over the foliage in summer. It needs a sunny spot and very well-drained soil. Hardy to 15-20 degrees F.

clevelandii hybrids. When closely related salvias come into a garden, it is nearly inevitable that the bees will try their hands (claws?) at hybridizing, and that something beautiful will appear. Several popular shrubby natives were once universally listed as cultivars of *S. clevelandii*, blue sage. Careful study at Rancho Santa Ana and elsewhere showed them to be hybrids with *S. leucophylla* and others. The first to be recognized as such was **'Allen Chickering'**, originating at Rancho Santa Ana. This is still one of the best of the group. It is a dense shrub, 4-5 feet tall with greater spread. The twigs are clothed with 3 inch grey-green, fragrant leaves which make a pleasant tea. In late spring and summer many 1-2 foot blooming stems rise from the shoot tips, displaying deep lavender blossoms in interrupted ball shaped clusters. A somewhat larger, slightly looser growing selection, **'Whirly Blue'** is quite bushy and grey-leaved, with great clouds of lavender blue flowers in summer. Occasional watering when established. Hardy to around 15 degrees F.

'Dara's Choice'. Sonoma sage. An apparent hybrid of *S. sonomensis*, selected by the late Dara Emery at the Santa Barbara Botanic Garden. It is a spreading, semishrubby perennial forming broad carpets of grey-green leaves. It is decorated by many 6-12 inch spikes of purple flowers in spring. It is exceptionally attractive and more disease-resistant than the species generally. Useful as a bank cover or for draping over walls and rockery. It tolerates some shade. Little or no watering when established. Hardy to about 10 degrees F.

'Dark Dancer'. A stunning hybrid discovered as a chance seedling at Wintergreen Nursery by Victor Quintero. The likely parents are *S. muelleri* and a large flowered *S. microphylla*. It grows round and dense, about 2-3 feet tall, with foliage like *S. muelleri* or *S. greggii*. The flowers are exceptionally large for this group and have broad, rounded "skirts" of rich red-violet, reminiscent to us of little ballerinas. Hardy to 15 degrees F. or less.

greggii. Texas and northern Mexico. A species popular for many years landscape use, though until the 1980s plant material available reflected little of its diversity in the wild. Some dedicated effort in selection has resulted in a wealth of new flower colors. Most clones are in the 2-4 foot range. All have closely branched stems and narrow ¾-1½ inch leaves, colored light green to bluish green. The ½-1 inch blossoms are dotted in small clusters over the plants much of the year. Many selections have been superseded by hybrids in our own **Western Dancer** series (see below). However we still offer **'Furman's Red'**, selected long ago in Texas by W.A. Furman and valued for its rugged nature and bushy

habit, plus deep red flowers over a long season. '**Moonlight**' is an old Wintergreen Nursery selection and a particularly compact plant, bearing masses of moonlight yellow blossoms. And a small, compact, unnamed **white-flowered** selection is still quite worth growing. These are perfect shrubs for exposed banks and neglected corners of the garden. With better treatment or heavy soils they grow and flower beautifully for a while, but tend to be short-lived. Mostly hardy to 15 degrees F. or less.

x jamensis. This is a swarm of natural hybrids found in northern Mexico, involving *S. greggii* and *S. microphylla*. Explorations by the folks from Yucca Do Nursery in Texas, plus the diligent efforts of hummingbirds and bees, have resulted in several showy selections from the complex. They generally resemble *S. greggii* in habit and foliage. The flowers tend to be larger and display an unusual range of colors, including yellow and orange shades. '**Cienega de Oro**' is an upright 2-3 foot shrub with pale yellow flowers. '**Sierra San Antonio**' is similar in habit. Its flowers combine moonlight yellow and an unusual soft orange. The garden hybrid '**Coral Sunrise**' is bushy in habit and growing about 3 feet high. The flowers are deep coral pink on opening, lighter as they age. The calyx and flower stems are nearly black. Hardy to 15 degrees F. or less.

leucantha. Mexican bush sage. A bushy perennial which spreads underground to form dense colonies. The stems are 2-3 feet tall and covered with white wool. Closely lining them are long, narrow greyish green leaves. A striking contrast is created from late spring to fall by 1-2 foot flower stems densely covered with purple-rose hairs and displaying clusters of--in our traditional selection--rosy purple flowers (the typical flower color is white). Winter deciduous (or more precisely, burned down by frost, then reappearing from the rootstock in spring). Most soils, moderate to little watering. Hardy to about 15 degrees F.

leucophylla. Purple sage. A highly variable, often massive shrub, native to the mountains and coastal bluffs of southern California. It is usually under 5 feet high (in the wild, not necessarily in more generous garden conditions), but often widely spreading. Both the leaves and stems are covered with soft hairs that impart a grey-green to ghostly white coloring overall. In summer they produce long stems displaying interrupted clusters of pale pink to purple flowers. We once set out to find plants with better cold tolerance than available coastal selections of this species. '**Figueroa**' is ornamentally the best of the resulting selections. It is a compact shrub 3-4 feet tall, with wider spread, with exceptionally white foliage and lavender-pink flowers. '**Amethyst Bluff**' is a recent introduction by the Santa Barbara Botanic Garden, lower but widely spreading. The plant is soft grey-green overall, with beautiful amethyst-colored flowers. Both plants are heat and drought-tolerant and useful as a cover for dry banks. 'Figueroa' is hardy to 15 degrees F. or less; assume 15-20 degrees F. for 'Amethyst Bluff'.

mellifera '**Sweet Honey**'. Black sage. Black sage is a common native in the coastal scrub and chaparral of central and southern California. It is round to spreading in form, with rather stout stems and generally dull green, heavily textured leaves up to 3 inches long. These may be sweetly or somewhat bitterly aromatic (or both). Whitish flowers are carried in whorls above the foliage in summer. They are adored by bees. 'Sweet Honey' was recently selected by Karl Bareis for its tidy mounding habit, rather bright green leaves, sweet fragrance and good flavor (the leaves make a nice tea, and can be used as a seasoning). Sun, well-drained soils, moderate to little summer watering. Hardy to around 15 degrees F.

microphylla. Arizona and Mexico. This species shares an interesting botanical complex with *S. greggii*, *S. muelleri* and *S. coahuilensis*. Distinguishing them sometimes requires a trained botanist, though each has many beautiful forms. This one, which is found from southern Arizona to southern Mexico, is extremely variable. It is a profusely branched shrub with slender young stems and usually small, flat, green leaves. The flowers are of variable size, up to perhaps 1 inch long and broad, much like those of *S. greggii* in form, and borne most of the year in loose clusters at the shoot tips. Colors range from white to intense violet, rose pink and fire engine red. '**Cerro Potosi**' is an especially sturdy selection featuring generous quantities of magenta red flowers set on near black stems against dark green leaves. '**Hot Lips**' was an instant hit several years ago, apparently due to its novelty. It bears flowers that are all white (usually early in the season), all red, or--most commonly--bicolored white and red throughout the year. '**Rosie O'Grady**' is more typical of the species, spreading in habit, with large leaves and cheery bright pink flowers from spring to fall. All are easily grown, drought tolerant, and longer lived than most *S. greggii*. Hardy to 15-20 degrees F.

'**Nuevo Leon**'. A twiggy shrub with small, dark aromatic leaves and an abundance of bright blue violet flowers spring to fall. This sage looks much like a *Salvia greggii*, though the leaves are smaller and the plant is more spreading in habit. Long bloom. Hardy to 15-20 degrees F.

officinalis. Mediterranean Region. The type species is our common kitchen sage, ornamental but usually relegated to the herb garden. It forms dense clumps, usually 6-12 inches high. Each shoot is packed with 2-4 inch narrowly oval, fuzzy leaves. In spring it sends up many dense spikes of small lavender to violet blossoms. '**Berggarten**' is a dense, low carpet of broad grey-green leaves, with lavender-blue flowers. '**Icterina**' has dull green leaves strongly and irregularly variegated with yellow, particularly bright in spring. '**Purpurea**' has darker green foliage, strongly tinged

with purple in new growth. **'Tricolor'** combines dark green, cream and purplish red. Tough, easily grown plants for use in the low border and--of course--an ornamental addition to the herb garden. Hardy to 0 degrees F. or less.

pachyphylla. Mountain desert sage. This sage is native to pinyon juniper and yellow pine habitats in California and the West. It is rather slow-growing to around 3 feet, holding its 1-2 inch silvery leaves on erect stems. It is a dramatic sight in bloom, displaying clusters of bright blue flowers set among rosy bracts. This species, as you might guess from the common name, is exceptionally drought tolerant, even for a sage. Excellent soil drainage and good air circulation are essential to its growing success. Hardy to 10 degrees F. or less.

regla 'Royal'. A tough, hardy Texan with several ornamental features. This selection grows as much as 6 feet tall and spreads about the same. It has bright green, profusely branched stems and rounded, deeply textured leaves. Large, orange-red blossoms are carried in short clusters at each shoot tip, with a profuse display in summer and fall. After each flower has fallen the reddish calyx left behind maintains a flower-like appearance for several weeks. Selected at the Huntington Botanical Gardens. Tolerant of many soils, drought and temperatures to 10 degrees F. or less.

'Shirley's Creeper'. An apparent garden hybrid of *S. mellifera* (the native black sage), selected and given to us for trial by Charles Christiansen. It is initially prostrate but can eventually form a broad mound up to 3 feet high. The leaves are deep green, textured and aromatic like those of *S. mellifera*, and the flowers are carried in the same interrupted clusters. They are cream-white in color. Hardy to 15 degrees F. or less.

sonomensis. Sonoma sage. Sonoma sage is a prostrate, semishrubby perennial, often seen making broad carpets in the California chaparral and light oak woods. The stems are closely lined by rather narrow, pleasantly to bitterly aromatic leaves, about 2 inches long. They are covered by short hairs, especially on the lower surface, and can be almost ashy grey in color. Rising straight up off the mats in spring are slender stems carrying interrupted clusters of deep purple to white--unfortunately, usually "dirty white"--blossoms. We have made several selections over the years for various ornamental features. **'Fremont's Carpet'** is the most vigorous, spreading to several feet. It has rather dark grey-green leaves and beautiful deep blue purple blossoms. **'Gorda'** is more compact, with unusually broad ashy blue grey leaves and deep violet blossoms. **'Pine Canyon'**, selected recently by Adrienne Harrold, is especially tight in habit, with shorter than typical, pale grey-green leaves. Its flowers are lavender blue in color. These are ideal ground covers for dry banks and mounds, in sun or light shade, with excellent soil drainage. Hardy to 15 degrees F. or less.

spathacea. Hummingbird sage. An unusual native perennial of central and southern California, in this case from the Santa Lucia Mountains. It forms broad, dense clumps from underground rhizomes. Each shoot has several arrow shaped, interestingly textured 6-8 inch leaves clustered at the base. Leafy 2 foot stems appear in spring and fall, carrying large interrupted ball shaped clusters of 2 inch blossoms colored pale pink to deep magenta. All parts of the plants are strongly and sweetly aromatic. As the common name suggests, hummingbirds flock to them. We offer regular crops of seedling material from superior parent stock and a robust selection from the wild, with flowering stems over 3 feet high, dubbed **'King Crimson'**. Its many large flowers are dark purplish red in color. Hummingbird sage prospers in part shade, making it especially useful for planting under oaks, though it will also grow in full sun. Moderate to little watering, hardy to 10-15 degrees F.

'Starlight'. This probable hybrid of *Salvia apiana* and *S. mellifera* was introduced by Rancho Santa Ana Botanic Garden. It grows erect to 4 feet or more, the stems lined with narrowly oval silvery green leaves. Wand-like flowering stems display white flowers in spring and summer. It attracts many kinds of insects. Hardy to 15-20 degrees F.

Western Dancer Series. Our old friend and talented plant hybridizer, Patrick Worley, carried out a series of *Salvia* hybrids at Suncrest from 2004 to 2007, drawing on existing selections of *S. greggii*, *S. microphylla*, *S. muelleri* and *S. x jamensis*. Our goals were to expand the existing range of colors and color combinations, increase flower size, and yield plants that were both attractive and tolerant of a wide variety of climates, soils and watering regimes. He succeeded in all respects, and the results became our **Western Dancer** series, several of them now marketed internationally under plant patents. Further seedlings resulted from these crosses, extending the range. Collectively, they offer something for nearly every California garden. Most grow around two feet tall, a little larger (though amenable to light pruning) where *S. microphylla* is involved, and quite dense, like their parents. They prosper in sun (those involving *S. microphylla* will tolerate light shade), reasonably well-drained soils, and moderate to very occasional watering when established. Hardy mostly to around 15 degrees F. Each one is described briefly below.

'Autumn Moon' (PP#24106). This compact *S. greggii* hybrid combines creamy flowers with rose tubes, set on dark red stems. Flower buds are flushed red. Bloom appears in waves from spring to fall.

'Bright Eyes' (PP#22491). A *microphylla/greggii* hybrid combining rich green leaves and very large deep red flowers with a white central "eye". Flowering is profuse in summer and fall. Prune occasionally to keep shapely.

'Dancing Dolls' (PP#19820). This *S. microphylla* cross was the instant favorite of our 2004 lot, displaying several unexpected features. The plant is sturdy and fairly upright, reaching three feet or more after a few years in the garden. The leaves resemble those of the *microphylla* parent, being up to one inch long, broadly oval and bright green in color,

and they remain attractive even in winter. It flowers from spring to late fall, bearing up to 12 very large, bright flowers on each stem. Each flower has a rosy base and center and a broad cream "skirt". The contrast is further enhanced by the very dark stems and calyces.

'Dancing Embers'TM. A selection typical of *S. greggii* hybrids in its bushy growth and rather narrow half inch leaves. However, it is anything but typical in flower, with masses of deep, glowing red blossoms set off by darker flower stems and calyces.

'Dancing Lights'TM. Some really interesting (and unexpected) bicolor patterns emerged in our second generation of *Salvia* hybrids. *S.* 'Dancing Lights' was one of the most intriguing. It has the spreading plant habit and large, bright leaves one would expect from its *S. microphylla* parentage. However, apart from their large size, the flowers are completely unique. Each is shaded purplish pink on the tube and the basal half of the lower lip. The upper lip and outer half of the lower lip are vivid, glowing red.

'Dancing Shadows'TM. This selection presents yet another interesting combination. Flowers painted icy pink and white are set on bright red violet stems for a sparkling effect; the flowers fade to light pink overall.

'Debbie's Rose'TM. Robust hybrid is a chance seedling selected by Bill Gallo. It is densely leafy and has larger than typical flowers combining a broad warm coral lower lip with a rose tube. Flowering is abundant with moderate watering.

'Fancy Dancer' (PP#24088). A particularly compact hybrid, flowering in massive waves from spring to fall in moderately watered gardens. It has closely packed creamy pink and raspberry flowers.

'Fire Dancer'TM is a bushy *greggii* type of moderate growth, ultimately 2 or more feet high. It has typical small *greggii*-like leaves but is well distinguished by its masses of large blossoms in summer and fall, colored a vivid orange-red throughout.

'Flamenco Rose'TM. Along with *S.* 'Dancing Dolls', this was one of the really surprising crosses of 2004. It is robust and nearly erect in growth, with broad, bright green $\frac{3}{4}$ inch leaves similar to those of its *S. microphylla* parent. It is extremely floriferous and displays its stunning flowers from mid-spring to fall. The flowers are large even for an *S. microphylla* type, with broad lower "skirts" predominantly colored a bright, clear pink, with white markings at their centers and on the upper lip.

'Full Moon'TM. Black stems are an effective backdrop for the creamy flowers with rose tubes. Like most hybrid salvias, the abundant flowers attract hummingbirds.

'Golden Girl' (PP#23997). This is a third-generation hybrid, amplifying some of the best features of our *Salvia greggii/S. x jamensis* group. The plant is shorter and slower-growing than a typical *S. greggii*, and extremely compact. Leaves are small ($\frac{1}{2}$ inch or less) and quite dark green. In summer and fall the plant is nearly hidden by masses of the brightest golden yellow blossoms we have seen in a *salvia* of this group to date, each set off by a dark red-tinged calyx.

'Golden Ruffles'TM. Another *greggii* hybrid, displaying many ruffled yellow flowers in summer. A dark calyx sets off each blossom nicely

'Lemon Light' (PP#24105). Medium green leaves are covered with bright clear lemon yellow flowers on this very compact hybrid. It blooms from spring to fall in moderate climates.

'Neon Dancer'TM. A bushy plant of typical *S. greggii* habit, with bright green half inch leaves. It flowers heavily over a very long season, beginning in mid-spring, with brilliant purplish red flowers of typical *greggii* size and form.

'Orchid Glow' (PP#22520). Our forms of *Salvia microphylla* have been remarkably generous parents, lending attractive foliage, long flowering season and large flowers to their offspring. More surprising has been the range of new colors that have appeared in their crosses. This one is a full, somewhat spreading plant with attractive shiny green, broad-oval leaves up to an inch long. It flowers mostly in summer and fall, bearing very large flowers of a color difficult to describe--call it bright orchid or "vivid purplish magenta"--we're still struggling for an apt description.

'Pink Frills'TM. Spikes of white flowers with a frilly light rose pink lip are abundant over medium green leaves on this plant from late spring to fall in moderate climates.

'Tangerine Ballet'TM. Several good oranges have appeared in each generation of our *salvia* hybrids, making a final choice difficult. 'Tangerine Ballet' is perhaps the brightest and truest of all, and the plant itself is exceptional for a *greggii* type. It is fairly upright and very neat in its branching habit, and the leaves are bright and shiny. It is a massive bloomer, beginning in late spring and continuing in waves through fall. Each large flower is colored a bright tangerine-orange overall, with contrasting yellow "eye".

SAMBUCUS mexicana (nigra ssp. caerulea). Blue elderberry. California elderberry grows quickly into a many stemmed shrub or small tree, usually broader than tall. It has large, divided, often shiny leaves with leaflets up to 6 inches long. Dense clusters of fluffy cream flowers appear in early summer and mature into ornamental hanging clusters of chalky blue then black berries in late summer and fall. Fruits are attractive to birds. Established plants may survive drought, but appearance is best with moderate to occasional watering. Hardy to 10 degrees F. or less.

SANTOLINA. Mediterranean area. Compact, mostly shrubby daisies with crowded narrow, usually dissected leaves. The leaves possess various scents that speak of the chaparral. They display small button shaped, yellow to whitish flower heads on long stalks above the foliage in summer. They respond well to pruning and are useful in borders and low hedges. The plants are long-lived and will eventually develop picturesque trunks. Sun, most soils, occasional to no watering when established. Hardy to 0 degrees F. or less.

chamaecyparissus. Lavender cotton. The best known species. It is a dense grey shrublet, growing 1-2 feet high. The branches are crowded and closely set with narrow, feathery 1 inch leaves. These are also oddly aromatic when touched. Bright yellow flower heads, a little over 1/2 inch broad, are carried well above the foliage. There are a number of selected forms. '**Nana**' is an exceptionally tight, mounding shrub, growing only about 1 foot tall, with extremely congested branches and silvery grey leaves.

ericoides. Plants offered under this name are close to the more familiar *S. virens*, though more compact, at least in the current form. It grows about 2 feet tall and nearly round. The many short branches are closely set with dark green leaves. Creamy yellow flower heads are massed over the plant in summer.

SATUREJA. Mostly North America and the Mediterranean. An odd collection of annual, perennial and shrubby mints. Most have aromatic leaves and small, though sometimes showy flowers. Their culture and hardiness vary, though most demand well-drained soil but only moderate to occasional watering, and little further maintenance.

douglasii (Clinopodium douglasii). Yerba buena. Southern California to British Columbia. A trailing perennial, eventually making loose carpets or draping attractively over walls and banks. The shiny 1 inch leaves are delightfully aromatic and make a refreshing tea. Small white blossoms are paired along the stems in spring and early summer. Yerba buena is useful as a loose ground cover under oaks and shrubs. Sun or part shade near the coast, part shade inland. Hardy to 10 degrees F. or less.

thymbra. Pink savory. A rounded twiggy shrublet found from Turkey to Lebanon, growing 1-2 feet high. It has hairy, aromatic light grey-green leaves and pale pink flowers in dense heads along the branches spring and summer. This would be a nice addition to the herb or dry garden. Hardy to about 15 degrees F.

SCHIZACHYRIUM scoparium 'The Blues'. Little bluestem. This warm season grass is native across North America (but does not enter California) and is particularly abundant in the tall-grass prairie of the American Midwest. It forms tight clumps, with erect 2-4 foot stems, narrow chalky-blue leaves and luminous pink flower stems. Silvery flowers tip the stems in late summer. Nice fall color. This is a pleasing candidate for meadows and banks. Sun, reasonably drained soil, moderate to occasional watering. Hardy to 0 degrees F. or less.

SEDUM. Stonecrop. Mostly Northern Hemisphere. A huge group, mostly of herbaceous perennials, highly variable in several respects. An alarming number of the cultivated species are reassigned to other genera in recent taxonomic schemes; we will resist the changes just a little longer. Many of these plants are quite showy, though the flowers are often secondary to the foliage as ornamental features. Both stems and leaves are typically succulent. Flowers are small, star shaped, and borne in head-like to spoke-like clusters. Depending on size and habit, they can be used for ground cover, borders, planter boxes and other containers, and the rock garden. They are even seen draping from chinks in rock walls. Most thrive in sun or light shade, most soils, moderate to occasional watering when established. The following are hardy to 10 degrees F. or less, except as noted.

album 'Nigra'. A small scale succulent ground cover with short deep green rounded leaves that turn chocolate in summer and darker chocolate in winter. Short clusters of starry cream colored flowers appear in summer. This is a nice plant for edging, rock gardens and containers, especially shallow containers. Hardy to 0 degrees F. or less.

lanceolatum. Sierra stonecrop. Mountains of California and the West. A matting succulent with short, narrow leaves held close to the ground. Well branched flower clusters on 4-6 inch stems display many starry yellow flowers in spring and early summer.

palmeri. Mexico. A closely branched 8-12 inch mound with broad, pointed light green succulent leaves. In late winter to early spring many spreading clusters of glowing yellow blossoms erupt above the foliage. Hardy to around 15 degrees F.

spathulifolium. A matting California native, often encountered on rock cliffs and shady banks. Its small, flattened leaves are packed into flat rosettes, from which spoke-like clusters of yellow flowers appear in summer. '**Cape Blanco**' is the most widely circulated cultivar. It makes broad, dense mats with bright grey leaves. '**Purpureum**' is another particularly compact selection, its leaves heavily tinged with purple, deepening in winter. Both are best in part shade, except near the coast.

SEMPERVIVUM. Houseleek. Europe, North Africa, West Asia. These are hardy succulents grown for their mats of neat rosettes. The leaves are variable in size and color, nearly triangular in outline and sometimes covered by cobweb-like hairs. Cold weather often brings out the most intense leaf colors. Older rosettes produce short stems of pink to greenish, narrow-petalled blossoms, then die, to be quickly covered over by new shoots. They are interesting and

durable plants for rock gardens, containers, and rock walls. Sun or light shade, well-drained soil, moderate watering. Hardy to below 0 degrees F.

arachnoideum. Cobweb houseleek. One of the most prolific of the genus, with ½ to 1 inch grey-green rosettes covered by web-like white hairs. '**Cebenese**' is a cultivar with particularly large rosettes. This species is especially demanding of good soil drainage.

hybrids. The popularity of houseleeks has given them a special following, and the number of both species and hybrid selections has continued to grow over many years. Most of these focus on leaf color and shape, and many are more tolerant of a range of soils and watering regimes than the original forms. Here are a few currently offered at Suncrest. '**Black Prince**' forms broad mats with deep red-violet rosettes showing pointed green leaf tips. '**Blue Boy**' is admired for its mats of neat blue grey rosettes with rose tinted leaf edges. '**Commander Hay**' has unusually broad leaves, red purple near the base and green toward the tips. '**Greenii**' shows the reverse of this color scheme, the grey-green leaves tipped deep maroon in winter. '**Jungle Shadows**' is one of the most striking selections. It has broad purplish rosettes with burgundy leaf tips; the entire plant is painted deep burgundy in winter. '**Rita Jane**' is more typical of earlier hybrids, having neat rosettes of green leaves with a red central zone. '**Spring Beauty**' has smaller, tightly packed rosettes of soft misty green leaves.

SENECIO talinoides '**Jolly Gray**'. Hybrid Kleinia. A spreading thick-stemmed succulent, growing up to 18 inches tall. It has 5 inch cylindrical grey leaves that are held at right angles to the ground. Spikes of modest cream colored flowers are carried above the foliage in summer. It can be used as a small scale ground cover in sun or part shade and is tolerant of moderate watering. Hardy to 15 degrees F. or less.

SISYRINCHIUM. The Americas. Perennials of the iris alliance, producing compact clumps of grass-like or iris-like leaves and displaying small 6-petalled flowers in branched clusters or spikes, mostly in spring and early summer. The flowers usually last only a day or two but are quickly replaced as new buds open. Some of them self-seed rather freely, but the seedlings are easily rogued out. These are beautiful, nearly essential plants for naturalistic meadows. Sun, reasonably well-drained soil, moderate to little or no watering, depending on species. The following are hardy to 10 degrees F. or less, except as noted.

bellum. Blue-eyed grass is a common but beautiful wildflower, sprinkled over grassy slopes in much of California. Typically it forms clumps of grassy, 6-12 inch, bluish green leaves. Taller, branched stems appear in spring with ½ to 1 inch purple blossoms, their centers marked by golden stamens. '**Arroyo de la Cruz**' is a relatively tall, upright plant with the largest and darkest flowers of all our current selections. '**H Bar H White**' has typical foliage and large snow-white flowers. '**Occidental**' is a 1 foot plant, very profuse in growth and bloom, with large purple flowers. '**Rocky Point**' is of dwarf habit, with broader leaves and violet blossoms. '**Ft. Bragg**' is similar in habit but the flowers are soft lavender in color, with violet centers. Unwatered plants may shrivel in late summer but are quickly renewed by fall rains.

californicum. Yellow-eyed grass. Native to winter-moist areas in coastal California, this perennial makes grassy thickets around a foot high, with bright green leaves. Star-shaped yellow flowers are carried above the leaves in spring and summer. The plant will die down with summer drought. It reseeds readily in moist areas.

SOLANUM. Nightshade. Worldwide; the following are California natives. An extremely large group including perennial herbs, shrubs and vines. The foliage is quite variable, with leaves both simple and divided. Their five-petalled flowers, usually of purple to white, have a distinctive conical "beak" of crowded stamens. The berries which follow are often ornamental. The following selections are useful on banks and other open areas, thriving in sun or light shade, in most soils, and with moderate to little watering when established. They should be hardy to 15 degrees F. or less.

umbelliferum var. incanum. In its typical form, the species is often a sprawling, rather shapeless shrub. The variety *incanum* tends to be more compact and mounding, with beautiful grey stems, contrasting blue-green leaves and lavender flowers borne in small clusters. These give way to large, shiny green berries. '**Indians Grey**', discovered in the Santa Lucia Mountains, is particularly bushy and floriferous, also blooming over a long period in spring and summer. The flowers are shaded a beautiful chalky lavender. '**Spring Frost**' is a selection by Roger Raiche, similar in habit but featuring pure white flowers.

xanti '**Mountain Pride**'. Purple nightshade. *S. xantii* is a bushy perennial or subshrub found in many parts of California. This is an outstanding selection by Carol Bornstein, introduced by San Marcos Growers. It has broad, unusually deeply veined, dark green leaves and a nearly continual succession of vivid royal purple flowers from spring to fall, if plants are given moderate water.

SOLIDAGO velutina ssp. californica. California goldenrod. California goldenrod is well suited to dry California gardens, though it will prosper in moderately watered gardens as well. It forms close thickets of erect 2-3 foot stems. The stems are leafy below, with toothed medium green leaves that are soft to the touch. Branched wands of bright yellow flowers top the stems in summer and fall. This adaptable, spreading perennial can be found in woodland

margins and grasslands in many plant communities throughout California. Flowers provide nectar to insects and butterflies. Sun to part shade, moderate to little watering, hardy to 10 degrees F. or less.

SOLLYA heterophylla (fusiformis). Australian bluebell creeper. Bluebell creeper is a low shrub if free-standing, a vine of 6 feet or more if given support. It has slender stems set with narrow, glossy 2 inch leaves and displays many clusters of little bell shaped bright blue blossoms in summer and fall. *Sollya* is attractive either individually or in shrubby borders. Sun or part shade, reasonably well-drained soil, moderate to occasional watering when established. Hardy to 15-20 degrees F.

SPHAERALCEA. Globe mallow. The Americas. A group of showy hibiscus allies that includes annuals, perennials and shrubs. Most of them have distinctive 3-lobed leaves and brightly colored 5-petaled flowers, with the central tube of stamens common to the hibiscus and other mallows. The following are rugged, woody-based perennials, useful in exposed, dry sites with reasonably well-drained soil, though they tolerate more generous treatment. Hardiness varies.

fendleri var. venusta. Thicket globe mallow. This southwestern species makes bushy, spreading mounds up to 4 feet high. It has white-hairy stems and grey-green leaves, greyer beneath. Elevated above them in summer on long, graceful stalks are interrupted clusters of gaily colored flowers, measuring up to an inch across. Flowers in this selection are a deep, glowing pink. Hardy to 10 degrees F. or less.

fulva 'La Luna'. La Luna globe mallow. Baja California. A shrubbier plant than the last, well branched and growing 3 feet or more in height. It has lobed, deeply veined, light green leaves set on golden stems and displays many silky white flowers in spikes over much of the year. This selection was introduced by the Santa Barbara Botanic Garden. Probable hardiness is 15-20 degrees F.

incana. Orange mallow. The Southwest. Orange mallow is a plant for gardeners who long to grow the apricot mallow (*S. ambigua*) of our deserts, but find it too intolerant of wet winters. It is a robust perennial, producing many 2-4 feet stems from the base. Both the stems and undersides of the 2 inch leaves are white-hairy, but the leaves are soft green above. Throughout the summer months and well into fall, it offers a wealth of one inch light to deep orange blossoms, much like those of apricot mallow, opening successively in long clusters. We also offer an unnamed **dark pink flowered** selection, allegedly of this species. These are really cheery plants for the summer garden. Hardy to 10 degrees F. or less.

SPOROBOLUS. This is a large genus of grasses, with nearly worldwide distribution. Those of interest here are clumping perennials native to California and the Southwest. Their most notable feature is their airy clusters of tiny one-flowered spikelets. The following are beautiful grasses for banks, borders and naturalistic meadows. Sun, many soils, moderate to occasional watering when established. Those described here are winter-deciduous and hardy to 0 degrees F. or less.

airoides. Alkali dropseed. A perennial native grass of deceptively delicate appearance. It makes attractive fountains of narrow, greyish green leaves. Wiry stems rise as much as 6 feet from the clumps in summer, carrying broad, widely branched clusters with hundreds of tiny flower heads. These are pinkish to purplish at first, gradually changing to pale tan and remaining showy for months.

wrightii. Sacaton. An elegant southwestern species, as much as 7 feet tall in flower. It forms substantial clumps, with arching deep green leaves up to 3 feet long. Above these are carried long, shining golden plumes of flowers in summer. **'Windbreaker'** is a wildly robust selection originally developed by the Natural Resources Conservation Service (USDA) for use as a windbreak in the low water climates of Arizona, New Mexico and Texas. It forms robust clumps to 8-10 feet high, with flower stems that extend another 2 feet. All forms are useful as tall screens, or for dramatic accent.

STACHYS. Widespread, mostly in temperate regions. An odd assortment of mint relatives, widely scattered around the globe. They have mostly square stems, paired, often strangely scented leaves, and spikes of small flowers resembling those of *Salvia* in form. The following are rugged perennials, useful on banks and in perennial borders. Sun, reasonably well-drained soil, only occasional watering when established. Their hardiness varies.

bullata. Hedge nettle. A common California native perennial that can spread widely by rhizomes. It generally grows 1-2 feet high. The soft green leaves are quite hairy and have an odd (some would say disagreeable) smell when touched. Our selection has especially vivid mauve pink flowers and thrives in both sun and shade. It is a good choice for planting under oaks. Hardy to 10 degrees F. or less.

byzantina (lanata). Lamb's ears. Caucasus to Iran. A popular ground-cover. It has short, prostrate stems, profusely branched to make dense carpets. The leaves are large, pointed-oval in outline and densely covered with white wool. One to two-foot stems bearing whorls of lavender pink blossoms appear in summer. These should be sheared off after bloom. **'Silver Carpet'** is a particularly dense selection, alleged not to bloom (However, we have seen material from several different sources contradict this claim). **'Helene von Stein'** ('Countess von Stein') is a more robust form, with woolly leaves nearly a foot long. **'Primrose Heron'** is distinguished by pale yellow new growth, changing to light

green beneath the usual white hairs. A useful, softly textured ground cover. There seems to be some disagreement about its drought tolerance, but we have seen old plants thriving in unwatered landscapes. Hardy to 0 degrees F. or less. **STIPA** (once again including *Nassella*, *Achnatherum*). Needle grass. Ornamental bunchgrasses, widely distributed around the world. This genus includes some of our most elegant native bunchgrasses, recently returned to the genus *Stipa*, after being assigned to *Nassella* and *Achnatherum* for a while. They are perennials with densely clustered stems and narrow leaves. The flowering stalks arch gracefully, well above the foliage. Most striking are the narrow flower heads, with needle-like extensions. They are especially beautiful when used as they appear in the wild, in naturalistic meadows. They also provide a low-maintenance cover for banks and other large stretches of open ground. Sun, well-drained soil, only occasional watering when established. The following are hardy to 10 degrees F. or less.

cernua. (*Nassella c.*) Nodding needlegrass. Plants of this species grow 2 feet or more tall. Both leaves and stems are an attractive blue-green color. Their flower heads have needle-like extensions that glisten with a silvery sheen.

coronata. (*Achnatherum c.*) Giant stipa. Giant stipa forms bright to deep green, fairly erect shoot-clumps up to 2 feet high. Flower stems up to 4 feet high tower over the foliage. They are narrow and graceful.

gigantea. Giant feather grass. Mediterranean region. This grass is an elegant giant, as its name implies. It forms dense clumps from the base. The narrow, dark green leaves arch to 2 feet. In late spring and early summer limber flowering stems rise to as much as 7 feet, making a shimmering, straw-colored fountain. Obviously not a plant for the postage stamp garden, though quite effective in large meadows. It thrives in sun, in most soils, with moderate to occasional watering.

hymenoides (*Achnatherum h.*). Indian rice grass. Indian rice grass is a tough plant of deceptively delicate texture. The lacy flower clusters are held just over the 12-18 inch clumps of narrow leaves. Airy and graceful.

lepida. (*Nassella l.*) Foothill needlegrass. This species typically has narrow green foliage to 1 foot high. Airy sprays of blonde flowers on 2 foot stems grace the plant in spring and early summer.

pulchra. (*Nassella p.*) Purple needlegrass. This is the most robust of our natives, making substantial clumps with narrow green leaves to 1 foot long. The airy, graceful flower sprays are held on 2 foot stalks in late spring and early summer. Long awns on the developing seeds are quite ornamental. Purple needlegrass is the state grass of California; it is widespread throughout California and was used as a food source by California native people as well as many animal species.

STYRAX redivivus. Snowdrop bush. California. A delightful native shrub found in both light woods and open chaparral. It grows nearly round to 6-10 feet high and is closely branched, with attractive tan bark. The roundish 2-3 inch leaves are bright green to greyish green in spring and summer, turning yellow to orange in fall and dropping in early winter. Waxy, bell shaped flowers resembling orange blossoms, pure white with yellow stamens, hang in small clusters from the branches in spring. Fragrance is a frequent bonus. This is a thoroughly delightful shrub, eventually forming small thickets. Drought tolerant when established, and hardy to 0-10 degrees F.

SYMPHORICARPOS albus 'Tilden Park'. Snowberry. This is the familiar snowberry of creeksides and margins of woods in California. It can form broad thickets or sometimes narrower fountains, up to 5 feet high. It has soft, bright green to blue-green leaves, about 1 inch long on the side shoots but noticeably larger on stronger, suckering shoots from the base. The bell-shaped flowers are only about ¼ inch long, light pink or white with a pink tinge. The berries are far showier, swelling to half of an inch across and pearly white in color. Berries often hang on until late winter. **'Tilden Park'**, introduced by the botanic garden of that name, is a bushy selection with bright, clean foliage and a reliably heavy crop of large berries. Sun-tolerant with moderate watering, but thrives as well or better with moderate to occasional watering in part shade, in most soils. Hardy to 10 degrees F. or less.

TAGETES lemmonii. Mexican marigold. Native from the mountains of southern Arizona into Northern Mexico, this shrubby daisy grows 5-8 feet tall, with strongly scented, finely divided, dark green leaves. Though primarily fall blooming, in coastal climates it is sprinkled almost perpetually with bright orange 1 inch blossoms. It responds well to pruning and may be used as an informal hedge or screen. Sun, reasonably well-drained soil, moderate to little watering. Hardy to 20 degrees F. or less when established, resprouting after extensive damage to the tops.

TALINUM calycinum. Fameflower. A tidy perennial from Missouri, fameflower makes tight low clumps of narrow succulent green leaves. Vivid rose-purple flowers are abundant on slender stems in summer and fall. This sparkling perennial is useful for edging, in rock gardens and in mixed plantings. Sun, well-drained soil, moderate to occasional watering. Hardy to 0 degrees F. or less.

TANACETUM vulgare var. crispum. Golden buttons. This is a broad, dense mat, useful for ground cover though potentially invasive in the presence of less robust plants. It has a lush covering of deep green, finely dissected leaves, each up to 8 inches long. Flower heads are golden yellow and showy if produced; however, in coastal climates one often sees only vegetative growth. This plant may be used in borders and for small-scale ground cover. Sun to part shade, most soils, moderate to occasional watering. Hardy to 0 degrees F. or less.

TECOMA stans. Yellow bells. A heat loving shrub native from the American Southwest to Argentina. It grows quickly to as much as 10 feet high. The plant is cloaked in lush shiny green, divided leaves. It produces clusters of showy bright yellow trumpet flowers at the shoot tips in summer and fall. The plant dies back with hard freezes but can be grown as a tree in mild areas. Sun, well-drained soil, moderate to occasional watering, ultimately hardy at least to 25 degrees F.

TEUCRIUM. Germander. Widespread, but especially Mediterranean. Germanders are a diverse group of shrubby and semishrubby mints. Size, habit and details of the leaves vary widely, though all have irregular, two-lipped flowers.

According to these features, they are useful as free-standing shrubs, for borders, or for ground cover. Sun, well-drained soil, moderate to little watering. The following are hardy to around 0 degrees F.

chamaedrys. A dense, mounding perennial, up to 18 inches high and 2 feet or more broad. They have rather narrow leaves with notched margins, up to 1½ inches long. The leaves are deep green and softly shiny. In summer many dense spikes develop above the foliage, displaying purplish pink to (occasionally) white blossoms. '**Prostratum**' is a matting cultivar, only a few inches high. It has leaves an inch or less in length and flowers of purplish rose color. A similar but slightly taller selection is '**Compactum**'. The species has long been valued for low borders and ground cover.

cossonii (*T. majoricum*). This is a tidy low mat, eventually 3 feet or more broad. The twigs are slender and closely lined by aromatic, very narrow 1 inch leaves, greyish green above and whitish beneath. It blooms (in our climate, at least) throughout the growing season, with dense clusters of rose-lavender blossoms nestled upon the foliage. This is one of the best of the teucriums for sunny banks.

fruticans. Bush germander. The typical *T. fruticans* is a useful and attractive shrub for dry landscapes, but it is often quite leggy. We offer an unnamed selection that is considerably bushier, probably reaching 4-5 feet in time. The stems are nearly white and conspicuously angled. Paired leaves resembling those of a dwarf olive, bluish green above and nearly white beneath, line the stems. Clusters of lavender blue flowers are carried at the branch tips in summer. The selection '**Compactum**' is smaller (usually 2-3 feet) and very dense, with stiffer stems. It blooms most of the year, with similar flowers. Yet another selection is '**Azureum**'. It is probably midway between the last two in size and has vivid purplish blue flowers.

marum. Cat thyme. A dense, slender stemmed shrub of about 1 foot, white-hairy on both the stems and the undersides of the tiny, pungently aromatic leaves. This selection bears small rose pink blossoms along the upper stems in summer. Like the true catnip (*Nepeta cataria*) it is extremely and often self-destructively attractive to cats.

THALICTRUM fendleri var. polycarpum. Meadow rue. A woodland perennial from California and the Pacific Northwest. It has tall stems with fern-like, highly dissected leaves, light green to greyish green in color. The subtle flowers are less likely to be noticed, for they can be the same color as the leaves, though often they are tinged more with purple. However the sight in spring of their masses of pendant stamens is quite beautiful. Cool sun to part shade, moderate to occasional watering, hardy to 0 degrees F. or less.

THAMNOCHORTUS. South Africa. Showy members of the great restio alliance, making dense thickets of erect to arching stems. Some species have two distinct kinds of shoots. The vegetative or sterile shoots are spreading to prostrate and intricately branched, making a springy net of wiry branchlets. Separate flowering stems rise above this mass, carrying clusters of chaffy gold to brown flower spikelets. Those of the male plants droop gracefully. Sun or light shade near the coast, part shade inland, well-drained soil, moderate to little watering. Their hardiness varies.

bachmannii. Smooth fertile culms of this restio reach about 3 feet in height and can be topped by golden flowers (bracts, really). High soil fertility will result in a tangled spring green foliage mass (many branched stems) below the smooth, erect flowering stems. A less fertile situation will emphasize the vase-shaped form, with smooth blue-green stems topped by shiny bronze bracts. The form of this plant is particularly striking in the winter garden. Moderate to little watering, hardy to at least 20 degrees F.

insignis. Dekriet This South African perennial provides a striking display in large spaces and in all seasons. Wiry dark green culms to 6 feet or a little more are smooth and topped by shiny golden flower clusters in summer. Vase shaped in form when young, the clumps mature to perfect hemispheres, with each culm sensitive to the slightest breeze. Moderate to occasional watering. Hardy to 15-20 degrees F.

THERMOPSIS. Golden banner, false lupine. Widely scattered in North America, Siberia and the Himalayas. The false lupines are rhizomatous perennials of the pea family, making small colonies over time. They are mostly winter deciduous, with branched or unbranched shoots having attractive three-parted leaves, vaguely resembling those of the lupines. They carry their showy lupine-like flowers well above the foliage in elongated clusters. Their predominant color is a bright, cheery yellow. False lupines are beautiful in mixed plantings, in meadows and on open banks. Sun, reasonably well-drained soil, moderate to occasional watering. Their hardiness varies.

montana. Mountains of the West. This is a 1-2 foot (sometimes more) perennial with branched stems and narrowly parted dark green leaves. In summer it carries many golden yellow flowers in extended clusters. Hardy to below 0 degrees F.

macrophylla. California false lupine. California. We have seen this plant in widely scattered locations, but seldom abundant. They grow from one to three feet high, with erect furry stems. Similarly furry, soft grey-green leaves line the stems. Tall clusters of brilliant yellow flowers grace the plant in late spring and early summer. Hardy to 10 degrees F. or less.

THYMUS. Thyme. Europe and Asia. Matting to bushy, tiny-leaved perennials and shrubs grown for both ornamental and culinary use. While they are valued primarily for their aromatic leaves, some display showy flowers in short, dense spikes. The following are suitable for rock gardens and small-scale ground cover. Sun, reasonably well-drained soil, moderate to little watering, depending on species. Hardy to below 0 degrees F.

caespititius 'Tuffet'. Selected form of a low thyme from Portugal, Spain and the Azores. It makes a flat mat with light green leaves. Small pink flowers appear just over the leaves in summer.

camphoratus. Portugal. A real jewel, with several endearing qualities. It is a small (to 1 foot) shrublet, making an intricately branched dome crowded with small rich green, wonderfully aromatic leaves. The flower clusters completely cover the plant in late spring and summer and are quite showy, with broad, crowded bracts and large rose pink blossoms.

x citriodorus. Lemon thyme. A dense low mound or mat with dark green, shiny leaves in the typical form. The leaves of some forms have a lemon fragrance and are delicious in salads. Others have a more pungent mixture of smells and tastes and are best used like commercial thyme. '**Variegatus**' is not only one of the most ornamental, but also one of the most flavorful. It forms billowy mounds 6-8 inches tall, densely set with yellow-edged leaves. Flowers are pale lavender. A green-leaved sport of this selection, dubbed '**Sweet Greens**', is equally fragrant and delicious. '**Lime**' is similar, with slightly less sweetly fragrant leaves of bright lime-green.

hirsutus. A low, dense mat of grey-green leaves, blanketed in spring by fluffy heads of pink blossoms. A finely textured, fairly drought-tolerant ground cover.

'Rose Williams'. Low and mounding, with pungently scented grey-green leaves, this shrublet covers its leaves in spring with light rose pink flowers. It may be a selection or hybrid of *T. vulgaris* and should develop its attractive gnarled trunks in time.

serpyllum (*T. praecox*). Mother-of-thyme. A low, dark mat with pungently scented leaves. Flowers in the typical form are unexciting, borne in small heads and colored off-white to pale lilac. In the cultivar '**Coccineus**', however, the whole plant is blanketed in crimson during the summer months. '**Elfin**' is named for its miniature form, pressing against the ground and so crowded with tiny grey-green leaves that it is hard to the touch. Flower clusters are also quite small, and they barely rise above the foliage to display their soft pink flowers. '**Pink Chintz**' is more like 'Coccineus' in scale. However, it has grey-green leaves and masses of pink flowers. The variety **albus** (actually, in this case, a selected form of that variety) has dark green foliage and pure white flowers.

TRICHOSTEMA. North America. A small group of annual, perennial and shrubby mints, often intensely aromatic and showy in flower. They have paired, usually narrow leaves and extended flower stalks rising from the shoot tips, carrying many small clusters of irregular flowers. Perhaps their most striking feature is their long, gracefully curved stamens. Their culture varies, though most need a sunny site with well-drained soil. Water needs and hardiness are described below.

lanatum. Woolly blue curls. This is a spectacular though temperamental native shrub, growing about 5 feet tall with greater spread. Its stiff branches are clothed with narrow, very aromatic 2 inch leaves. In spring and summer (nearly all year in mild climates) it carries flowering stems 1 foot or more long, these and the base of each flower covered by blue to reddish purple hairs. The flowers are usually lavender blue to violet in color and have long, curled stamens. This species is best suited for open bank and hillside plantings. Sun, very well-drained soil, little or no watering when established. Hardy to 15 degrees F. or less.

'Midnight Magic'TM. Hybrid blue curls. This is a cross made at Suncrest by Patrick Worley between *T. lanatum*, above, and the pink-flowered subtropical Mexican species *T. purpusii*. It forms a 3-5 foot rounded shrub with narrow dark green lightly aromatic leaves and showy spikes of purple "blue curl" flowers, with curved long stamens extending from each blossom. Flowering is typically from late spring to fall when planted in sun with moderate to occasional watering. This plant is considerably more tolerant of garden conditions than *T. lanatum*. Hardy to around 25 degrees F. (plants clearly need protection from hard frosts).

TRITELEIA. California and the West. Tritelleias are a wonderful group of cormous native perennials, formerly included (and still often known to gardeners and hikers) in *Brodiaea*. They form dense colonies where adequately protected against rodents (this can be a challenge, as these and other animals find them irresistible). Each seasonal shoot consists of a few long, channeled leaves, often lying close to the ground, and a stalk of a few inches to nearly 3 feet, topped by an umbrella-like flower cluster, appearing in spring or early summer. The individual blossoms have a basal tube or cup and six flared, often highly colored segments. Sometimes the anthers are also colored. These are fine

subjects for rock gardens, containers, and open meadows (where they will need gopher baskets or sharp rocks around the corms for protection against rodents); there are also few bulbs as attractive as these in large pots. They thrive in full sun or light shade and any reasonably well-drained soil. Once the leaves have withered, they need no further watering. The following are hardy to 10 degrees F. or less.

hyacinthina. A spring-blooming species, usually found in meadowy spring seeps. It has 1-2 foot stems bearing pure white, star-shaped blossoms with dark centers.

laxa 'Queen Fabiola'. This appears to be simply a good color form of *T. laxa*, known popularly as Ithuriel's spear. It is a robust plant, bearing broad clusters of trumpet shaped lavender blossoms on sturdy 1-2 foot stems in late spring.

peduncularis. Long-rayed brodiaea. One of the most vigorous species, quickly forming many-stemmed clumps in cultivation. It blooms in late spring and early summer, with stems often 1 foot or more tall. These carry many white blossoms on long, spokelike stalks.

TRITONIA. Cormous South African cormous perennials, closely related to *Ixia*. They quickly form dense clumps. Narrow fans of flattened, often sickle shaped leaves are produced in the fall. These are followed in mid to late spring by spikes of brightly colored, 6-parted blossoms, tubular at the base and cup shaped to widely spreading above. They are fine subjects for pot culture and in meadows. Sun, most soils, moderate watering while in growth and bloom, little or none after the foliage withers in summer. Hardy to 15-20 degrees F., though young foliage can be severely burned by sudden hard frosts.

crocata. Flame freesia. Plants of this species grow 1-2 feet tall and have narrow bright green leaves. The cupped, upfacing blossoms are 1 inch or more broad at the face and variously colored. Flowers of '**Princess Beatrix**' are painted brilliant orange, while those of '**White Glory**' are white tinged with pink. Seeds of a spectacular seed strain, '**Charles Puddles**', were received many years ago from Don Mann in England. Colors range from pale to bright pinks to apricot and deeper orange shades, often with contrasting centers. Two Suncrest reselections from this group are '**Flaming Fancy**', with fluorescent orange pink flowers, and '**Salmon Beauty**', with soft salmon-colored flowers.

hyalina. Plants of this species are smaller, usually under 1 foot tall, and bear nearly sickle shaped leaves. The blossoms are about 1 inch broad, painted bright orange with a large transparent spot at the base of each segment.

securigera. This species is spring growing and summer blooming, unlike most species. It bears many soft salmon orange flowers with yellow throats on stems to 12-16 inches high. Great in containers or small scale perennial plantings. It should have some summer water to thrive.

UMBELLULARIA californica. California bay laurel. This is an amazingly variable and adaptable California native. In the dry chaparral and on bare coastal slopes, it is a dense, oval shrub. Growing along creeks or in moist forests, it is encountered as a large tree with widely spreading canopy. Wherever it is seen, however, it has a lush covering of narrow, pointed, shiny leaves which are pungently aromatic when bruised (taking too deep a whiff brings instant fire to the sinuses). They had a brief commercial reign as a substitute for Grecian bay (*Laurus nobilis*) in cooking, until toxic compounds were identified in them. Large green or purple tinged berries decorate mature plants in the fall, but unfortunately create enough litter when they fall to preclude its use as a street tree. Sun or light shade, reasonably well-drained soil, moderate to little watering. Hardy to 0-10 degrees F.

VERBENA. Vervain. The Americas, widespread. A large group including annuals, perennials and a few shrubs. They have toothed or dissected leaves and usually small, irregular, two-lipped flowers, often opening in head-like clusters near the tips of gradually elongating stalks. The following with one exception are low, spreading perennials, useful for ground cover and borders. Sun, reasonably well-drained soil, moderate to occasional watering when established. Hardiness varies considerably.

bonariensis. South America. One of the giants of the group, and very different in habit from any of the better-known species. It produces several erect, angled 3-4 foot (or even more) stems from a stout rootstock. These are lined at wide intervals by 2-4 inch conspicuously toothed, dark green leaves. Clusters of small violet blossoms are produced almost continuously at the shoot tips. Hardy to 15 degrees F. or less.

lilacina 'De la Mina'. Cedros Island verbena. Native to an island off the west coast of Baja California, this is a mounding shrub with finely divided pale green leaves. It blooms more or less continuously from spring to fall, bearing clusters of lilac-colored blossoms with the fragrance of heliotrope. Introduced by the Santa Barbara Botanic Garden. Hardy to around 25 degrees F.; protect it from hard frosts.

peruviana 'Red Devil'. South America. One of the best of the many selections of *V. peruviana*. It actually presses against the ground, making a solid mat with dark, toothed leaves. The flowers are of almost incandescent red. Hardy to 15 degrees F. or less.

VITEX. Widespread, mostly in tropical regions. This is a large genus of the verbena family, including both trees and shrubs. They have paired leaves, often divided palm-like into several leaflets. The flowers are small but borne in clusters and often showy. They are irregular, two-lipped in form. Sun, most soils, moderate to occasional watering

when established. Hardy to around 0 degrees F.

agnus-castus. Chaste tree. Southern Europe, Asia. A beautiful deciduous shrub making fountains up to 10 feet tall and 15 feet or more broad. It has fragrant leaves divided palm-like into 5-7 narrow leaflets, each up to 4 inches long. The leaves are usually dark green above, densely hairy and grey beneath. In summer and fall the shoots are tipped by narrow 3-6 inch spikes of small lavender flowers. '**Amiguita**' is our own selection from earlier seedling batches, distinguished by smaller size (thus far 4 feet in the garden) and 3-5 inch spikes of lavender blossoms. '**Pink Sensation**', selected by Herb Kelly, has branched clusters of light pink flowers. '**Stony Point**' is a bushier plant with even darker flowers. Chaste tree makes a fine large specimen shrub and is useful as a tall screen. Or it can be trained as a small, unusual tree.

VITIS. Grape. Northern Hemisphere, especially North America. Grapes are the most familiar of all vines cultivated in California, where commercial selections are grown on a vast scale here for wine and table. They often grow quite large, covering trees and anything else in their path with massive leafy curtains and showing their shredding bark in winter. The leaves are usually large, toothed and sometimes lobed. Opposite them at each node are tendrils which wrap tightly around every possible object as a means of support (Don't turn your back on them). The flowers are small and inconspicuous but borne in generous branched clusters. The grapes are, of course, the part we prize most for consumption and sometimes for ornament. In many species, fall color of the foliage is dazzling. The chief argument against having them in the garden is their sheer size and vigor. However, most are quite controllable by pruning. All are useful both as actual vines (on fences, walls and trees) and for ground cover, particularly on banks. Sun or--if you don't mind sacrificing production of the fruit--light shade, reasonably well-drained soil, moderate to occasional watering in the following cases. The following should all be hardy to 10 degrees F. or less.

californica. California wild grape. This is a frequent sight along streams in northern California, clambering over willows and alders and making massive curtains of foliage during the summer months. Its fruits are small but sometimes quite delicious, and extremely attractive to birds (you may never get to taste them). '**Walker Ridge**' was selected for its smaller size (around 10 feet) and vivid mix of fall leaf colors.

girdiana. Southern grape. This species is quite similar in most respects to *V. californica*, and is useful both as a vigorous vine and for ground cover, particularly on banks. The stems and undersides of the leaves are densely coated with small hairs, giving the whole plant a distinctly grey cast. Grapes are dark purple. Fall color in this form is golden yellow.

'**Roger's Red**'. Selected as a presumed *V. californica* by Roger Raiche for its glowing red fall color, this grape was later determined to be a hybrid of the native California grape, *Vitis californica*, and the European wine grape, *V. vinifera*. It is an easy and adaptable vine that will quickly cover large spaces. Flowers are insignificant, dark berries have little pulp, but are ornamental. Fall color is spectacular.

WATSONIA. South Africa, Madagascar. Sturdy evergreen or deciduous perennials related to *Gladiolus*. Most form compact colonies by means of offsets from underground corms. Each mature corm produces a fan of flat, usually sword shaped leaves and a taller stalk displaying long-tubed, lily-like blossoms. All prefer full sun and thrive in most soils. The following are all summer dormant and perfectly tolerant of summer drought. They are hardy to around 20 degrees F., though the foliage will be damaged by sudden hard frosts.

coccinea. Bugle lily. This is a typical watsonia in habit, with leaves up to 1 foot high and stems to 18 inches. The flowers appear in late winter and early spring. They have long tubes and are up to 2 inches wide at the tips, colored a bright dark pink.

humilis. This is a charming dwarf species, with broad 4-6 inch fans of leaves and 8-12 inch stems carrying several relatively large blossoms colored deep pink with darker centers. Spring blooming and summer deciduous.

intermedia. A particularly beautiful species, much resembling *W. humilis* above, but growing 1-2 feet tall, with larger but similarly deep pink flowers.

WESTRINGIA. Softly colored and finely textured, these Australian shrubs are beautiful companion plants for some of our own dryland natives. They are moderate in growth, the following generally under 4 feet high with greater spread. Their stems are richly clad with soft, narrow leaves. The irregular two-lipped flowers can also be quite decorative. These are useful plants both individually and in hedges and shrubby borders. The following thrive in sun, with reasonably well-drained soil and little watering when established. Hardy to 20 degrees F. or less.

fruticosa (*W. rosmariniformis*). This is the one westringia well-known in California. It is a dense, spreading shrub, up to 6 feet high and 8-10 feet broad. The twigs are crowded with narrow, pointed leaves, silvery on both surfaces in the most popular form. It blooms most heavily in spring but has at least a sprinkling of its small white flowers much of the year. '**Jervis Gem**' is an especially compact, lower (about 3 feet) selection, with deep lilac flowers over a long period in spring and summer. '**Morning Light**' is another smaller selection, with more spreading branches, crowded with cream-yellow margined leaves. '**Smokey**' is similar in size and habit, also variegated, but has leaves that are greyer

overall, with white margins. Newer selections promise to fit every planting niche. '**Low Horizon**' (PPAF) will stay about 1 foot high and spread to 4 feet across, with grey leaves and bright white flowers. '**Grey Box**' (PPAF) grows to 2 feet high and about 3 feet wide, shorter than typical leaves are grey and flowers are white. '**Small Ball**' (PPAF) has lighter greenish grey leaves and pinkish flowers and grows to about 3 feet high and wide, and '**Mundi**' (PP#24042) stretches to 3 feet high and 5 feet wide, with dark grey leaves and white flowers. '**Blue Gem**' (PPAF) forms a rounded mound to 5 feet or more with grey leaves and violet blue flowers.

glabra. This is showy shrub, unfortunately less tolerant of difficult conditions than *W. fruticosa*. Both stems and foliage are dark green, with a satiny sheen. The plant is decorated for several weeks each spring and fall by small lavender blossoms, borne in small clusters along the stems. It is notably sensitive to lime and salts in either water or soil.

'Wynyabbie Gem'. A purported hybrid of *W. fruticosa* and the more obscure *W. eremicola*. It is upright and a little more loosely branched than most selections of *W. fruticosa*, growing at least 6 feet high. It has narrow silvery leaves. Small lavender flowers are carried along the stems in spring and summer. The overall effect of this westringia is light and airy.

YUCCA. North and Central America. For many years use of the yuccas was dominated by the largest and most awkward species, like *Y. gloriosa*, while some of the smaller, tidier members, much more appropriate for small home landscapes, were neglected. The following fit mostly in the second category. They have crowns of roughly sword shaped leaves, each crown clumping from the base to form small colonies. Eventually each crown sends up a large, branched stalk bearing dozens or hundreds of showy bell shaped, usually white or cream colored blossoms. That particular crown then dies, to be covered over by its own offsets. The species described here delight in full exposure, any reasonably well-drained soil, and moderate to only occasional watering. Hardy to 0 degrees F. or less, unless otherwise noted.

'Bright Edge'. A beautiful selection, forming tight clusters of basal rosettes, the individual leaves about 1 foot long. Though stiff in appearance, they have soft, non-threatening terminal points. Each displays a dark green central band, broadly margined with bright yellow. The flowers are about 2 inches long and cream colored with some purple tinge.

filamentosa 'Variegata'. Very similar in appearance and dimensions to the previous description, the leaves just a bit longer, relatively broader and margined with creamy white. Dry filaments curl out and back at intervals along the margins.

flaccida. As the species name implies, this is one of the softest of the yuccas, quite unlike some of the fearsomely sharp and stiff leaved Californians. The crowns produce offsets freely to form dense colonies. Each has several drooping, bluish green leaves, up to 2 feet long. It is one of the showiest of the yuccas in bloom, bearing broad torches of fragrant ivory-colored blossoms, 2-3 inches long on stalks 4-10 feet high. '**Ivory Tower**' is a somewhat dwarf selection, with leaves about 1 foot long, 3-4 foot stalks and quite large flowers. '**Garland Gold**' is a hybrid sometimes listed under this species. It is one of the brightest of the variegated yuccas. The leaves have broad, golden yellow centers and deep green margins. '**Yellow Stripe**' has more irregularly variegated leaves, the bands of grey-green alternating with yellow.

whipplei (Hesperoyucca whipplei). It is with some trepidation that we offer this spectacular native. It is a dangerous neighbor, particularly for small children, and best placed on banks and walls out of the line of traffic. It makes crowns of stout, viciously pointed, pale green to silvery grey leaves up to 2 feet long. From the crown, after several years, issues a stalk resembling a giant asparagus spear, rising as much as 10 feet. This develops into a many-branched panicle of large white bells. The effect is stunning. If offsets have been produced by flowering time, they take over the task of perpetuating the plant as the old crown dies. Otherwise, it is time to plant a new one (it is easily grown from seeds). Probably hardy, in this material, to 10 degrees F. or less.

ZEPHYRANTHES. The Americas. Rain lily. Bulbous perennials of the Amaryllis family, most of them quite showy and easily grown. The bulbs in most species produce numerous offsets each year, quickly forming dense clumps. Each shoot consists of a few rush-like to grassy leaves and one to several cupped or trumpet shaped flowers borne on individual stems. Colors range from white to yellow, orange and rose. Some bloom seasonally. Others respond to any good rain or watering after a period of drought (thus the common name). These are beautiful plants for meadows, rock gardens (here they may require periodic thinning) and containers. Sun or light shade, most soils, moderate to occasional watering. The following are hardy to 10 degrees F. or less.

candida. Zephyr lily. An evergreen species with 8-12 inch rush-like, bright green leaves. In late summer and fall it carries many 1½ to 2 inch white, crocus shaped blossoms. A beautiful plant for rock gardens and containers. Sun or light shade, most soils, moderate watering (a short summer drought will promote heavier blooming).

flavissima. South America. A vigorous species, quickly forming many tightly packed bulbs and growing 6-10 inches high. It has glossy bright green leaves similar to those of *Z. candida*. Quite distinctive, however, are the vivid golden

yellow crocus-like flowers that appear for a long period in summer and fall.

'La Bufa Rosa'. This hybrid from Yucca Do Nursery has actually become a whole race of hybrids, each with an additional cultivar name. The plant at hand has broader leaves than most zephyranthes, blue-green in color. Trumpet-shaped pink flowers with darker bases, each nearly 3 inches long, are held over the leaves in summer

'Prairie Sunset'. Another hybrid, involving *Z. candida* as one parent. It grows about a foot high, with narrow bright green leaves. In summer and fall it displays many peach-pink flowers, the show improving as the bulbs become more crowded.