

# MARGARET ARMSTRONG

FIELD BOOK OF  
WESTERN WILD  
FLOWERS

Margaret Armstrong

**Field Book of Western Wild Flowers**

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# Margaret Armstrong

## Field Book of Western Wild Flowers

### PREFACE

In this little book a very large number of the commoner wild flowers growing in the United States, west of the Rocky Mountains, are pictured and described. It is the first attempt to supply a popular field book for the whole West. The field is vast, including within its limits all sorts of climate and soil, producing thousands of flowers, infinite in variety and wonderful in beauty, their environment often as different as that of Heine's *Pine and Palm*. In such strange homes as the Grand Canyon and the Petrified Forest of Arizona, or the deserts of Utah and southern California, we find the oddest desert plants, forced to curious expedients in order to sustain life amidst almost perpetual heat and drought, but often displaying blossoms of such brilliance and delicacy that they might well be envied by their more fortunate sisters, flourishing beside shady waterfalls, in a "happy valley" like Yosemite, or a splendid mountain garden, such as spreads in many-colored parterres of bloom around the feet of Mt. Rainier. On the wind-swept plains hundreds of flowers are to be found; many kinds of hardy plants brighten the salty margins of the sea cliffs, or bloom at the edge of the snow on rocky mountain peaks, while quantities of humble, everyday flowers border our country roadsides or tint the hills and meadows with lavish color.

The field included the States of Washington, Oregon, California, Idaho, Nevada, Utah, and Arizona and to designate this whole field the term West is used in this book. The term Northwest designates Washington, Oregon, northern Idaho, and northern California, and the term Southwest covers southern California and Arizona. The flowers found only in the Rocky Mountains are not included, and it may be noted here that exceedingly few of the western flowers cross the Rockies and are found in the East.

This is the only fully illustrated book of western flowers, except Miss Parsons's charming book, which is for California only. The drawings have all been made from life. Allowance must be made for differences in appearance, owing to locality, and the text should be consulted for the size, as, on so small a page, some of the plants must be drawn smaller than others.

Almost all technical botanical terms have been translated into ordinary English, as this book is intended primarily for the general public, but as a large number of the plants given have never before been illustrated, or even described, except in somewhat inaccessible or technical publications, it is hoped that the scientist also may find the contents both interesting and useful.

The nomenclature used, with few exceptions, is that of the American Code. Where these names differ greatly from those in common usage the latter are given as synonyms in brackets, making the book more useful to all readers. The botanical names are marked with an accent. Two accents are used, the grave (˘) to indicate the long English sound of the vowel, such as the "i" in "violet," and the acute (´) to show the short sound, such as the "i" in "lily."

Professor J. J. Thornber, of the University of Arizona, is responsible for the botanical accuracy of the text and his knowledge and patient skill have made the book possible.

Thanks are due for most valuable assistance in the determination of a very large number of specimens to Miss Alice Eastwood, of the California Academy of Sciences. Also to Dr. W. L. Jepson of the University of California; Professor A. O. Garrett, of Salt Lake City; Professor A. R. Sweetser, of the University of Oregon; Mr. S. B. Parish, of San Bernardino, Cal.; Mrs. Henshaw, of Vancouver, B. C.; Dr. A. Davidson, of Los Angeles; and Mr. Marcus E. Jones, of Salt Lake City. Also for advice and assistance to Dr. N. L. Britton, and Dr. H. M. Richards of New York; to Dr. Livingston Farrand, of Colorado; Mr. C. R. Orcutt, of San Diego; Mr. Carl Purdy, of Ukiah, Cal.; Professor Flett, of

Mt. Rainier National Park; Miss Winona Bailey, of Seattle; Professor J. H. Paul, of Salt Lake City; and many other kind friends.

The arrangement is that originated by Mr. Schuyler Mathews, in his *Field Book of American Wild Flowers*, which has been found very popular in the East, but, in this book, most of the genera, as well as the species, have been very briefly described.

*Margaret Armstrong.*

New York,  
*January 1, 1915.*

## TECHNICAL TERMS

**Corolla.** The flower-cup composed of one or more divisions called petals.

**Petal.** One of the divisions of the corolla.

**Calyx.** A flower-envelope, usually green, formed of several divisions called sepals, protecting the bud.

**Sepal.** One of the divisions of the calyx.

**Anther.** The pollen-bearing organ, usually yellow.

**Filament.** The stalk-like support of the anther.

**Stamen.** Anther and filament combined.

**Ovary.** The seed-bearing organ.

**Ovary inferior.** With the flower-parts growing from above the ovary.

**Ovary superior.** With the flower-parts growing from below the ovary.

**Placenta.** That particular portion of the ovary wall to which the ovules are attached.

**Ovule.** The body in the ovary which becomes a seed.

**Style.** The stalk-like projection proceeding from the ovary and terminated by the stigma.

**Stigma.** The generally sticky and sometimes branching termination of the pistil through which pollination takes place.

**Pistil.** Ovary, style, and stigma combined.

**Regular Flower.** Generally symmetrical and uniform in the number of its parts.

**Perfect Flower.** A flower complete in all the common parts.

**Staminate.** With stamens and without pistils.

**Pistillate.** With pistils and without stamens.

**Polygamous.** Pistillate, staminate, and perfect flowers, on the same or on different plants.

**Claw.** The narrow or stalk-like base of some petals.

**Pedicel.** The stalk of a flower in a cluster.

**Raceme.** A flower-cluster in which the flowers are borne along the flower-stalk on pedicels of nearly equal length.

**Spike.** A flower-cluster in which the flowers have no pedicels and are arranged more or less closely along the flower-stalk.

**Bracts.** Small scalelike formations.

**Involucre.** A circle of bracts below a flower-cluster.

**Stipule.** Small often leaflike formations, confined to the base of the leaf.

**Capsule.** A dry seed-vessel, composed of more than one part and splitting open.

**Akene.** A small dry one-seeded fruit, not splitting open.

## WATER-PLANTAIN FAMILY. *Alismaceae*

A rather small family, widely distributed, growing in fresh-water swamps and streams. The leaves are all from the root, with long sheathing leaf-stalks, and the flowers are regular and perfect, or with only pistils or only stamens; the sepals three; the petals three; the stamens six or more; the ovaries numerous, superior, developing into dry, one-seeded nutlets.

There are a good many kinds of *Sagittaria*, with fibrous roots and milky juice; the leaves are usually arrow-shaped; the lower flowers usually pistillate and the upper ones usually staminate; the stamens are numerous and the numerous ovaries are closely crowded and form roundish heads. The name is from the Latin for "arrow," referring to the shape of the leaves.

### **Arrowhead**

*Sagittaria latifolia*

**White**

**Summer**

**North America**

An attractive and very decorative plant, with stout, smooth, hollow flower-stems, from eight inches to four feet tall, with very handsome, smooth, olive-green leaves and papery bracts. The flowers are about an inch across, with delicately crumpled, white petals and yellow anthers, forming a bright golden center, and the plants look very pretty standing along the edges of ponds. The leaves are exceedingly variable both in size and shape. This is found throughout North America. The tubers are edible and hence the plant is often called Tule Potato, and they are much eaten by the Chinese in California. The Indian name is Wapato.



Arrowhead – *Sagittaria latifolia*.





## LILY FAMILY. *Liliaceae*

A wonderfully beautiful family, large and widely distributed, mostly perennial herbs, growing from bulbs or root-stocks, with perfect, regular, symmetrical flowers and toothless leaves. The flower-cup almost always has six divisions, the outer often called sepals and the inner petals. The six stamens are opposite the divisions and sometimes three of them are without anthers. The styles or stigmas are three and the ovary is superior, developing into a three-celled capsule or berry, containing few or many seeds.

There are several kinds of *Anthericum*, rather small, lily-like plants, with grasslike leaves, springing from the base and surrounded by the fibrous remnants of older leaves. The slender stems are leafless, or have one, very small, dry leaf; the roots thick and fleshy-fibrous; the flowers yellow, on pedicels jointed near the middle; the style long and slender; the pod oblong, containing several flattened, angular seeds in each cell. They are common in rocky soil, at altitudes of six thousand to nine thousand feet, from western Texas to Arizona.

### **Amber Lily**

*Anthéricum Tórreyi*

**Yellow**

**Summer**

**Arizona**

A beautiful little plant, with delicate flowers, unusual and pretty in coloring. It grows from eight to fifteen inches tall and has a slender, pale-green stem, springing from a clump of graceful, pale bluish-green, grasslike leaves. The flowers are about three quarters of an inch long, pale orange or corn-color, with a narrow stripe on each division; the pistil green, with an orange stigma; the anthers yellow. The flowers fade almost as soon as they bloom. This grows in open woods.





Amber Lily – *Anthericum Torreyi*.



There are several kinds of *Zygadene*, natives of North America and Siberia. They mostly have coated bulbs, resembling onions, and white or greenish flowers, in clusters, the leaves long, smooth, folded lengthwise and springing mostly from the root. The flowers are perfect or polygamous, the six divisions alike, with one or two, greenish, glandular spots at the base of each; the styles three, distinct; the fruit a three-lobed capsule, with several or many seeds in each compartment. The name is from the Greek for "yoke" and "gland," because some kinds have a couple of glands on each division of the flower.

**Poison Sego**

*Zygadènus paniculàtus*

**Cream-white**

**Spring, summer**

**Utah, Nev., Idaho**

A handsome, rather stout plant, about a foot tall, with bright light-green, smooth, graceful leaves sheathing the stem, which has a papery bract around its base. The flowers are in clusters varying in shape, sometimes growing in a long, loose raceme and sometimes in a closer, pointed cluster. The divisions of the rather small, cream-white flowers have short claws, with a yellow gland and a stamen at the base of each. The stamens are conspicuous, with swinging, yellow, shield-shaped anthers, and are at first longer than the three styles, which gradually lengthen and, together with the stamens, give a delicate, feathery appearance to the whole flower cluster. This grows on dry hillsides and in meadows. The bulb is very poisonous.



Poison Sego.

*Zygadenus paniculatus.*

Poison Sego – *Zygadenus paniculatus*.

**Zygadene**

*Zygadènus élégans*

**White**

**Summer**

**U. S.**

A handsome graceful plant, with one or more stiff stems, from six inches to three feet tall, springing from a large clump of rather stiff, bluish-green leaves, covered with a pale "bloom," and bearing fine clusters of cream-white flowers, less than an inch across, their divisions united below and adhering to the base of the ovary and each with a sticky, bright-green, heart-shaped gland. This grows in moist places in the mountains, across the continent.

**Star Zygadene**

*Zygadènus Fremóntii*

**White**

**Spring, summer**

**California**

Much like the last, but the foliage with less "bloom" and the flowers handsomer and rather larger. Their divisions are free from the ovary, only the inner divisions have claws, and the glands are greenish-yellow and toothed. This grows among bushes, on hillsides and sea-cliffs along the coast.

**Death Camass**

*Zygadènus venenòsus*

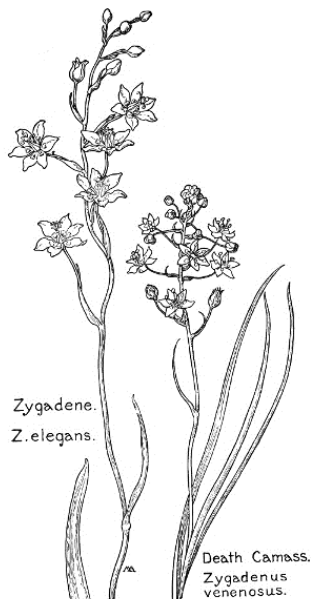
**White**

**Spring**

**Wash., Oreg., Cal.**

Not nearly so handsome as the two last, but a pretty plant, from one to two feet tall, with dull-green leaves, folded lengthwise, with rough edges. The cream-colored flowers are less than half an inch across, striped with green on the outside, their divisions free from the ovary and all with claws, with roundish, greenish-yellow glands, not toothed, and with long stamens. This grows in meadows and the bulb is very poisonous except to hogs, so it is often called Hog's Potato.

There are several kinds of *Veratrum*, natives of the north temperate zone; tall, perennial herbs, with thick, short, poisonous rootstocks; stems tall and leafy, more or less hairy; leaves broad, plaited, with conspicuous veins; flowers more or less downy, polygamous, whitish or greenish, in a cluster, their six, separate divisions colored alike, adhering to the base of the ovary, without glands, or nearly so, and without claws; stamens opposite the divisions, with heart-shaped anthers; styles three; capsule three-lobed, with several flat, broadly-winged seeds in each compartment. *Veratrum* is the ancient name for Hellebore.



Zygadene – *Z. elegans*.

Death Camass – *Zygadenus venenosus*.

### **False Hellebore**

*Veratrum Californicum*

**Greenish-white**

**SpringWest**

The leaves of this plant are its conspicuous feature. A few near the top are long and narrow, but most of them are boat-shaped, with heavy ribs, and from six to twelve inches long. They are bright yellowish-green and, although somewhat coarse, the general effect is distinctly handsome, as we see masses of them growing luxuriantly in rich, moist meadows and marshes in the mountains. When they first come up in the spring, the shoots are packed into green rosettes, in which the leaves are intricately folded, but they soon grow to a height of three to six feet. The flowers are beautiful, in fine contrast to the coarse foliage. They measure about half an inch across and are cream-white, streaked with green, and form a fine cluster about a foot long. The flowers are far prettier and the plants handsomer than their eastern relations and they flourish at an altitude of six to nine thousand feet. The plants are supposed to be poisonous to cattle, but in a recent bulletin of the Agricultural Experiment Station of the State of Washington, it is reported as being a popular food with horses and sheep, particularly the latter, which eat it greedily and without ill effects.

There are several kinds of *Hastingsia*, perennials, with bulbs or rootstocks; the stamens on the base of the perianth, with swinging anthers; the ovary with a very short stalk and short style.

**Reed-lily**

*Hastingsia álba* (*Schoenolirion*)

**White**

**Summer**

**Oreg., Cal., Nev.**

An attractive marsh plant, with a smooth, stiff, bluish stem, over three feet tall, springing from a cluster of long, narrow, sword-like leaves. The slightly sweet-scented flowers are white, about half an inch across, forming a long, graceful, fuzzy wand of bloom, which has a pretty silvery effect and looks interesting at a distance, but is not very striking close by, as the flowers are too colorless. The seeds are black and shiny.



False Hellebore – *Veratrum Californicum*.

Reed Lily – *Hastingsia alba*.



**Amole Soap Plant**

*Chlorógalum pomeridiànum*

**Silvery-white**

**Summer**

**California**

There are several kinds of *Chlorogalum*. This odd plant springs from a big bulb, which is covered with coarse brown fiber and often shows above the ground. The leaves are sometimes over two feet long, with rippled margins, look like very coarse grass, and usually spread out flat on the ground. The plants are conspicuous and look interesting and we wonder what sort of flower is to come from them. Then some day in late summer we find that a rather ugly, branching stalk, four or five feet tall, has shot up from the center of the tuft of leaves. The branches are covered with bluish-green buds, and we watch with interest for the bloom, but we may easily miss it, for the flowers are very short-lived and come out only for a little while in the afternoons. In the lowlands the flowers

are rather scattered and straggling, but in Yosemite they are lovely, close by. Each flower is an inch or more across and looks like an airy little lily, with six spreading divisions, white, delicately veined with dull-blue, and they are clustered along the branches, towards the top of the stalk, and bloom in successive bunches, beginning at the bottom. When they commence to bloom, the tips of the petals remain caught together until the last minute, when suddenly they let go and spring apart and all at once the dull stalk, like Aaron's rod, is adorned with several delicate clusters of feathery silver flowers. The thread-like style is slightly three-cleft at the tip and the capsule has one or two blackish seeds in each cell. The bulbs form a lather in water and are used as a substitute for soap by the Indians and Spanish-Californians, and as food by the Pomo Indians, who cook them in great pits in the ground. *Pomeridianum* means "in the afternoon."



Soap Plant – *Chlorogalum pomeridianum*.

Wild Onions are easily recognized by their characteristic taste and odor. They mostly have coated bulbs; their leaves are long and narrow, from the base; the flower-stalk bears a roundish, bracted cluster of rather small, white, pink, or magenta flowers, on slender pedicels, their six divisions nearly alike and each with a stamen attached to its base. The bracts enclose the buds, before blooming, in a case and the capsule contains six, black, wrinkled seeds. There are numerous kinds, very widely distributed, not easily distinguished, some resembling *Brodiaea*, but the latter never smell of onion. *Allium* is the Latin for "garlic."

**Pink Wild Onion**

*Allium acuminatum*

**Pink**

**Spring, summer**

**Northwest**

From four to ten inches high, with a few leaves. Before blooming, the flower cluster is enveloped in two papery bracts, forming a beautiful pink and white, iridescent case, the shape of a turnip, at the tip of the stalk. Later these bracts split apart and disclose a cluster of pretty flowers, usually very deep pink in color, the divisions each with a darker line on the outside, the anthers pale-yellow. This is very gay and attractive, often growing in patches on dry hillsides and fields. The flowers last a long time in water, gradually becoming paler in color and papery in texture. The bulb is marked with veins.

**Wild Onion**

*Allium bispétrum*

**Pink, white**

**Spring**

**Utah, Nev., Cal.**

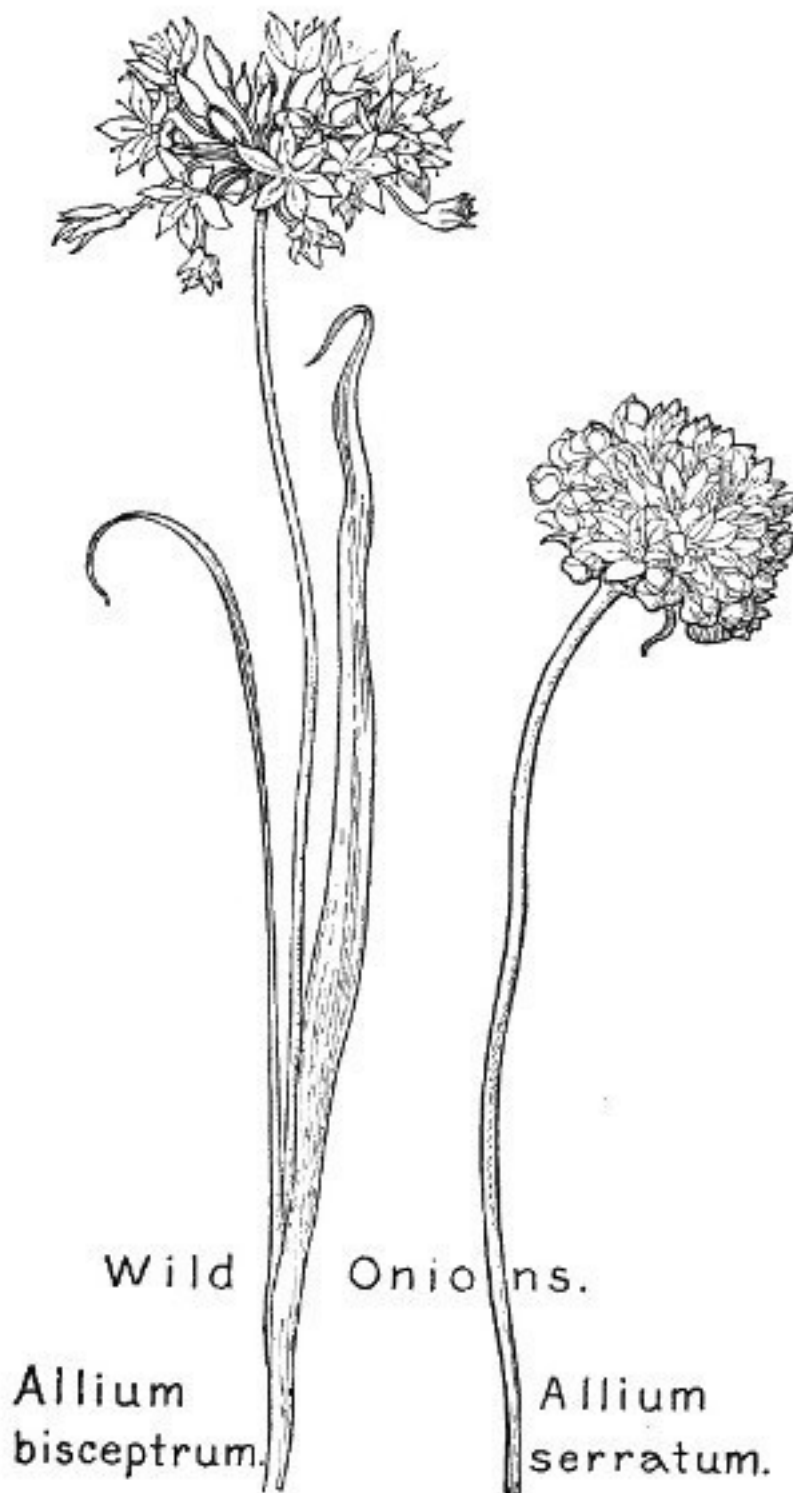
Six to ten inches tall, with two slightly thickish leaves, and usually two slender flower stalks, each bearing a graceful cluster of starry, white, pink or pinkish-purple flowers, each petal delicately striped with pinkish-brown, the anthers pink, the ovary green, with three, tiny, double crests. These flowers are exceedingly delicate and pretty, growing among rocks in shady canyons. The bulb is usually red-coated.

The flower cluster of *Allium serratum* is much more compact than the last and the pink flowers change to deep purplish-pink as they fade, making a pretty, round, papery head, about an inch and a half across. Common on low hills in California.





Wild Onion – *Allium acuminatum*.



Wild Onions.

*Allium bisceptrum.*

*Allium serratum.*

There are many kinds of *Brodiaea*, among the prettiest western flowers. They have a small, solid bulb, coated with brownish fibers. The stem bears a bracted, roundish head of flowers at the top, the pedicels varying in length. Their leaves, all from the root, are grasslike and soon wither and the flowers dry up, become papery, and remain on the stalk, sometimes keeping form and color for

some time. The stamens are in two sets and are attached to the flower-tube, their filaments often winged. Sometimes three of the stamens are without anthers and their filaments are broadened, so that they look like small petals alternating with the ordinary stamens.

**Grass Nuts.**

**Blue Dicks.**

**Covena.**

*Brodiaëa capitata*

**Blue, violet**

**Spring**

**California**

All through the spring these lovely flowers grow abundantly all over the hills and fields of California. The slender stalks vary from a few inches to two feet tall. The flowers are usually purplish-blue, but vary from deep-violet to white and are rather translucent in texture. They measure over half an inch across and grow in a cluster of seven or eight flowers, with several membranous, purplish bracts at the base. There are six anthers. The three inner stamens are winged and form a crown in the throat of the flower-tube. These Brodiaeas last a long time in water and are great favorites everywhere. The little bulbs are edible and give the name of Grass Nuts. There are several other names, such as Cluster Lily and Hog-onion. The name Wild Hyacinth is poor, as it does not resemble a hyacinth in character. *B. capitata* var. *pauciflora* of Arizona is similar, except that the bracts are white. Covena is the Arizona name.

**Ookow**

*Brodiaëa congesta*

**Blue, violet**

**Spring, summer**

**Wash., Oreg., Cal.**

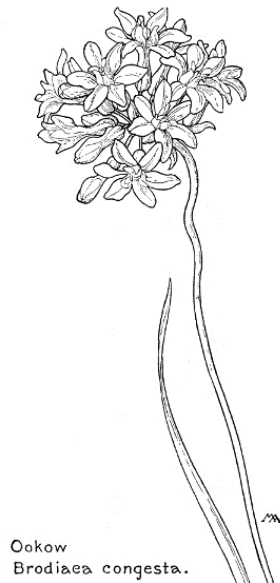
Much like the last, except that only three of the stamens have anthers and the stem is sometimes as much as five feet tall. This grows on open hills in the Coast Ranges.



Covena

Brodiaea capitata  
var. pauciflora.

Covena – Brodiaea capitata var. pauciflora.



Ookow – *Brodiaea congesta*.



### **Harvest Brodiaea**

*Brodiaea grandiflora* (*Hookera coronaria*)

**Blue**

**Summer**

**Cal., Oreg., Wash.**

In early June, at the time of the hay harvest, these handsome flowers, which look like clusters of little blue lilies, begin to appear among the dried grass of the hillsides and in open places in the woods. They vary in height from a few inches to over a foot and the number of flowers in a cluster also varies very much. Sometimes there are as many as ten of the beautiful blossoms, an inch or more long, with pedicels unequal in length and from one to four inches long, in a large cluster at the top of the stalk, with several, whitish, papery bracts at the base of the cluster. The color of the flowers is usually a deep bright blue shading to violet and the six divisions grow paler toward the base and have a brown stripe on the outside; the buds are greenish, striped with brown. The stamens are translucent white, three ordinary stamens, with long erect anthers, alternating with three without anthers, the latter tongue-shaped and petal-like. The leaves, which are thickish and about the same length as the stalk, have withered away before the flowers bloom. This plant very much resembles *Ithuriel's Spear*, *Triteleia laxa*, but three of the stamens are without anthers and the ovary is not on a long stalk. It is the commonest kind around San Francisco. *B. minor* is much the same, but a smaller plant with fewer and smaller flowers. The three outer divisions are narrow, with pointed tips, and the inner blunt and broad, and the sterile stamens are notched and longer than the fertile ones. This grows on dry hills and plains in middle and southern California.



*Brodiaea minor.*

Harvest *Brodiaea* – *B. grandiflora*.



### **Twining *Brodiaea***

*Brodiaea volubilis.*

(*Stropholirion Californicum*)

**Pink**

**Summer**

**California**

This is a strange, rather grotesque-looking plant, with its slightly roughish, leafless, reddish stem contorted into curious curves, occasionally quite short but usually enormously long, sometimes as much as eight feet, and twining awkwardly in a snake-like way around and over the bushes in its neighborhood. There are sometimes a few long narrow leaves lying on the ground, but when the flower blooms they usually seem to have withered away. The flower-cluster is quite compact, sometimes six inches across, comprising from eighteen to twenty flowers, with several, large, pink, papery bracts. The flowers are rather pretty, dull pink outside but paler inside, the buds are deeper and more purplish pink, both of dry papery texture. The flowers are over half an inch across, their tubes and buds are six-angled, and they have three stamens with anthers and wings, alternating with three, notched, petal-like stamens, without anthers. In the spring the stem grows rapidly for several weeks and then the flower cluster begins to come out at the tip. If the stem is broken off the flower comes out just the

same and the stem keeps on growing, even if it is brought into the house. These curious plants are found in the foothills of the Coast Ranges and the Sierra Nevada Mountains and may be seen in open sunny places along the stage route from Yosemite to Wawona. In the woods near Wawona I saw it twining around a very tall white larkspur and the combination was exceedingly pretty. The capsule is egg-shaped and pointed, the seeds black and angled.



Twining Brodiaea – *Brodiaea volubilis*.



There are four kinds of *Bloomeria*, all Californian, resembling *Brodiaea*, but the stamens unlike. They have a fibrous-coated, solid bulb, long narrow leaves, and a bracted cluster of many flowers, at the top of a tall flower-stalk. The flowers are yellow, with six, nearly equal, spreading divisions, the six stamens on the base of the divisions, with slender filaments, which with a microscope are seen to have a short, two-toothed, hairy appendage at base. These are united and form a little cup surrounding the base of the stamens. The style is club-shaped, with a three-lobed stigma. The roundish capsule, beaked with the style, contains several, angular, wrinkled seeds in each cell.

**Golden Stars**

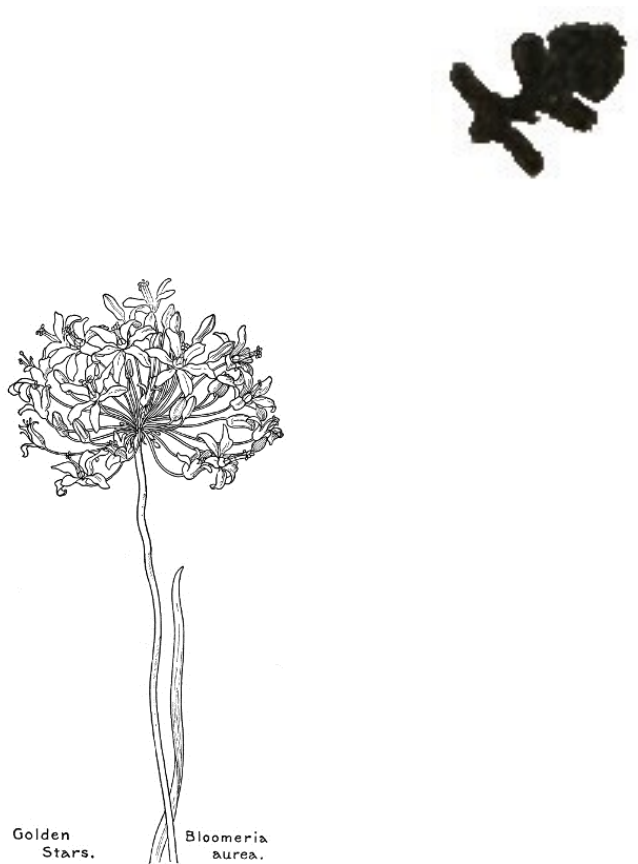
*Bloomeria àurea*

**Yellow**

**Spring, summer**

## California

In late spring the meadows around Pasadena and other places in the Coast Range are bright with pretty clusters of Golden Stars. The plant is from six to eighteen inches tall, springing from a small bulb, covered with brown fibers, with a long, narrow, grasslike leaf, and a large flower-cluster, sometimes comprising as many as fifty blossoms, at the top of the stalk. The flowers, about an inch across, with pedicels from one and a half to two inches long, are orange-yellow, the spreading divisions each striped with two dark lines, and the anthers are bright green. This looks very much like Golden Brodiaea, but the latter has no cup at the base of the stamens. It grows in the southern part of California and is abundant wherever it is found. *B. Clevelandi* is much the same, but the flowers are striped with green and the numerous buds are green, so that it is less golden and the general effect is not so good. It has numerous narrow leaves.



Golden Stars – Bloomeria aurea.

Triteleias resemble Brodiaeas, but they have six, swinging anthers and the ovary has a stalk.

### Indian Hyacinth

*Triteleia grandiflora* (*Brodiaea Douglasii*)

**Blue**

**Spring, summer**

**Northwest and Utah**

Though the general appearance of the plant is very different, the individual flowers of this beautiful plant very much resemble the bells of a Hyacinth, for they have the same waxy, semi-translucent texture. The bluish-green leaves, folded lengthwise and withering before the flower, are sometimes a foot long and the flower-stalk often reaches a height of two feet and bends beneath the weight of its lovely crown of blossoms. The cluster has four papery bracts at the base and is from three to four inches across, comprising about a dozen flowers, each nearly an inch long. They are pale-



violet, with a bright-blue mid-vein on each division, the general effect being blue, with a white pistil and six stamens in two rows, all with blue anthers and the outer ones with broad, white filaments. It is wonderful to find these lovely and exotic-looking flowers, delicately scented, gleaming in the shadow of a dusky oak thicket or a deep canyon. They last a long time in water, becoming papery as they wither.

**White Brodiaea**

*Triteleia hyacinthina* (*Brodiaea lactea*)

**White**

**Spring**

**Cal., Oreg., Wash.**

From one to two feet high, with very pretty flowers, about half an inch long, delicately striped with green on the outside, with six equal stamens, their filaments broad, triangular and slightly united at base, with yellow or purple anthers, and a green pistil. The leaf is grasslike, but thickish, and as long as the flower-stalk. These flowers are quite common and last a long time in water.

**Ithuriel's Spear**

*Triteleia láxa* (*Brodiaea*)

**Blue, purple**

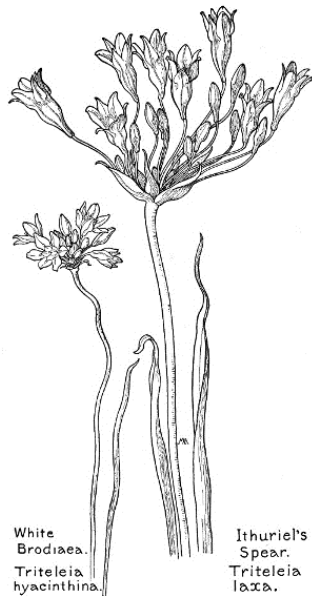
**Spring**

**Cal., Oreg.**

Very much like Harvest Brodiaea but rather taller, with more flowers in the cluster, and less waxy in texture, varying in color from blue to violet and occasionally white. This is common on hillsides and in adobe fields. The rather fanciful name was suggested by the spear carried by Milton's angel Ithuriel.



Indian Hyacinth – *Triteleia grandiflora*.



White Brodiaea – *Triteleia hyacinthina*.

Ithuriel's Spear – *Triteleia laxa*.

There are one or two kinds of Brevoortia.

### **Fire-cracker Flower**

*Brevoortia Ida-Màia (Brodiaea coccinea)*

**Red and green**

**Spring**

**Cal., Oreg.**

A handsome plant, most extraordinary both in form and color. The stem is from one to three feet tall, with a few grasslike leaves, and bears a large cluster of six to thirteen flowers, one or two inches long, hanging on slender, reddish pedicels. They have bright-crimson tubes and apple-green lobes, sometimes turned back, showing the tips of the three pale-yellow anthers. There are also three stamens without anthers and broadened so that they look like three white or yellowish petals. The buds are also crimson, tipped with green, and the whole color scheme is wonderfully brilliant and striking. This grows in mountain canyons and on wooded hillsides, blooming in late spring.

There are several kinds of *Muilla*, much like *Brodiaea* and very much like *Allium*, but with no onion taste or smell.

### **Muilla**

*Muilla marítima*

**White**

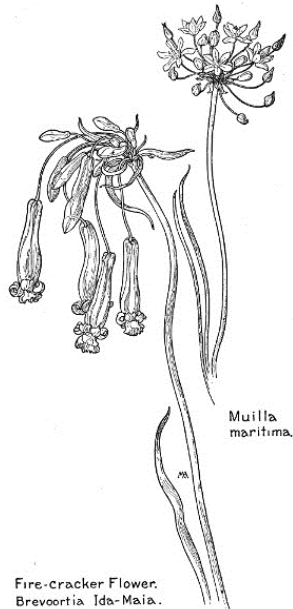
**Spring**

**Cal., Nev.**

A slender little plant, sometimes rather pretty, from three to nine inches tall, with sweet-scented flowers, about three-eighths of an inch or less across, white or greenish, striped with green outside, with six, bluish, swinging anthers. This grows in alkaline fields, on sea cliffs and mesas.

There are a good many kinds of *Erythronium*, all but one from North America, and, East and West, they are among our prettiest flowers. They have deep, membranous-coated, solid bulbs; a pair of netted-veined, unequal leaves, sometimes mottled with brown; flowers without bracts, large, nodding and bell-shaped, with usually six divisions, all colored alike, the tips turning back, each with a nectar-groove, and each with two or four little scales at base, or only the three inner divisions with scales; stamens on the receptacle, anthers not swinging; style more or less three-lobed; capsule more

or less oblong and three-angled. The younger plants are often flowerless, with only one broad leaf, with a long leaf-stalk. The name is from a Greek word meaning "red," though these flowers are mostly yellow. The common name, Dog-tooth Violet, is old, and suggested by the little, white, toothlike offshoot often found on the bulb, but of course they are not in the least like Violets. In California they are often called Chamise Lily, and sometimes Adam and Eve, because the plant often bears a large and a small flower at the same time. Mr. Burroughs would like to call it Fawn Lily, on account of the mottled leaves of some kinds, which slightly suggest the ears of a fawn. Adder's-tongue, probably suggested by the long forked pistil, is also an old and usual name.



Muilla maritima.

Fire-cracker Flower – Brevoortia Ida-Maia.

**Avalanche Lily**

**Dog-tooth Violet**

*Erythrònium montànum*

**White**

**Summer**

**Northwest**

An exquisite kind, peculiarly graceful in form, with from one to nine, pure-white flowers, nearly three inches across, each petal prettily ornamented at the base with some orange-colored markings, arranged in a symmetrical scalloped pattern. The anthers are orange-yellow, the pistil white, the buds are pinkish and the leaves are very bright green and not mottled. This is very common around Mt. Rainier.

**Glacier Lily**

**Dog-tooth Violet**

*Erythrònium parviflòrum*

**Yellow**

**Summer**

**Northwest**

A lovely flower, much like *E. grandiflorum*, but the anthers are white or pale yellow. Around Mt. Rainier these beautiful plants often grow in large patches at the edge of the snow, alongside of the Avalanche Lily, *E. montanum*, but the two kinds do not seem to mingle.

**Easter Bells**

**Dog-tooth Violet**

*Erythronium grandiflorum*

**Yellow**

**Spring, summer**

**Northwest and Utah**

One of the loveliest of a charming group, growing in rich northern woods. The delicately-scented flowers, from one to six on a stalk, are about two inches across, clear yellow shading to white at the base, with purplish-red anthers, turning brown. A patch of these flowers bordering the edge of a glacier, as if planted in a garden-bed, is a sight never to be forgotten. Pushing their bright leaves right through the snow they gayly swing their golden censers in the face of winter and seem the very incarnation of spring. There are several similar kinds. In the Utah canyons these flowers in early spring are a wonderful sight, covering the wooded slopes with sheets of gold, and they seem to me to be the largest and handsomest of their clan, growing at an altitude of six thousand to eleven thousand five hundred feet, and blooming from March to July according to height. Easter Bells is a Utah name.



Dogtooth Violet – Erythronium grandiflorum.



Avalanche Lily – *Erythronium montanum*.

Glacier Lily – *E. parviflorum*.



### **Desert Lily**

*Hesperocallis undulata*

**White**

**Spring**

**Cal., Ariz.**

This is the only one of its kind, a wonderfully beautiful desert plant, much like an Easter Lily. The stout, pale, bluish stem, from six inches to two feet tall, has a delicate "bloom" and springs from a graceful cluster of narrow leaves, which are a foot and a half long, spreading widely, but not lying quite flat on the ground. They are pale bluish-green, with a narrow, crinkled, white border and folded lengthwise. The buds are bluish and the lovely flowers are about three inches long and pure-white, delicately striped with pale-green and blue on the outside, with yellow anthers and a white stigma, and with a papery bract at the base of each pedicel. The flowers are slightly fragrant and become papery and curiously transparent as they wither. In dry seasons these plants do not bloom at all, but the slightest moisture will cause them to send up a stout stem and crown it with exquisite blossoms, which look extraordinarily out of place on the arid desert sand around Yuma and Ft. Mohave. The bulb is eaten by the Indians.





Desert Lily – *Hesperocallis undulata*.



Lilies, the "lords of gardens," are perhaps the most beautiful and popular flowers everywhere and there are some wonderful ones in the West. They have tall, smooth, leafy stems, springing from scaly bulbs; large showy flowers, solitary or in terminal clusters; smooth, netted-veined leaves, often in whorls, and leaflike bracts. The flower-cup is funnel-formed, or bell-shaped, and has six, equal, spreading divisions, with a honey-bearing groove at the base of each; the stamens, with long anthers, swinging from the tips of long filaments; a long pistil, with a three-lobed stigma and the capsule oblong, with two rows of flat seeds in each of its cells. There are no true Lilies in Utah.

**Small Tiger Lily**

*Lilium párvum*

**Orange-red**

**Summer**

**Cal., Oreg.**

These tall plants carry a brilliant crown of small lilies, glowing like jewels in the dark moist woods they love. The stem is from one and a half to six feet high, covered with a slight down that rubs off, and springs from a small bulb with short, thick scales. The long, pointed, rich-green leaves are in whorls of five or six below, more scattered towards the top of the stalk. The flowers are rather more than an inch long, yellow at the base of the petals, shading through orange to vermillion at the tips and dotted with crimson in the throat. Usually there are six or seven in a cluster, but they have been found with many more in favorable situations and single plants in Yosemite have been seen with as many as thirty blossoms. The capsule is roundish and less than an inch long. These little Lilies are among the most attractive of their kind and grow somewhat freely in the high Sierras to an altitude of seven thousand feet and as far north as Oregon.





Small Tiger Lily – *Lilium parvum*.



**Washington Lily**  
**Shasta Lily**  
*Lilium Washingtonianum*  
**White**  
**Summer**  
**Cal., Oreg.**

In the Sierras, at an altitude of from three to over seven thousand feet, and as far north as the Columbia River, we may be fortunate enough to find this glorious Lily, growing in the forest in moderate shade and protected by the chaparral. It is not rare but nowhere very abundant. I shall never forget finding a group of three or four, growing near a huge fallen tree, in the woods at Wawona near Yosemite, where it is very fine. Their raiment is even more "white and glistening" than the cultivated Easter Lilies. The smooth, stout, purplish stem is from two to five feet high, adorned all the way up with successive whorls of handsome dark-green leaves, three or four inches long, thin in texture, with rippling margins, and shining as if they had been varnished. There are from two to twenty blossoms of shining white, each one from three to four inches long and as much across. The petals are cleft to the base, spreading wide apart when the flower is fully open, sometimes finely dotted with purple, and becoming purplish in fading. The anthers are yellow and the pistil green, and the bulb is large, with thin scales. The scent is delicious, having a whiff of spicy carnation added to the usual lily fragrance.

This is never found in the Coast Range and is the only pure white American Lily. Shasta Lily is a variety with a small bulb. *L. Párryi*, the Lemon Lily, of southern California and Arizona, is similar in the form of its flowers, which are large and clear yellow, dotted lightly with deeper yellow. It grows in shady, moist spots in cool canyons and is very beautiful.



Washington Lily – *Lilium Washingtonianum*.

**Leopard Lily**  
*Lilium pardalinum*  
**Orange**  
**Summer**  
**Wash., Oreg., Cal.**

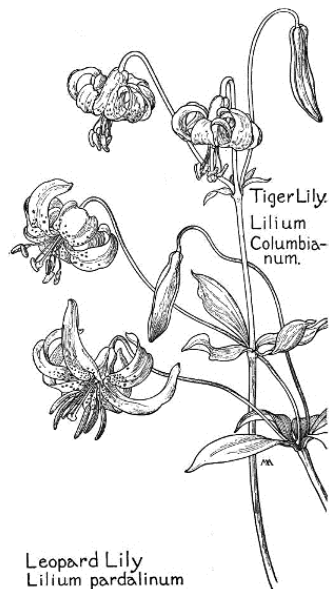
A magnificent plant, from three to six feet tall, with bright-green leaves, thin in texture, smooth but not shiny, and mostly in whorls. The stem is crowned by a splendid cluster of flowers, usually about half a dozen together, but sometimes as many as thirty on one stalk. They measure three or four inches across and are pale-orange outside and deep-orange inside, spotted with maroon, often blotched with orange-yellow in the throat and tipped with scarlet. The anthers are purplish, changing to reddish-brown, and the pistil is bright-green. These plants often grow in large companies, in moist spots in the mountains, and are unrivaled in decorative beauty and brilliancy of coloring.

**Tiger Lily**  
*Lilium Columbiànum*  
**Orange**  
**Summer**  
**Wash., Oreg.**

A good deal like the last, but not so large. The petals are more turned back and they are orange-color all over, dotted with dark-red, and the anthers are pale orange-color, ripening to golden-brown. This is common in the Hood River Valley.

**Ruby Lily**  
**Chaparral Lily**  
*Lilium rubescens*  
**White, pink**  
**Summer**  
**Cal., Oreg.**

A glorious plant, from two to five feet tall, with leaves mostly in whorls, with rippled edges. The stem bears a magnificent cluster of blossoms, most wonderful in coloring, for the buds and young flowers are white, dotted with purple inside, with yellow anthers and a pale-green pistil, but they gradually change to pink, and deepen to ruby-purple as they fade, and the anthers and pistil also darken in color. The effect of the whole cluster is therefore white at the top, shading through pink to almost crimson below. The flowers are even more deliciously fragrant than the Washington Lily, which they resemble, except that they are not quite so large as the latter and stand more erect and the petals are not so spreading. This usually grows among chaparral in the Coast Ranges.



Tiger Lily – *Lilium Columbianum*.

Leopard Lily – *Lilium pardalinum*.

There are many kinds of *Fritillaria*, natives of the north temperate zone. In the East there are only cultivated ones, such as the familiar Crown Imperial, but we have a number growing wild in the West. They have bulbs with round, thick scales, developing into bulblets and sometimes resembling grains of rice. The flowers are bell-shaped, and nodding, with separate and nearly equal divisions, each with a nectar-spot at its base. They resemble Lilies, but the style is three-cleft, the honey-gland is a shallow pit and the flowers are smaller. The capsule is roundish and six-angled, containing numerous flat seeds. It is conspicuous and perhaps suggested the Latin name, meaning "dice-box."

**Bronze Bells**  
**Brown Fritillary**  
*Fritillaria atropurpurea*  
**Brown**  
**Spring, summer**

### **West**

This plant is beautiful and decorative, and yet there is something weird about it. The flowers, an inch or more across, grow four or five in a cluster, on a smooth stalk about a foot tall, the long, narrow leaves scattered or in whorls. The bells, nodding on slender flower-stalks, are very unusual in coloring. They are greenish-yellow, streaked and spotted with maroon, and the long curling tips of the three-pronged pistil project like the forked tongue of an adder, so that somehow we feel that, in a previous existence, beautiful as it is now, it may have been a toad or some reptile. When we found this flower growing in the Grand Canyon, halfway down Bright Angel trail, it seemed entirely suitable to the mysterious spirit of the place. The general effect is bronze-color and the attractive name of Bronze Bells, or Mission Bells, is very appropriate. It has a small bulb of numerous, roundish scales. The pistils are often rudimentary.

#### **Yellow Fritillary**

*Fritillaria pùdica*

**Yellow**

**Spring**

**West, except Ariz.**

A pretty little flower, a favorite with children, growing on grassy plains, with a smooth stem about six inches tall, and smooth, somewhat thickish, alternate or whorled leaves. The nodding flowers, about an inch long, are usually single, but sometimes as many as six on a stalk, various shades of yellow and orange, tinged with crimson and fading to dull-red. The smooth bulb is pure white, and made up of a number of rounded, thickish scales not resembling grains of rice, so the name Rice Root is not appropriate and the local Utah names, Crocus, Snowdrop, and Buttercup are absurd.



Bronze Bells – *Fritillaria atropurpurea*.



**Yellow Fritillary – *Fritillaria pudica*.**

There are several kinds of *Yucca*, natives of North and Central America; large plants, with dagger-like leaves, usually with long, thread-like fibers along the margins; flowers with bracts, nodding in a terminal cluster, somewhat bell-shaped, with six, thickish, white divisions; stamens short, with thickened filaments and small anthers; ovary with three united stigmas; capsule containing many, flat, black seeds. The flowers are pollinated by a little white moth, which lays its eggs in the ovary, but previously gathers pollen from many flowers and pushes it against the stigma after the eggs have been laid.

**Our Lord's Candle**

**Spanish Bayonet**

*Yucca Whipplei*

**White**

**Spring, summer**

**Cal., Ariz.**

A noble plant, with no trunk, but sending up a magnificent shaft of flowers, from five to fifteen feet tall, springing from a huge, symmetrical bunch of dagger-like, bluish-green leaves. The cluster is composed of hundreds of waxy, cream-colored blossoms, sometimes tinged with purple, two inches across, crowded so closely together along the upper part of the stalk that the effect is a great, solid mass of bloom, three feet long. The white filaments are swollen, tipped with pale-yellow anthers; the pistil cream-color, with green stigmas. The large, white bracts are stiff and coarse, something like parchment, folded back so that the pinkish stalk is ornamented with a series of white triangles, symmetrically arranged. A hillside covered with hundreds of these magnificent spires of bloom, towering above the chaparral, is a wonderful sight. After they have blossomed, the tall, white stalks remain standing for some time, so that the hills look as if they had been planted with numbers of white wands.

The genus *Cleistoyucca* resembles *Yucca*, but the divisions of the flower are very thick and there is no style.

**Joshua Tree**

**Tree Yucca**

*Cleistoyucca arborescens* (*Yucca*)

**Greenish-white**

**Spring, summer**  
**Cal., Ariz., Utah**

A tree, grotesque and forbidding in aspect, but with a weird sort of beauty, looming black against the pale desert landscape, with a great, thick, rough trunk, fifteen to thirty feet high, and a few thick, contorted branches, stretching out like a giant's arms and pointing ominously across the sandy waste. The branches are thatched with the shaggy husks of dead leaves and from their tips they thrust out a great bunch of dagger-like leaves and a big, ponderous cluster of pallid, greenish flowers or heavy, yellowish fruits. The coarse flowers are about two inches across, with a clammy smell like toadstools, and the bracts are dead white. This grows in the Mohave Desert and is at its best around Hesperia, where one may see the most fantastic forest that it is possible to imagine. Elsewhere it is smaller and more like other Yuccas in shape. It was called Joshua Tree by the early settlers, it is said because they fancied that its branches pointed towards the Promised Land. The fruits are relished by the Indians, who utilize the fibers from the leaves for weaving baskets, ropes, hats, horse-blankets, etc., and make a pulp from the stems, used for soap.



Our Lord's Candle.  
Yucca Whipplei.  
[very small part of cluster]

Our Lord's Candle – Yucca Whipplei.  
[very small part of cluster]



There are several kinds of Trillium, of North America and Asia; with tuberous root-stocks; three, netted-veined leaves, in a whorl at the top of the stem; a single flower with three, green sepals, three petals, six, short stamens, and three styles; capsule berry-like and reddish, containing many seeds. The Latin name means "triple."

**Wake-robin**  
**Birthroot**  
*Trillium ovatum*  
**White**

**Spring, summer**  
**Northwest**

A charming plant, about a foot tall, with a single beautiful blossom, set off to perfection by its large, rich green leaves. The flower is two or three inches across, with lovely white petals, which gradually change to deep pink. It is a pleasure to find a company of these attractive plants in the heart of the forest, where their pure blossoms gleam in the cool shade along some mountain brook. They resemble the eastern Large-flowered Trillium and grow in the Coast Ranges.



Wake-  
robin

Trillium  
ovatum.

Wake-robin – Trillium ovatum.  
There are three kinds of Xerophyllum.

**Squaw-grass**  
**Bear Grass**  
*Xerophyllum tenax*  
**WhiteSummer**  
**Northwest**

This is a magnificent plant, from two to six feet high, with a very stout, leafy stem, springing from a very large tuft of wiry, grass-like leaves, which spread out gracefully like a fountain. They are from one to two and a half feet long, dark-green on the upper side and pale-gray on the under, with rough edges. The imposing flower cluster is borne at the top of the stalk and is about a foot long, broad at the base and tapering to a blunt point, and composed of hundreds of fragrant, cream-white flowers, each about half an inch across, with slender, white pedicels, and so closely crowded together that the effect is very solid, yet made feathery by the long stamens. It is a fine sight to come across a company of these noble plants in a mountain meadow, rearing their great shafts of bloom far above their neighbors. They are very handsome around Mt. Rainier. They are said to blossom only once in



five or seven years and then to die. The leaves are used by Indians in making their finest baskets. Unfortunately the size of this book does not admit of an illustration.

There are two kinds of *Maianthemum*, an eastern one and the following, which also grows in Europe and Asia.

**Wild Lily-of-the-valley**

*Maianthemum bifolium*

**White**

**Spring, summer**

**Wash., Oreg., Cal.**

This is a very attractive, woodland plant, from four to fourteen inches tall, with handsome, glossy, rich green leaves, and a rather stout stem, bearing a pretty cluster, two or three inches long, of many, small, waxy-white flowers, with four divisions. They have four stamens, with thread-like filaments and small, yellowish anthers, the stigma has two lobes and the berry is red. This grows in rich soil in the mountains and is much handsomer than its eastern relation and strongly sweet-scented. The Latin name means "blooming in May."



Wild  
Lily-of-the-valley.      *Maianthemum*  
   *bifolium*.

Wild Lily-of-the-valley – *Maianthemum bifolium*.

There are several kinds of *Streptopus*, much like *Disporum*, but the pedicels of the flowers are twisted or bent.

**White Twisted Stalk**

*Streptopus amplexifolius*

**Whitish**

**Spring, summer**

**U. S. except Southwest**

This is a fine plant, two or three feet tall, with a smooth, branching, bending stem and handsome leaves, thin in texture, with strongly marked veins and pale with whitish "bloom" on the under side. The greenish-white flowers are about half an inch long and hang on very slender, crooked pedicels, from under the leaves, and the oval berries are red and contain many seeds. This grows in moist soil, in cold mountain woods, up to an altitude of ten thousand feet and across the continent. The Greek name means "twisted stalk."

**Pink Twisted Stalk**

*Streptopus roseus*

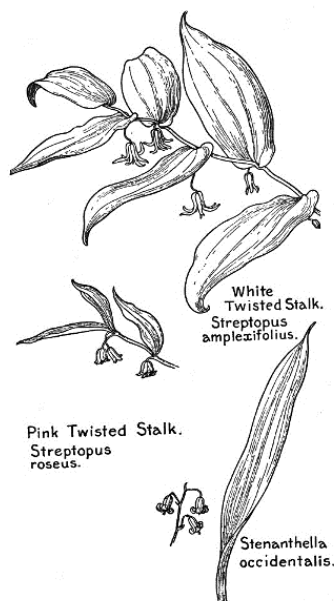
**Pink**  
**Spring, summer**  
**U. S. except Southwest**

A smaller plant, from one to two and a half feet tall, with a slightly hairy stem, ornamented with pretty leaves, green on both sides and hairy along the edges, and hung with pretty, little, dull purplish-pink flowers, more or less streaked with deeper color and less than half an inch long. This grows in the same sort of places as the last and is also found across the continent.

There are two kinds of *Stenanthella*; smooth herbs, with bulbs and small nodding flowers, in bracted clusters, the divisions of the perianth separate, without glands or distinct claws; the short stamens inserted at the base of the divisions; the styles three; the capsule with three beaks and containing oblong, winged seeds.

**Stenanthella**  
*Stenanthella occidentalis*  
**Brownish**  
**Spring, summer**  
**Northwest**

This is a graceful plant, from ten to twenty inches tall, with long, rather narrow leaves and a slender stem, terminating in a long spray of about ten, rather pretty, little brownish-green or purplish flowers, each less than half an inch long. This grows in shady places.



White Twisted Stalk – *Streptopus amplexifolius*.

Pink Twisted Stalk – *Streptopus roseus*.

*Stenanthella occidentalis*.

There are several kinds of *Camassia*, one eastern; herbs with onion-like bulbs, long, narrow leaves and thin, dry bracts. The flowers are blue of various shades, with six, separate, somewhat spreading divisions, each with a stamen on its base, the anthers swinging, the style threadlike, with a three-cleft tip; the capsule three-lobed, with several seeds in each compartment. Varieties of *Camassia* have long been cultivated in European gardens. The name is derived from *Quamash*, the Indian name for these plants.

**Camass, Quamash**  
*Camassia quámash*  
**Blue**  
**Summer**

### Northwest and Utah

Looking across the vivid green of wet meadows and marshes, the deep blue patches of this flower are often conspicuous and beautiful. They grow from one to over two feet high, taller than the grasslike leaves, forming a loose cluster, with papery bracts. The flowers are from an inch and a half to over two inches across, the six divisions spreading out into a star. The buds are tinged with turquoise-blue and striped with purple, giving a fine iridescent effect, and the flowers, which fade very quickly, are often exceedingly handsome, varying in color from dark-blue to white, but usually deep, bright purplish-blue, with a green ovary, a long purple style and yellow anthers, with purple filaments. They are larger and handsomer in northern California than in Yosemite. Grizzly bears are fond of the bulbs and the Indians of the Northwest prized them as a delicacy, indeed the Nez Percé war in Idaho was caused by encroachments on a territory where they were abundant. They were cooked elaborately in pits, care being taken to avoid the poisonous bulbs of the Death Camass, which resemble them. The Indians also boil the bulbs in water and make good molasses from them, which they use on festive occasions. This is sometimes called Wild Hyacinth, but the name is poor, as it does not resemble a hyacinth in character.



Camass – *Camassia quamash*.

There are six kinds of *Clintonia*, of North America and Asia; with creeping rootstocks and a few, broad root-leaves; flowers without bracts, their divisions separate, equal or nearly so, each with a stamen at its base; style with two or three, inconspicuous lobes; fruit a berry. These plants were named in honor of De Witt Clinton, Governor of New York, a naturalist, interested in botany, so Thoreau need not have been so annoyed at their having been given this name.

#### **Red Clintonia**

*Clintonia Andrewsiana*

**Red, pink**

**Spring, summer**

**Oreg., Cal.**

A magnificent plant, one or two feet high, with five or six, exceedingly handsome, glossy, rich green leaves, very conspicuous and sometimes a foot long, and a tall, slightly downy flower-stalk, usually with a few flowers scattered along it, and crowned with a large, roundish cluster of beautiful flowers. They are about three-quarters of an inch long, very rich in color, a deep shade of warm reddish-pink, or crimson, not common in flowers. The form of the cluster varies a good deal;

sometimes the flowers are not mostly at the top, but clustered quite thickly along all the upper part of the stalk. The large, deep-blue berries are very handsome and, altogether, this is one of our most conspicuous and attractive woodland plants, especially when growing in the deep shade of redwood forests.

**Queen-cup White Clintonia**

*Clintonia uniflora*

**White**

**Spring**

**Northwest**

In rich moist soil, in shady woods, we find this lovely flower, with a white chalice and heart of pale gold, surrounded by two or three, beautiful, large, glossy leaves, resembling those of Lily-of-the-valley, and fairly carpeting the ground in favorable situations. The slender flower-stalk is hairy, six to ten inches tall, and usually bears a single flower, an inch or more across, with pure-white petals that soon drop off. The fruit is a handsome blue berry.



*C. uniflora.*

Red Clintonia – *C. Andrewsiana*.

There are a good many kinds of *Vagnera*, natives of America and Asia, with a single stem, scaly below and leafy above; the leaves alternate, with short leaf-stalks or none; the flowers small, the divisions equal and spreading, white or greenish, in a cluster; the berry round, usually with one or two seeds.

**False Solomon's Seal.**

**Wild Spikenard**

*Vagnera amplexicaulis* (*Smilacina*)

**White**

**Spring**

**West**

It is a pity that all flowers cannot have really individual names. "False" is especially unattractive and "Solomon's Seal" is confusing, as the flowers are not alike, but this is the old name used all over the world, so it will have to stand, though unworthy of this pleasing plant. It is from one to three feet high, with large, light-green leaves, usually slightly downy on the under side. The flower-cluster is sweet-scented and composed of numerous, very small, cream-white flowers, the conspicuous parts

of which are the stamens, white and larger than the petals, giving a feathery appearance to the whole cluster. The fruit is a light-red berry, very finely sprinkled with dark-red dots. This fine tall plant is very decorative and is common in rich moist woods. The name was given in honor of Wagner.

**Star-flowered Solomon's Seal**

*Vágnera sessilifòlia*(*Smilacina*)

**White**

**Spring**

**West**

A gracefully bending plant, from one to two feet high, springing from a slender root-stock. The bright light-green leaves, without leaf-stalks and clasping at base, have a slight "bloom" like some lily leaves and are handsome and conspicuous, but not at all coarse, and are usually very smooth, but sometimes minutely downy. The small, delicate, cream-white flowers, on a very slender, angled flower-stalk, grow in a loose cluster and the berries are reddish-purple or nearly black. This charming plant sometimes forms large patches in moist, rich soil in shady places and its pretty foliage is often very noticeable beside the railroad tracks in Utah.



Star-flowered Solomon's Seal – *V. sessilifolia*.

False Solomon's Seal – *V. amplexicaulis*.



Fairy Bells are graceful plants, growing in rich, moist, mountain woods, with smoothish, or slightly hairy, branching stems, leafy above and with scaly bracts below, springing from slender root-stocks; leaves netted-veined, alternate, without leaf-stalks, smooth and thin in texture and often clasping the stem; rather small, bell-shaped flowers, hanging from under the leaves, with six stamens and a slender style, with one or three stigmas; the fruit a yellow or red berry. *Disporum* is from the Greek meaning "double-seed," as in some kinds there are two seeds in each cell of the ovary.

**Fairy Bells**

**Drops of Gold**

*Disporum trachycarpum* (*Prosartes*)

**Yellowish-white**

**Spring, summer**

**West**

A very attractive mountain plant, growing near streams. It is from nine to twenty-four inches tall, with an angled stem, pale green above and reddish below. The delicate flowers, about half an inch long, with a three-lobed green stigma and yellow anthers, grow singly or in clusters of two or three, nodding shyly under the pretty leaves, which are dull above and very shiny on the under side, with oddly crumpled edges and set obliquely on the stem. The berry when unripe is orange color and suggested the name Drops of Gold, but becomes bright red when it matures in June. *D. Hookeri* is similar, but the style is not three-lobed and the leaves are slightly rough to the touch and are not so thin or crumpled. They spread out so flat that they make a green roof over the flowers, completely screening them from the passer-by. This grows in shady woods, but not near streams.



Fairy Bells.  
*Disporum*  
*trachycarpum.*

Drops of Gold.  
*Disporum*  
*Hookeri.*

Fairy Bells – *Disporum trachycarpum*.

Drops of Gold – *Disporum Hookeri*.

Perhaps the most characteristic western flowers are the members of the genus *Calochortus*. They grow freely all through the West, as far north as British America, and down into Mexico, but they never get east of Nebraska, so these gay and graceful flowers may be considered the peculiar property of the West. *Calochortus* means "beautiful grass" and the leaves are usually grasslike, the stems slender and the flowers bright in color, decorative and interesting in form. They have three sepals, often greenish, and three large, colored petals, with a honey-gland, usually covered with hairs, at the base of each. They are allied to true Tulips, so the popular name is suitable, and they fall into three groups: Globe Tulips, with nodding, globular flowers, and nodding capsules; Star Tulips, with erect, star-like flowers and nodding capsules; and Mariposa Tulips, with large, somewhat cup-shaped flowers and erect capsules. Mariposa means "butterfly" in Spanish and is appropriate, for the brilliant hairy spots on the petals are wonderfully like the markings of a butterfly's wing and the airy blossoms seem to have but just alighted on the tips of their slender stalks. They usually grow on dry open hillsides and their leaves have often withered away before the flowers bloom. The various forms run into each other, so that it is impossible to determine all the different species. They have solid bulbs, some of which are edible, considered a delicacy by the Indians and called Noonas.

**Golden Lily Bell**

**Yellow Globe Tulip**

*Calochortus amabilis*

**Yellow**

**Spring**

**California**

A charming plant, with pale bluish-green foliage, with a beautiful "bloom," which sets off the clear-yellow blossoms to perfection. There are from two to twenty flowers on each stem and the petals are smooth, except for a neat, stiff fringe of hairs along the margins and the matted hairs on the glands, which are often reddish. These lovely flowers, common in northern California, are peculiarly fresh in color and when growing among the grass in the shade of oak trees they have the springlike charm of Daffodils in English woods.



Yellow  
Globe Tulip.

*Calochortus*  
*amabilis.*

Yellow Globe Tulip – *Calochortus amabilis*.



**Satin-bell.**

**White Globe Tulip**

*Calochortus álbus*

**White**

**Spring**

**California**

Beautiful and popular flowers, with a great deal of individuality and quite Japanese in the decorative arrangement of the graceful stems and glossy, rich green foliage. The narrow root-leaf is over a foot long and spreads on the ground and other smaller leaves are disposed along the bending stem, which is from one to two feet tall and hung with pretty light-green buds and beautiful drooping blossoms, over an inch long, pearly white, sometimes tinged with lilac, with a satiny sheen and delicate yet crisp in texture. The papery sepals are greenish-white and the petals are sometimes tinged with purple at the base and are prettily fringed with hairs along the edges and often cross their tips in a

very engaging way. They are covered inside with long, silky, white or yellow hairs and the glands are crescent-shaped, with close, short, sticky, white or yellow hairs, and form pale-green humps on the outside of the petals; the anthers are cream-color and the pistil whitish. The capsule is one or two inches long, with a short beak and brown seeds. These plants grow on shady banks in the Coast Ranges and have several pretty common names, such as Lantern of the Fairies and Alabaster Tulip, as well as the misleading name Hairbell, which causes this flower to be confused with the Harebell or Campanula.



Satin Bell – *Calochortus albus*.



**White Star Tulip**

*Calochortus nudus*

**White**

**Summer**

**California**

This is a delicate and charming little flower, growing best in meadowy places in the woods of the Sierra Nevada Mountains at moderate altitudes, sometimes to a height of over seven thousand feet. The single, ribbonlike leaf is much taller than the flower-stalk, which is only a few inches high and bears several pretty flowers, measuring over an inch across, with pale-green sepals and three pure-white or pale-lilac, fan-shaped petals, with a little notch in the edge, almost without hairs and



marked with a lilac crescent at the base; the honey-gland is divided crosswise by a toothed scale and the anthers are light blue. The nodding capsule is pointed at both ends.

**White Pussy's Ears**

*Calochortus Maweanus*

**White, gray**

**Spring**

**Cal., Oreg.**

A charming little plant, with lovely little flowers, about an inch across, with white or pale-lilac sepals and white petals, hairy all over inside, often lilac at the base, the crescent-shaped gland covered with violet hairs and the anthers and pistil lilac. Usually the general effect is of a most delicate shade of gray and the little blossoms do not droop, but look straight up at one from among the grass. This is common in northern California.

**Yellow Pussy's Ears.**

**Yellow Star Tulip.**

*Calochortus Benthani*

**Yellow**

**Spring**

**California**

Much like the last in character, from three to seven inches tall, with bluish-green, stiffish leaves and a few quaintly pretty flowers. They are about an inch across, clear light-yellow, with smooth sepals and the petals thickly covered with yellow hairs and sometimes brown at the base. This is common in the Sierra foothills.



Star Tulip – *Calochortus nudus*.

Pussy's Ears – *C. Maweanus*.

**Butterfly Tulip**

**Mariposa Tulip**

*Calochórtus luteus* var. *oculatus*

**Many colors**

**Spring, summer**

**California**

The commonest kind in northern California, found in both the Sierra Nevada and Coast Mountains, and one of the most beautiful of all the Mariposas. The broad petals, each about an inch and a half long, are usually white, lilac, or yellowish, with an "eye" like that on a peacock's feather, giving the name *oculatus*. Occasionally they are deep rose-color, as in the colored picture, though this is not typical, and have a vivid blotch of shaded maroon and crimson and an orange spot on each petal, with some maroon-colored hairs at the base. The sepals are striped with pink and maroon and twist into spirals as they fade; the pistil and the blunt anthers are mauve; the honey-gland narrowly crescent-shaped; the leaves pale-green and the delicate stem over a foot tall. This Mariposa is extremely variable and seems sometimes to merge into *C. venustus*, a similar kind, and gorgeous varieties of both may be seen along the Yosemite road on the down grade to Wawona. There are many similar Mariposas, but the casual flower-lover who finds any of these beautiful flowers will probably be satisfied to know that they are Butterfly Tulips, without going into the technical peculiarities which differentiate them.

**Yellow Mariposa Tulip**

*Calochórtus luteus* var. *citrinus*

**Yellow**

**Spring**

**California**

A fine robust plant, about a foot tall, with a stout stem, light, bright green leaves, and exceedingly handsome flowers, over two inches across. The sepals are yellowish, with a black spot and streaks of brown, and the petals are deep lemon-yellow, each with a rich maroon spot near the center and a hairy, brown, crescent-shaped gland below, often flecked with maroon at the margins and base, with cream-colored anthers and a yellowish pistil. This is very much like a Tulip in character and looks very gay and cheerful growing in green fields. The typical *C. luteus* is similar, but smaller and duller in color.



Butterfly Tulip – *Calochortus luteus*. var. *oculatus*.



Yellow Mariposa Tulip – *Calochortus luteus* var. *citrinus*.

**Orange Mariposa Tulip**

*Calochortus Kennedyi*

**Orange-red**

**SpringCal., Ariz.**

A wonderful flower, exceedingly brilliant and unusual in color, not quite like anything else in nature. The stout, firm stem is from two inches to over a foot tall and the leaves are dark-green, with a delicate bluish "bloom." The flowers are about two inches across, with pale-green sepals, bordered with pale-pink and orange inside, and beautiful petals, thick in texture and easily bruised, delicate peach-color outside and bright orange-vermilion within, each petal ornamented with a purplish gland, covered with matted hairs and crossed with a band of long vermilion hairs. When the stems are very short the flaming flowers look like Crocuses, sprouting out of the barren desert soil, but when they are tall they have the gorgeous effect of Tulips. These plants grow in the Mohave Desert, but are rather rare in California. They are very abundant in the foothills and on the mountain slopes of Arizona, giving a beautiful orange-red color to the landscape for miles in spring, there being literally thousands in a small area.

**Sego Lily**

**Mariposa Tulip**

*Calochortus Nuttallii*

**White, pale lilac**

**Early summer**

**Ariz., Cal., Utah**

These pretty flowers are about two inches across, their white petals tinged with yellowish-green or lilac, and often delicately fluted at the edges, often with hairy spots inside the petals at their base, the whole flower very variable in coloring. These Mariposas grow all through the Southwest. In the Grand Canyon they begin to come out early in May, among the dry grasses halfway down the Bright Angel trail, and are a lovely shade of clear lilac. The slender stem, about a foot tall, often bears a small bulb near the base. It is called Sego Lily (pronounced Sègo) in Utah and is the "State flower." Its bulbs formed a substantial part of the food of the early Mormon pioneers when they crossed the desert and the flower is therefore held in great esteem in Utah.



Sego Lily – *Calochortus Nuttallii*.

## IRIS FAMILY. *Iridaceae*

A large family, widely distributed and found throughout our continent. Perennial herbs, with bracts; the leaves long, narrow, toothless, and sheathing; the flowers showy, perfect and regular, twisted in the bud, not falling off in withering, of three and six parts; the three stamens on the base of the sepals, their anthers turning outward; the single style with three branches; the ovary inferior, becoming a three-celled, usually three-angled, many-seeded capsule. This family is noticeably distinguished from the Lily family by the inferior ovary, and from the Amaryllis family by the three stamens.

There are many kinds of Iris. To the casual observer the flowers appear to have nine petals of different sizes, but in reality there are three sepals, three petals, and three petal-like branches of the style. The three outer divisions, or sepals, are large and spread or turn down; the three inner divisions, or petals, are usually narrower and are erect; the style branches arch over and under each is a stamen. The sepals and petals have claws, which are united below and form a tube; the capsule is large and contains many, flat, black seeds, in one or two rows in each cell; the large rootstock is usually fleshy. Iris is from the Greek for "rainbow," in allusion to the variegated tints, and Flower-de-luce from the French "fleur-de-lis," or "lily-flower." Many odd and beautiful kinds are cultivated from the Old World. Orris-root is made from the roots of a Florentine species.

### **Western Blue Flag**

*Iris Missouriensis*

**Violet, blue**

**Spring, summer**

**West, except Wash, and Oreg.**

A very handsome and decorative plant, growing in large clumps, in damp situations, from stout, creeping rootstocks. The stiff, sword-shaped leaves, mostly shorter than the stems, are smooth and light bluish-green and the stout stems, from one to two feet high, bear usually two, pale-violet flowers, about three inches long, emerging from thin, papery bracts. The sepals are white, or pale blue, delicately veined with violet, with a yellow-veined rib down the middle, the petals are pale blue or pale violet, veined with purple, and the buds are yellowish, veined with brown. This grows in profusion in the Yosemite meadows, at the foot of El Capitan, and is delicately beautiful, but would be more effective if the coloring were a little stronger.



Western Blue Flag – *Iris Missouriensis*.

**Douglas Iris**

*Iris Douglasiæna*

**Purple, lilac, cream**

**Spring, summer**

**Cal., Oreg.**

A beautiful kind, very common in the Coast Ranges. It grows in patches, or singly, and has rather dark green leaves, longer than the flower-stalks, and lovely flowers, which vary exceedingly in color. Near the coast they are usually bluish-purple, but in mountain woods they run from violet and mauve to pink, yellow, and white. They are often striped with white and yellow, delicately veined with purple, and measure three or four inches across. In the redwood forests, in northern California, they are peculiarly large and beautiful, their delicate tints of cream and straw-color, tinged with mauve and marked with reddish-purple, and wonderfully set off by their dark forest background. This kind often blooms throughout the rainy season, but chiefly in early spring.

**Hartweg's Iris**

*Iris Hartwégi*

**Yellow and violet**

**Summer**

**California**

This odd and pretty little Iris grows in half-dry, open forests, in the Sierra Nevada Mountains. The many flower-stems, from six to twelve inches tall, are overtopped by some of the long, narrow leaves and the flowers are from one and a half to two inches long, either yellow, veined with violet, or pale-violet, veined with purple. The two color forms often grow together and attract much attention from tourists. They look very pretty, springing from a carpet of fallen pine-needles, in the forests along the Wawona road near Yosemite.

**Ground Iris**

*Iris macrosiphon*

**Blue, purple**

**Spring, winter**

**California**

A beautiful kind, forming low clumps of many, very narrow leaves, from five to twenty inches long and much taller than the flower-stalks. The handsome flowers are over three inches across, bright purplish-blue, the sepals veined with darker color and marked with a white stripe. This is common on grassy hills near the coast and farther inland becomes taller and paler in color. The flowers are slightly sweet-scented and begin to bloom in January. The Hupa Indians used the leaves for making twine and rope for their nets and snares. There are many other beautiful western Irises.



Iris Douglasiana.

There are numerous kinds of *Sisyrinchium*, attractive little plants, all American, many from South America; with fibrous roots; grasslike leaves; slender, flat stems, sometimes branching; papery and green bracts and pretty flowers, that soon wither, on very slender pedicels, the six spreading divisions all alike; the filaments of the stamens united; the style branches slender, the capsule roundish, containing round seeds.

**Blue-Eyed Grass**  
*Sisyrinchium bellum*  
**Blue**  
**Summer**  
**Cal., Oreg.**

The deep blue stars of this pretty plant are a beautiful feature of the fields near Santa Barbara, and in other parts of California, in summer; in fact they are so plentiful in some places that they are a menace to the farmers. They grow in clumps, about a foot tall, among the grass. The stems are somewhat branching, the leaves are shorter than the stem, and the bracts are about an inch long, green and sheathing. There are about seven flowers on each stem, in a loose cluster, each about an inch across and handsomer than their relations in the East. They vary in tint from bright blue to purple, with a yellow "eye," and their divisions are prettily notched at the tips, with a little prong. The anthers are arrow-shaped, the style short, with three very small stigmas, and the small, oddly-shaped, little capsule is dark-brown when ripe, and perhaps suggested one of the common names, Nigger-babies. It is called Azulea and Villela by Spanish-Californians.

**Golden-Eyed Grass**  
*Sisyrinchium Californicum*  
**Yellow**  
**Spring, summer**



**Cal., Oreg.**

This is very much like Blue-eyed Grass, but the flowers are bright yellow, the stems are about a foot tall, broadly winged and not branching, and the leaves are somewhat broader. The pretty flowers are nearly an inch across and there are from three to seven in a cluster. The filaments are united at the base only, the style is cleft to below the middle, and the small capsule is rather oblong. This grows in swampy places near the ocean. *S. Arizonicum* has yellow flowers and branching stems and grows in Arizona. *S. Élmeri* also has yellow flowers, with purple lines, and is found in wet places in the Sierras. When pressed and dried the yellow-flowered *Sisyrinchiums* stain the paper reddish-purple.



Blue-eyed Grass – *Sisyrinchium bellum*.

## ORCHID FAMILY. *Orchidaceae*

A very large family, most abundant in the tropics; curious plants, with oddly beautiful flowers. Perhaps because they are also rather rare they seem to have a peculiar fascination for the public; in fact almost any strangely-shaped flower is apt to be dubbed an orchid by the passer-by. They are perennial herbs, with various kinds of roots, some of them parasitic, usually with alternate, toothless leaves, the lower ones sheathing the stem. In some kinds the leaves have dwindled to scales. The flowers are perfect, irregular, with six divisions; the three sepals are alike and colored like petals; two of the three petals are alike, but the central one differs in size and shape and is called the lip. This is conspicuously colored, often spurred, and contains nectar for the attraction of "long-tongued" insects, on which these plants depend mostly for cross-pollination. The mechanism for this purpose is curious and interesting. The stigma is usually a broad sticky surface and its style is united with the filaments and forms, in front of the lip, a column which is usually capped by a single two-celled anther, containing two clusters of pollen, one in each cell. Each cluster consists of a few waxy grains, held together by cobweb-like threads, which run together and terminate in a sticky disk. These disks adhere to the insects, which push in to get the nectar, and are transported to the gummy stigma of another flower. The inferior ovary develops into a three-valved capsule, containing numerous minute seeds. Orchis is the ancient Greek name.

There is only one kind of *Cephalanthera* in North America; with creeping rootstocks; flowers in terminal spikes, with bracts; sepals and petals nearly equal; petals somewhat united and hooded; lip more or less pouched.

### **Phantom Orchis**

*Cephalanthera Austinae*

**White**

**Summer**

**Northwest**

In dense mountain forests these strange plants shimmer like pallid ghosts among the dark trees. They are pure translucent white throughout, stem and all, and the leaves have shrunk to white sheaths, an inch or two long. The stems are one to two feet tall and bear spikes of numerous flowers, each over half an inch long, with the lip shorter than the sepals and petals, which are alike. They are beautiful and yet not quite pleasing, for we feel instinctively that there is something unnatural about them and, indeed, the strange absence of any green coloring matter in their make-up indicates that they are incapable of making their own food from the elements and draw their nourishment from decaying vegetation, or are parasitic on other plants. They range northward from Yosemite but are nowhere very abundant. I found several growing near the trail from Little Yosemite Valley to Cloud's Rest and a good many in the woods near the foot of Mt. Shasta, where they seem to be quite common.



**Phantom Orchis – Cephalanthera Austinae.**

There are several kinds of *Serapias*, widely distributed; tall, stout herbs, with creeping rootstocks and leafy stems; the leaves plaited lengthwise and clasping at base; the flowers with leafy bracts, in terminal racemes. The flowers have no spur; the sepals and petals are separate and nearly equal; the lip broad, free, concave below, constricted near the middle.

**Stream Orchis Chatter-box**

*Serapias gigantea* (*Epipactis*)

**Reddish and greenish-yellow**

**Summer**

**West, etc.**

A handsome plant, decorative and curious in form and unusual in coloring. It is from one to four feet tall, with a stout, leafy stem bearing three to ten flowers and smoothish leaves, with prominent veins. The sepals are reddish or greenish-yellow and the petals pinkish, veined with maroon. The lip is pouched at the base, with a winged margin and a pendulous tip, which swings freely as if on a hinge, so that it quivers when the plant is shaken. Although the flowers are very handsome this curious tremulous motion, which makes them seem almost alive, gives them a quaint likeness to an old woman in a sunbonnet, with a hooked nose and chattering jaw. They have a slight scent and the plant is quite common along streams and in wet places, in the West and in Colorado and Texas. Some botanists think it is identical with a variety which grows in the Himalaya Mountains. It was named for the Egyptian deity, Serapis.



**Stream Orchid – *Serapias gigantea*.**

There are several kinds of *Corallorrhiza*, widely distributed in the north temperate zone and growing in dense woods; pinkish or straw-colored plants, more or less parasitic, with large roots resembling branches of coral; the leaves all reduced to sheathing, papery scales; the flowers in terminal racemes, without bracts, on short pedicels, which turn down in fruit, mostly with a short spur, the sepals and petals about equal, the upper ones curving in.

**Coral-root**

*Corallorrhiza multiflora*

**Reddish-yellow**

**Summer**

**Wash., Oreg., Cal., Utah**

The curious knobby rootstock, shaped like a bit of coral, gives the name to this strange and rather unwholesome looking plant. From living on decayed vegetation it has lost its green leaves, and has only a few papery sheaths in their place, and the thick, translucent stem is pale and smooth, from one to two feet tall, pink at the base, shading to golden-brown towards the top. The flowers, less than half an inch across, are usually yellow, with reddish-brown tips, and the white, three-lobed lip is spotted with purple. The buds are yellow and brown and the whole color effect is very pretty, as if the plant were trying to match the russet tints of the floor of the forest. The flowers vary from several to many and grow in a long cluster, hanging down when their seeds begin to ripen. This is widely distributed, growing also in the East, but nowhere common.

**Coral-root**

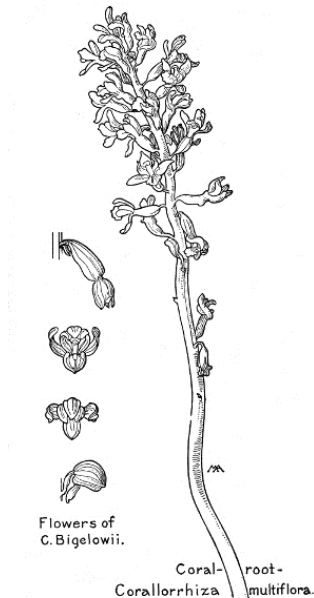
*Corallorrhiza Bigelovii*

**Reddish-yellow**

**Summer**

**Wash., Oreg., Cal., Utah**

This is a similar plant, but handsomer, with much larger flowers, duller in coloring and striped not spotted. Instead of a spur the base of the sepals is swollen over the ovary, which develops gradually into an oblong fruit to which the flower still clings, so that the older flowers, on the lower part of the stalk, give an odd effect of having long, swollen necks. The seeds are small and numerous. There are other kinds, similar in general effect.



Flowers of *C. Bigelowii*.

Coral-root – *Corallorrhiza multiflora*.

There are numerous kinds of *Limnorchis*; the lower leaves clasping or sheathing the stem; the flowers mostly in spikes or racemes; sepals nearly equal, petals mostly smaller than the sepals; lip spreading or drooping, not toothed or lobed, with a spur. The Latin name means "marsh-dweller."

**Sierra Rein Orchis**

*Limnorchis leucostachys*

(*Habenaria*)

**White**

**Summer**

**Cal., Oreg., Wash.**

Often in some favorable corner of a marsh, near the woods, we may see a dozen of these lovely plants, their robust leafy stalks sometimes as much as four feet tall, rearing their delicate spires of bloom above the lush grass. The long narrow leaves are bright-green and smooth and the numerous, small, delicate blossoms, sprinkled thickly along the stem, are pure white, each with a very long spur like a little tail, each with a green bract at the base of its little pedicel, and deliciously fragrant. There are several similar kinds, mostly with green flowers; this is the handsomest and least rare.

There are many kinds of *Cypripedium*, with large, broad leaves and one or several, large, drooping flowers, with two fertile anthers, with short filaments, one on each side of the column below the stigma, and a conspicuous, petal-like, sterile anther, arching over the stigma. They are easily known by the curious lip, which is a large inflated sac, suggesting both the common names, Lady's Slipper and Indian Moccasin, and the Greek, meaning "foot of Venus."

**Mountain Lady's Slipper**

*Cypripedium montanum*

**Brown and white**

**Summer**

**Northwest**

Beautiful and decorative, with a stout, hairy stem, one to two feet tall and a few handsome flowers, rich and harmonious though not brilliant in coloring, with a lip about an inch long, dull-white, veined with purple, and brownish or purplish sepals and petals, very long, narrow, and twisted. This grows in mountain woods and is found around Yosemite. There is a picture in Miss Parsons's

*Wild Flowers of California.* *C. Califórnicum* is similar, but with more flowers, the sepals and petals greenish-yellow, the lip pinkish. *C. parviflòrum* has a yellow lip and purplish sepals and grows in northern woods, across the continent. None of these plants is common.



Sierra Rein Orchis – *Limnorchis leucostachys*.



## **LIZARD-TAIL. *Saururaceae***

A small family; ours are perennial astringent herbs, with alternate, toothless leaves, with leaf-stalks; flowers perfect, with bracts, in a dense, terminal spike, without calyx or corolla; stamens generally three or six; ovary with one to five stigmas; fruit a capsule or berry.

There are two kinds of *Anemopsis*.

### **Yerba Mansa**

*Anemopsis Californica*

**White**

**Spring**

**Cal., Ariz.**

This plant bears several, large, cream-white flowers, which at the first glance appear to have from five to eight petals and a long, projecting knob in the center, but what appears to be a corolla is in reality an involucre, about an inch and a half across, and surrounding the base of a long, conical spike of numerous, small, greenish flowers. These are half-sunk in the fleshy substance of the spike and have no sepals or petals, but each has a small, white bract at its base, so that the spike appears to be covered with scales symmetrically arranged. The flower has from six to eight stamens on the base of the ovary and from three to four stigmas. The ovaries, which are superior, form small pods, opening at the top when ripe, so that in the end the spike is neatly pitted with holes. The rather thick, hollow, reddish stems are from six inches to two feet tall, covered with hair, and the smooth, light-green leaves, from two to ten inches long, are mostly from the root, with leaf-stalks which broaden at the base and partly sheathe the stem. The creeping rootstocks are peppery and acrid, used medicinally, and considered exceedingly valuable by Spanish-Californians. These pretty, odd-looking plants grow in alkaline or salty swamps in the south. The name is from the Greek meaning "anemone" and "appearance," but the flowers do not look very much like Anemones.





Yerba mansa.  
*Anemopsis Californica.*

Yerba mansa – *Anemopsis Californica*.





## SANDALWOOD FAMILY. *Santalaceae*

This is a very small family in this country, for they prefer the tropics, and in those regions some are trees. Ours are usually parasitic on the roots of their neighbors. They have toothless, mostly alternate leaves, mostly without leaf-stalks or stipules, and small flowers, with a four- or five-lobed calyx and no corolla. The four or five stamens are opposite the calyx lobes, at the edge of a fleshy disk, and the ovary is one-celled and inferior, with one style, developing into a one-seeded fruit.

There are four kinds of Comandra, one of them European; smooth, perennial herbs, with alternate leaves, and flowers in clusters, without bracts. The calyx is more or less bell-shaped, usually with five lobes, its tube lined with a disk, the stamens inserted at base of the lobes and the anthers attached to the lobes by tufts of hairs.

### **Pale Comandra**

*Comándra pállida*

**Flesh-color, greenish, purplish** Spring, summer

**Northwest, Nev., Utah, Ariz.**

This is a rather pretty plant, growing from a few inches to about a foot tall, branching and rather woody below, with pale-green, smooth, slightly thickish, rather stiff leaves, which are reduced to pinkish scales on the lower stem. The flowers are small, usually flesh-color, thickish in texture, with slender pedicels, and form terminal, rather flat-topped clusters. The fruit, which is about the size of a small pea, is crowned by the remains of the calyx, like a rose-hip. This is common on dry plains and hillsides and is noticeable because of its pale and somewhat peculiar coloring.



Pale Comandra- C. pallida.

Pale Comandra – *C. pallida*.



## BIRTHWORT FAMILY. *Aristolochiaceae*

A rather small family, chiefly of warm countries, but widely distributed; herbs or shrubs; the leaves alternate or from the root, with leaf-stalks, more or less heart-shaped, without stipules; the flowers perfect, mostly large, symmetrical or irregular in form, with or without a corolla; the calyx with three or six lobes, or irregular; the stamens six to many, inserted on the pistil; the ovary wholly or partly inferior; the fruit a mostly six-celled capsule, containing many seeds.

There are several kinds of Asarum.

### **Wild Ginger**

*Asarum Hartwegi*

**Brown**

**Spring**

**Cal., Oreg.**

The handsome leaves of this perennial are its conspicuous feature. They have long, hairy leaf-stalks and are heart-shaped and toothless, from three to five inches broad, dark rich green, prettily veined and often also beautifully mottled with white, smooth on the upper surface and hairy on the under. We notice them immediately in the damp, dark woods they live in, but unless we look carefully we miss the single, large, strange, purplish-brown flower, the color of dead leaves, which nestles close to the ground as if trying to hide itself. This has twelve stamens, with stout filaments, and six styles, united at the base. There are no petals, but the hairy calyx has three lobes, which are sometimes an inch and a half long, and have long points like tails. The seed-vessel is roundish, crowned by the withered calyx and stamens. The rootstock cannot be used as a substitute for ginger, but smells and tastes very aromatic and pungent. This resembles the Wild Ginger of the East, but is handsomer.



Wild Ginger- *Asarum Hartwegi*.

**Wild Ginger – Asarum Hartwegi.**

## BUCKWHEAT FAMILY. *Polygonaceae*

A large family, widely distributed, mostly herbs or low shrubs, with toothless leaves, often with stipules sheathing the swollen joints of the stem. The small flowers have no petals, the calyx usually resembles a corolla and has from three to six divisions. There are from four to nine stamens and a superior, mostly triangular, ovary, with two or three styles or stigmas, becoming a dry, one-seeded fruit, generally brown or black. The kind from which flour is made is cultivated from northern Asia, and the name Buckwheat, from the German, means "beech-wheat," because the grain resembles minute beech-nuts. There are several common "weeds" belonging to this family, such as Dock, Sorrel, and Smartweed.

Chorizanthes are low herbs, with branching stems, without stipules, the leaves forming a rosette at the base and withering early. The small flowers have six sepals and are clustered in small heads, usually one flower in each papery involucre, which has from two to six teeth, with bristles at the tips; stamens usually nine, on the base of the perianth; styles three, with round-top stigmas.

### **Turkish Rugging**

*Chorizánthe fimbriàta*

**Pink**

**Spring**

**California**

An odd, dry-looking plant, making pretty patches of purplish color on dry mesas. The stiff, roughish, purplish stem is a few inches tall, springing from a few dull-green or reddish root-leaves, branching abruptly and widely towards the top and bearing many small flowers. The involucre are deep-red or purple, with very prickly teeth, the sepals bright-pink, prettily fringed with white and striped with deeper color, and the filaments are long and threadlike, with purple anthers. The flowers are exceedingly pretty when closely examined, though too small to be very effective, but the plant as a whole is conspicuous both in color and form. *C. staticoides* is similar, but the sepals are not fringed.



Turkish  
Rugging -

Chorizante  
fimbriata

Turkish Rugging – *Chorizante fimbriata*.



There are many kinds of Rumex, or Dock, coarse herbs, with leafy, branching, grooved stems, sheathed with conspicuous, papery stipules, strong tap-roots and acid or bitter juice. The large leaves are alternate, with smooth or wavy edges; the flowers small, greenish or reddish, on jointed pedicels, in branching clusters; the stamens six; the styles three, the stigmas shield-shaped, with a tuft of hairs at the tip. The six divisions of the flower are in two sets, the three outer small and green, the inner ones larger, colored and becoming veiny and larger in fruit, forming valves or wings, (often with a grain on the back of one or all of them,) which closely cover the three-sided fruit. These wings make the fruits of Docks more conspicuous than the flower. The Latin name comes from a word meaning "to suck," because the Romans sucked the leaves to allay thirst.

**Sand Dock**

*Rumex venosus*

**Greenish**

**Spring, summer**

**West**

In favorable situations this is a very handsome member of a rather plain genus, about a foot tall, with a smooth, stout reddish stem and smooth, pale, blue-green leaves, that feel like thin rubber, with a prominent mid-vein front and back. The small inconspicuous flowers develop into clusters of showy valves or wings, wonderfully odd and beautiful in coloring, resembling Begonia flowers. At first these wings are pale green, but they gradually brighten until they are all shades of salmon, rose-color, and red, fading to brown, and forming lovely combinations of vivid color, particularly against the arid background of the sand hills they frequent, and they last a long time in water and are exceedingly decorative. If these wings, which are nearly an inch across, are pulled apart, a three-sided akene, like a little nut, will be found inside them.





Sand Dock – *Rumex venosus*.



There are many kinds of *Eriogonum*, herbs or shrubs, natives of America, mostly western, growing in dry places, very numerous and difficult to distinguish. The leaves, without sheaths or stipules, are often covered with white down and usually grow in a spreading cluster at the base of the stem. The numerous small flowers, on very slender little pedicels, have six sepals, thin in texture and usually colored, and form clusters of various shapes, which emerge from more or less bell-shaped or top-shaped involucre, with six teeth. There are nine stamens, with threadlike filaments, often hairy, and a three-parted style with round-top stigmas. The name is from the Greek meaning "wooly knees," in allusion to the wooly joints of the stem.

**Bottle-plant**

*Eriogonum inflatum*

**Yellow**

**Spring**

**Southwest**

This is a most extraordinary looking plant, with queer inflated, hollow stalks, about two feet high, swelling larger towards the top, and the branches, which are also swollen, sticking out awkwardly in all directions and bearing a few minute, yellow flowers. The stalks, which are pale bluish-green, suggest some strange sort of reed, but the dark-green leaves, growing in a rosette at the base, are something like the leaves of cultivated violets and seem entirely out of keeping with the rest of the plant. This grows on the plateau in the Grand Canyon and in similar places.

**Swollen-stalk**

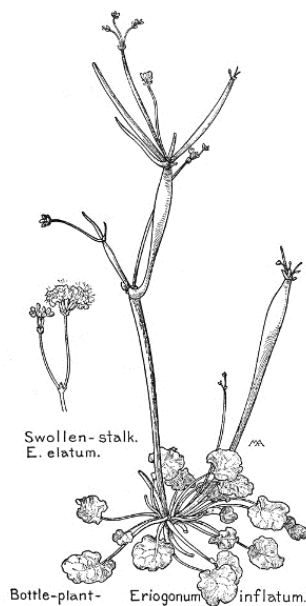
*Eriogonum elatum*

**White, pink**

**Summer**

### Northwest

This is about a foot and a half tall and the stem is swollen, but not so much so as the last, and the flowers are more conspicuous, forming rather flat-topped clusters, about three-quarters of an inch across. The tiny flowers are cream-white or pinkish, the buds are deep-pink, and the stamens are long, with tiny, pinkish anthers. The leaves are dull-green on the upper side and pale with close down on the under and grow in a cluster at the base.



Swollen-stalk – *E. elatum*.

Bottle-plant – *Eriogonum inflatum*.



### Butter Balls, Snow Balls

*Eriogonum orthocaulon*

Yellow, white

Spring, summer

Northwest

These are attractive plants, with pretty odd little balls of flowers, and are very conspicuous on dry, rocky mesas. They have a number of slender, pale, downy stems, about ten inches tall, springing from a close clump of small, dull-green leaves, pale with down on both sides and the smaller ones almost white, and bearing at the tip a dense flower-cluster, about an inch and a half across, which



is very fuzzy and pretty. The little flowers have cream-color, downy involucres, the outer sepals are broader than the inner, and the pedicels, stamens, and pistil are all the same color as the sepals, either very bright sulphur-yellow or cream-white, but not mixed on the same plant, and sometimes tinged with red. These flowers are very popular with children in Idaho and they make necklaces of the fuzzy balls, something like "daisy chains."

*Eriogonum compósitum*

**White, yellow**

**Summer**

**Northwest**

This is a big handsome plant, with a thick, smooth stem, one or two feet tall and woody at base, and with thickish leaves, slightly downy, dark green in color on the upper side and white with close down on the under. The flowers form feathery, cream-white or yellow clusters, often more than six inches across, with red buds, and are beautiful and conspicuous on bare mountainsides, smelling of honey.





Butter Balls – Eriogonum orthocaulon.



*Eriogonum compositum.*



**Buckwheat Bush, Flat-top**

*Eriogonum fasciculatum*

**White**

**Spring, summer**

**Southwest**

In favorable situations this is an attractive shrub, from two to four feet high, with shreddy, reddish bark and long, straight branches, standing stiffly up and crowded with small, thickish, stiffish leaves, dark olive-green on the upper side and pale with down on the under, with rolled-back margins. The flowers are about three-eighths of an inch across, dull-white or pinkish, with pink buds, forming large, feathery, flat-topped clusters, on long, stiff, bare, reddish flower-stalks, standing up stiffly all over the bush. This is a very valuable bee-plant and grows on mesas and mountain slopes.

**Sulphur Flower**

*Eriogonum Bakeri*

**Yellow**

**Summer**

**Ariz., Utah, New Mex., Col., Wyo.**

This plant is quite pretty and conspicuous, as the flowers are bright in color and a peculiar shade of sulphur yellow. The stem is downy and often reddish, about a foot tall, with two or three branches at the top, each bearing a cluster of numerous small sweet-scented flowers with pretty stamens. The gray-green leaves grow mostly in a rosette on the ground and are covered with close white down on the under side. Their soft tints tone in well with the bright color of the flowers and the pale sandy soil in which they grow. *E. flavum* is similar and widely distributed. *E. incanum* is the same color but much smaller, often tinged with red, the gray leaves forming a dense velvety mat, and it grows at

high altitudes, in sandy spots on rocks, and is found around the Yosemite Valley. The alpine form is very small. There are several other kinds of Sulphur Flower.



Sulphur Flower – E. Bakeri.

Buckwheat Bush – Eriogonum fasciculatum.

**Wild Buckwheat**

*Eriogonum racemòsum*

**Pink, white**

**Summer**

**Ariz., Utah**

A pretty desert variety of Wild Buckwheat. The pale downy stem is from one to two feet tall, rather stout, with two or three erect branches at the top, and the leaves are all from the base, gray-green in color and covered with close white down on the under side. The small white and pink flowers are clustered along the branches in small heads, with reddish involucre, forming a spike about three inches long. The whole effect of the plant is curiously pale, but quite pretty. It grows plentifully on the rim of the Grand Canyon.

There are many kinds of Polygonum, East and West, many of them insignificant, some aquatic, some woody at base, with alternate leaves, and sheathing stipules; the sepals four or five; the stamens five to nine; the style with two or three branches and round-top stigmas. The name is from the Greek, meaning "many knees," in allusion to the swollen joints of some kinds.

**Knot-weed**

**Alpine Smartweed**

*Polygonum bistortoides*

**White**

**Summer**

### **West**

This is about two feet tall, very pretty and rather conspicuous, and the general effect of the smooth stem and sheathing, green leaves is somewhat grasslike. The flowers, which are small and cream-white, with pretty stamens and pinkish bracts, grow in close, roundish, pointed heads, an inch or two long, at the tips of the stalks. The buds are pink and the heads in which the flowers have not yet come out look as if they were made of pink beads. This is an attractive plant, growing among the tall grasses in mountain meadows, and smells deliciously of honey.

## PIGWEEED FAMILY. *Chenopodiaceae*

A large family, widely distributed, growing usually in salty or alkaline soil; herbs or shrubs, generally succulent and salty or bitter, often covered with white scurf or meal, without stipules; leaves thick, usually alternate, sometimes none; flowers perfect or imperfect, small, greenish, without petals; calyx with two to five sepals, rarely with only one, pistillate flowers sometimes with no calyx; stamens as many as the sepals, or fewer, and opposite them; ovary mostly superior with one to three styles or stigmas; fruit small, dry, with one seed, sometimes with a bladder-like covering. Spinach and Beets belong to this family; many are "weeds," such as Lamb's Quarters.



Wild Buckwheat – *Eriogonum racemosum*.

Alpine Smartweed – *Polygonum bistortoides*.

There are two kinds of *Grayia*, named after Asa Gray; low shrubs; the stamens and pistils in separate flowers, on the same or on different plants.

### **Hop Sage**

*Grayia spinosa*

(*G. polygaloides*)

**Greenish, with red bracts**

**Spring**

**Calif., Nev., Utah, Ariz.**

An odd and beautiful desert shrub, about three feet high, very dense in form, with interlacing, angular, gray branches, spiny and crowded with small, alternate, toothless leaves, pale-green and thickish, but not stiff. The flowers are small and inconspicuous, but the pistillate ones are enveloped in conspicuous bracts, which enlarge and become papery in fruit, something like those of Docks, and often change from yellowish-green to all sorts of beautiful, bright, warm tints of pink, or to magenta, and the branches become loaded with beautifully shaded bunches of these curious seed-vessels, giving a strange, crowded look to the shrub, which in favorable situations, such as the Mohave Desert, makes splendid masses of color, especially when contrasted with the pale gray of Sage-brush.

There is only one kind of *Cycloloma*; leaves alternate, smooth or downy, irregularly toothed; flowers perfect or pistillate, with five sepals, five stamens, and two or three styles; fruit winged horizontally.

**Tumbleweed**

*Cycloloma atriplicifolium*

**Purple or green**

**Summer**

**West of Mississippi River**

Very curious round plants, six to twenty inches high, usually purple all over, sometimes green and rarely white, giving a brilliant effect in the fall to the sandy wastes they inhabit. They are a mass of interlacing branches, with hardly any leaves, except at the base, and very small flowers. When their seeds are ripe, and they are dry and brittle, the wind easily uproots them and starts them careening across the plain, their seeds flying out by the way. They turn over and over and leap along, as if they were alive, bringing up at last against a wire fence, or some such obstacle, where perhaps a traveler sees them from the train and wonders at the extraordinary-looking, dry, round bunches. There are other Tumble-weeds, such as Tumbling Mustard, *Sisymbrium allissimum*, and *Amaranthus albus*, not of this family.



Hop  
Sage-

Grayia  
polygaloides.

Hop Sage – *Grayia polygaloides*.

## FOUR-O'CLOCK FAMILY. *Nyctaginaceae*

A rather large family, widely distributed, most abundant in America. Ours are herbs, often succulent, with no stipules; stems often fragile, swollen at the joints; leaves opposite, usually toothless, often unequal; flowers perfect, with no petals, but the calyx colored like a corolla, with four or five lobes or teeth, and more or less funnel-shaped; one or several flowers in a cluster with an involucre; stamens three to five, with slender filaments; style one, with a round-top stigma; the green base of the calyx drawn down around the ovary, making it appear inferior, and hardening into a nutlike fruit; seeds sometimes winged.

Quamoclidions have the odd habit of opening in the afternoon, hence the common name, Four-o'clock. The flowers usually have five stamens, and are grouped several together in a cluster, which emerges from an involucre so much resembling a calyx that it is often mistaken for one. The effect is of the flowers having clubbed together and made one calyx do for the lot. The fruit is hard, smooth, and roundish.

### **Four-o'clock**

*Quamoclidion multiflorum*.

(*Mirabilis*)

**Pink, purple**

**Spring**

**Southwest and Col.**

The leaves of this low, stout, and spreading perennial are an inch or two long, light bluish-green, somewhat heart-shaped, rather rough and coarse, and the stems are often hairy and sticky. The foliage contrasts strikingly in color with the gaudy pink or magenta flowers, an inch across and slightly sweet-scented, the shape of Morning-glories and resembling them, as they have the same stripes of deeper color. The long stamens droop to one side, the pistil is long and purple and the bell-shaped involucre contains about six flowers. These plants are conspicuous and quite handsome. They grow on the plateau in the Grand Canyon.

There are several kinds of *Hesperonia*, much like *Quamoclidion*, but the bell-shaped involucre contains only one flower, which is also bell-shaped, usually with five separate stamens. The fruit is roundish, not angled or ribbed, usually smooth.



Four o'clock- *Quamoclidion multiflorum*.



Four o'clock – *Quamoclidion multiflorum*.

**California Four-o'clock**

*Hesperonia Californica*

(*Mirabilis*)

**Magenta, pink**

**Spring, summer**

**California**

This is very common in southern California and forms quite large, low clumps of rather yellowish green, sticky and hairy foliage, sprinkled with numbers of bright little flowers, opening in the afternoon. The base is woody and the weak, hairy stems are supported on bushes, as if climbing over them. The leaves are rather thick, about an inch long, and the flowers are open bell-shaped, about three-quarters of an inch across, usually magenta, but often pink of various shades, sometimes quite pale in tint with long stamens drooping to one side, and the involucre is often purplish and very hairy and sticky. The effect at a distance is gay and attractive, though the plant is not quite so pretty close by.

*Hesperonia glutinosa* var. *gracilis*

**White, pinkish**

**Spring**

**Arizona**

This has a straggling, hairy, sticky stem, over a foot long, and thickish, dull-green leaves, hairy and sticky. The flowers are about half an inch long, white or tinged with pink, and are rather delicate and pretty, though the plant is not especially attractive. It blooms at night, the flowers gradually closing with the morning sun. This variety is common in the southern part of the state, in mountain canyons, and *Hesperonia glutinosa* is common in the north.

There are several kinds of *Abronia*, all American, with branching, usually sticky-hairy stems, thick, toothless leaves, with leaf-stalks, in pairs and one of each pair somewhat larger than the other. The flowers are more or less salver-form, with five lobes, a threadlike style, and from three to five, unequal stamens, on the tube of the perianth and not protruding from it. They are numerous and in clusters, with involucre, on long flower-stalks, from the angles of the leaves. The fruit is winged. The name is from the Greek meaning graceful, but most of these plants are rather awkward in their manner of growth.



*Hesperonia glutinosa* var. *gracilis*.

California Four o'clock – *H. Californica*.

**Sand Puffs**

*Abrònia sálssa*

**White**

**Spring, summer, Autumn**

**Utah**

This plant is, as a whole, so delicately tinted and so decorative in form, that it is most attractive, particularly against the sandy soil where it grows, deserving the Greek name more than some of its slightly awkward sisters. It is about fourteen inches tall, with a stoutish, rather straggling, prostrate stem, which is pale, pinkish, sticky and fuzzy. The leaves have long leaf-stalks and are pale bluish-green, leathery and smooth, but fuzzy on the mid-vein of the under side, and the flowers are numerous, rather small, in handsome roundish clusters, which are about two inches across, with a papery, pinkish or yellowish involucre, of about five, separate, rounded bracts. The calyx is corolla-like and salverform, with a long, yellowish or greenish tube and five lobes, prettily crinkled at the edges. The seed-vessel is very curious, resembling a round, yellowish sponge, with hooks sticking out of it, and the flowers are deliciously sweet-scented. This is sometimes called Snowball.

**Pink Sand-Verbena**

*Abrònia villòsa*

**Pinkish-lilac**

**Summer**

**Ariz., Cal., Utah**

The coloring of this plant, one of the prettiest of its kind, is striking and unusual, and makes it very conspicuous, growing in the sand near the sea or in the desert. The thickish leaves are light bluish-green and the thick stem, which straggles rather awkwardly over the ground, is a peculiar shade of pink and sticky and hairy, as are also the involucre. The small delicate flowers are an odd tint of pinkish-lilac, light but vivid, in striking contrast to the coloring of stems and foliage, and form very pretty clusters, with an involucre of five to fifteen papery bracts. They are very fragrant and look much like garden Verbenas, so the name is not so unhappy as some. *A. umbellàta* has slender stems and almost smooth leaves, sometimes with wavy margins, about an inch long, narrowed at base to a slender leaf-stalk, and deep-pink flowers. It is common all along the California coast and blooms in the summer and autumn. *A. marítima* is found from Santa Barbara to San Diego and is a very stout, coarse, sticky plant, with small, deep-magenta flowers.



Sand  
Verbena

Abronia  
villosa

Sand Verbena – *Abronia villosa*.



Sand Puffs – *Abronia salsa*.

**Yellow Sand-Verbena**

*Abronia latifolia*

**Yellow**

**Spring, summer, autumn**

**Wash., Oreg., Cal.**

Pretty at a distance, but rather coarse close by, a straggling plant, with long, thick, rubbery stems, lying on the ground, thickish leaves, and small yellow flowers, slightly fragrant and forming pretty clusters about an inch and a half across, with five bracts. This is common along the seashore, blooming more or less all through the year. It has a long, thick root, which is eaten by the Indians.

There are a good many kinds of *Allionia*, one Asiatic, the rest American. The bell-shaped flowers have unequal stamens, usually three, on the receptacle. The peculiar, five-lobed involucre, which becomes large and papery after flowering, contains from three to five flowers. The fruit is ribbed and often hairy. The shape of the involucre probably suggested the common name Umbrella-wort.

**Narrow-leaved Umbrella-wort**

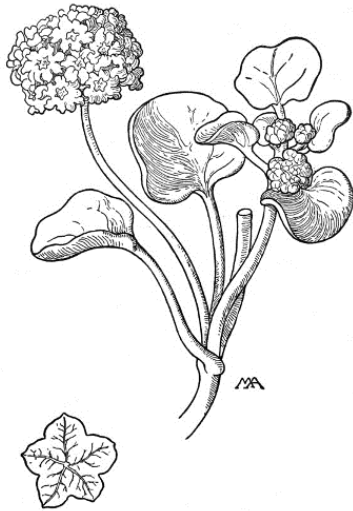
*Allionia linearis*

**Purple, pink, white**

**Summer**

**Utah, Ariz., etc.**

A pretty plant, one to four feet tall, with a slender stem and long, narrow, bluish-green leaves, with somewhat wavy margins, and almost no leaf-stalks. The flowers are fragile and pretty, of various shades of pink, the shape of small Morning-glories, half an inch across, the stamens and style protruding. There are from three to five in a cluster, in a purple and green involucre. This involucre is curious, for before the flowers come out it is closed around a bunch of buds, looking as if it were itself a pretty five-angled bud, and one would not suspect that there were other little buds inside it. When the flowers bloom and drop, which they do very soon, this involucre unfolds and expands until it becomes an exceedingly thin, papery, five-lobed disk, three-quarters of an inch across, veined with purple, very pretty and delicate, looking like an odd little flower without a heart. The smooth stem forks towards the top and the branches, which are slightly hairy, bear numerous clusters of involucres with flowers inside them. This grows in dry soil, is widely distributed and found as far east as Illinois.



Involucre of  
*Allionia linearis*.

Yellow Sand Verbena  
*Abronia latifolia*.

Involucre of *Allionia linearis*.  
Yellow Sand Verbena – *Abronia latifolia*.



## CARPET-WEED FAMILY. *Aizoaceae*

Not a very large family, mostly natives of warm regions. Ours are branching herbs, lying mostly on the ground; leaves mostly opposite or in whorls; flowers perfect; sepals four or five; petals numerous, small or none; stamens few or many, usually on the calyx; ovary sometimes superior; fruit a capsule. In this country most of this family are dull little plants, with inconspicuous flowers.

There are many kinds of *Mesembryanthemum*, mostly African; ours are smooth, very succulent perennials; without stipules; leaves opposite; calyx-lobes unequal and leaf-like; petals long, narrow and very numerous, inserted with the innumerable stamens on the calyx-tube; ovary with ten or twelve styles, becoming a sort of berry, containing many minute seeds, and opening at the top in rainy weather. The terribly long name is from the Greek, meaning "noonday flower."

### **Ice-plant**

*Mesembryanthemum cristállum*

**White, pinkish**

**Spring**

**California**

One of the queerest looking plants that it is possible to imagine, the stout stems and large flat leaves thickly encrusted with millions of small translucent beads, resembling glass or ice and giving a glistening effect to the whole plant. They cluster especially thickly along the wavy margins and under sides of the leaves, and on the calyxes, and feel quite hard to the touch, but when they are crushed underfoot they exude a watery juice, which is said to be alkaline and injurious to shoe-leather. The stems and leaves are light bright-green, the tips and margins tinged with bright pinkish-red, especially on dry mesas, where this plant sometimes covers the ground for long distances with flat rosettes, forming a thick, red carpet, beautiful in color. In shadier, damper places, such as the crevices in the sea-cliffs at La Jolla, it becomes quite a large, tall plant, scarcely tinged with red and very glistening. The flowers are about an inch across, with a greenish center, surrounded by numerous, small, yellowish anthers and a single row of many, white or flesh-colored petals, suggesting the tentacles of a sea-anemone. In fact the whole plant is curiously suggestive of some low form of animal life. It is very troublesome to farmers in the south near the sea, and also flourishes in the Mohave Desert, in France and the Canary Islands.





Ice-plant

*Mesembryanthemum crystallinum.*

Ice-plant – *Mesembryanthemum crystallinum.*

**Sea Fig, Fig-marigold**

*Mesembryanthemum aequilaterale*

**Pink**

**Spring**

**California**

A very strange and conspicuous plant, often clothing sandy slopes with a curious mantle of trailing, fleshy stems and foliage thickly sprinkled with thousands of gaudy flowers. The stems are stout and flattish, several feet long; the leaves three-sided, with flat faces, tipped with a small reddish point; the calyx-lobes three-sided like the leaves. The stems, leaves, and the calyx-lobes are all pale bluish-green with a "bloom" and exceedingly succulent, the watery juice running out in large drops when the plant is broken. The twigs seem to be fitted into a sort of socket, from which they come out very easily, so that the plant comes apart almost at a touch. The fragrant flowers are two or three inches across, bright but crude in color, the numerous, purplish-pink petals resembling the rays of a composite and encircling a fuzzy ring of innumerable stamens, with white, threadlike filaments and small, straw-colored anthers, around a dark-green center, composed of the top of the calyx and the six to ten styles of the ovary. This accommodating plant is very useful and ornamental in hot, sandy places, where not much else will grow, and may be seen hanging its long stems over the sea-cliffs all along the coast, from Patagonia to Marin County in California. It also grows in Africa and is extensively cultivated. The fruit is edible, with pulp and tiny seeds something like a fig.



Sea Fig-  
*Mesembryanthemum aequilaterale*.

Sea Fig – *Mesembryanthemum aequilaterale*.



## PINK FAMILY. *Caryophyllaceae*

A large family, widely distributed, most abundant in the northern hemisphere, including both the handsome Pinks and the insignificant Chickweeds. They are herbs, with regular, mostly perfect flowers, with four or five sepals; usually with four or five petals, sometimes with none; stamens as many, or twice as many, as the petals; ovary superior, one-celled; styles two to five in number; fruit a capsule, containing several or many, kidney-shaped seeds, opening by valves, or by teeth, at the top; leaves opposite, toothless; stems usually swollen at the joints. The name Pink comes from the petals of some kinds being cut into points, or "pinked."

There are numerous kinds of *Arenaria*, widely distributed, difficult to distinguish, with small, white flowers with five petals, usually not notched, ten stamens and usually three styles; leaves usually long and narrow, often stiff and growing in tufts; capsule roundish, splitting into usually three valves, each with two parts. These plants often grow in dry, sandy places, some at very high altitudes, some by the sea, hence the Latin name meaning "sandy," and the common one, Sandwort.

### **Fendler's Sandwort**

*Arenaria Fendleri*

**White**

**Summer**

**Utah, Ariz., etc.**

This has pretty little white flowers, about half an inch across, and is variable. Sometimes the stem is roughish, only three or four inches tall, springing from a tuft of small leaves, stiff and almost prickly. Sometimes the stem is smooth, six or eight inches tall, and the leaves resemble rather fine, stiff grass. This grows on dry hills and mountains, up to thirteen thousand feet, from Nebraska and Wyoming to Utah, Arizona, and New Mexico.

There are many kinds of *Silene*, widely distributed, more or less sticky plants, hence the common name, Catchfly; flowers mostly rather large; calyx inflated or tubular, with five teeth; petals five, with long claws, which often have scales at the top, forming a "crown"; stamens ten; styles usually three; capsule opening by three or six teeth at the tip; seeds numerous.



Sandwort- *Arenaria Fendleri*.

Sandwort – *Arenaria Fendleri*.

**Moss Champion.**

**Cushion Pink**

*Silène acaulis*

**Purple**

**Summer**

**Alpine regions**

An attractive little dwarf, living only in the high mountains. It has a long tap-root and many spreading stems, crowded with tiny, stiff, pointed, dark-green leaves, forming close tufts, from six to twenty inches across, resembling cushions of harsh moss and spangled all over with pretty little flowers. They are less than half an inch across with a bell-shaped calyx and five bright pinkish-purple petals, occasionally white, with a "crown" of small scales. We find this brave little plant crouching on bleak mountain tops, blossoming gayly at the edge of the snows that never melt, in arctic alpine regions across the world, up to a height of thirteen thousand feet. It is variable. There is a picture in Mrs. Henshaw's *Mountain Wild Flowers of Canada*.

**Windmill Pink**

*Silène Ánglica*

(*S. Gallica*)

**White**

**Spring**

**Northwest, etc.**

A rather inconspicuous "weed" from Europe, common in fields and along roadsides, with a slender, hairy stem, about a foot tall, and hairy leaves. The small flowers grow in a one-sided cluster and have a purplish calyx, sticky and hairy, and white or pinkish petals, with a small "crown," each petal twisted to one side like the sails of a windmill. This is widely distributed in nearly all warm temperate regions.

**Indian Pink**

*Silène Califórnicá*

**Red**

**Summer**

**Northwest**

From six inches to over a foot tall, with a thick, perennial tap-root, one to two feet long, and branching, half-erect stems, both leaves and stems covered with fine down, the dull-green foliage contrasting well in color with the vivid vermilion of the gorgeous flowers. They are more than an inch across, the petals usually slashed into two broad lobes, flanked by two narrower, shorter points at the sides, the "crown" conspicuous. The flowers are even more brilliant in color than *S. laciniata* and are startlingly beautiful, glowing like coals of fire on the brown forest floor, in the open mountain woods they usually frequent. It is widely distributed in the Coast Ranges and Sierra Nevada Mountains, but nowhere very common. *S. Hookeri* has beautiful large pink flowers, often more than two inches across, sometimes white, and grows on shady hillsides in the Northwest, except in Idaho.



Windmill Pink-  
Silene Anglica

Indian Pink-  
Silene Californica.

Windmill Pink – Silene Anglica.

Indian Pink – Silene Californica.

**Indian Pink**

*Silene laciniata*

**Red**

**Summer**

**California**

This has handsome conspicuous flowers, clear vermilion or pinkish-scarlet in color, about an inch and a half across, with the five petals prettily slashed at the ends into four long divisions. Each petal has two little crests, which form a pretty "crown" in the throat of the corolla. The roughish, slender stems, from one to over two feet high, have several branches, the flowers growing two or three at the ends. The leaves are long, narrow, and rather rough and the whole plant is hairy and sticky. This is common around Pasadena and other places in southern California and is beautiful on Point Loma, where the brilliant flowers gleam among the underbrush like bits of flame. *S. laciniata* var. *Gréggii* is common in Arizona and New Mexico.

*Silene Lyalli*

**White**

**Summer**

**Northwest**

Rather pretty, with a slender stem about a foot tall, smooth, bluish-green leaves, and flowers about three-quarters of an inch across; the calyx much inflated, yellowish-white and papery, with brownish veins, and the petals cream-color, with two lobes and a "crown."

There are a few kinds of Vaccaria, of Europe and Asia, smooth annuals, with clasping leaves and red or pink flowers in terminal clusters; calyx five-angled and inflated in fruit, five-toothed, without bracts; petals longer than the calyx, without appendages; stamens ten; styles two. Both the Latin and common names allude to the value of some kinds for fodder.

**Cow-herb**

*Vaccaria vaccaria*

(*Saponaria*)

**Pink**

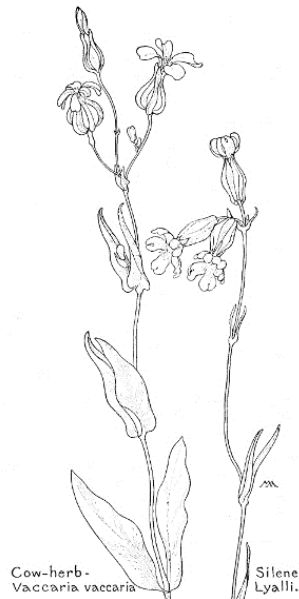
**Summer**

### Across the continent

Quite pretty, with a leafy, branching stem, from one to three feet tall, bluish-green leaves, and flowers less than an inch long, with a ribbed, yellowish-green calyx, with reddish teeth, and the petals a very pretty and unusual shade of deep, warm reddish-pink, veined with deeper color. This is a European "weed," common in waste places and cultivated fields.



Indian Pink – *Silene laciniata*.



Cow-herb – *Vaccaria vaccaria*.

*Silene Lyalli*.

There are many kinds of Alsine, widely distributed, low herbs, liking moist ground and shady places, with small, starry white flowers; with four or five sepals; four or five petals, deeply two-lobed or none; three to ten stamens and three to five styles; capsule roundish or oblong, rather shorter than that of *Cerastium*, splitting to below the middle, with twice as many valves as there are styles and many seeds. Many of these plants are weeds. They are often called Stitchwort. The Greek name means "grove," the home of some kinds.

**Tall Chickweed**

*Alsine longipes*.

(*Stellaria*)

**White**

**Summer**

**Northwest, Nev., Utah, etc.**

An attractive little plant, with smooth stems, from six to fifteen inches tall, and pretty little flowers, less than half an inch across, growing singly, or in loose clusters, with white petals which are deeply two-lobed, so that they appear to be ten. The capsule is almost black when ripe. This is common in moist and grassy places in Yosemite and when growing in the shade is taller and more slender than in the open. It reaches an altitude of ten thousand feet and is found in the East and in Asia.

There are many kinds of *Cerastium*, abundant in the temperate zone, resembling *Alsine*, but usually downy and therefore called Mouse-ear Chickweeds. The flowers are white, usually with five sepals, five petals notched at the tips or with two lobes, ten or five stamens and five stigmas. The cylindrical capsule, often curved, splits at the top into ten teeth.

**Field Chickweed**

*Cerastium arvense*

**White**

**Spring, summer**

**U. S.**

On the ledges moistened by the mist and spray that blow from the Yosemite waterfalls, among the glistening, wet grasses, these pretty little white flowers are quite conspicuous. They smell pleasantly of honey, measure about half an inch across, and have more or less downy stems, from

five to ten inches tall. This is the prettiest *Cerastium*, though not so "mousy" as some, and grows in dry as well as moist situations.



Tall Chickweed-  
Alsine longipes.

Field Chickweed-  
*Cerastium arvense*.

Field Chickweed – *Cerastium arvense*.

Tall Chickweed – *Alsine longipes*.



## PURSLANE FAMILY. *Portulacaceae*

A rather small family, mostly American; herbs, usually with thick, succulent leaves and stems, with flowers opening only in sunlight. They usually have only two sepals, but the petals number from two to five or more; the stamens are sometimes numerous, but when they are of the same number as the petals they are opposite them; the one-celled ovary is superior, becoming a many-seeded capsule. Pusley, or Purslane, is one of the commonest garden weeds; everybody knows how difficult it is to keep the spreading rosettes out of gravel walks, and we are all familiar with the gaudy, ephemeral flowers of the cultivated *Portulaca*. The Purslane-tree, or Spek-boom, of South Africa is often the principal food of elephants and its foliage gives the characteristic coloring to the landscape.

There are several kinds of *Montia*, closely related to *Claytonia*, mostly natives of North America, rather succulent plants, very smooth and often with a "bloom." The flowers are white or pinkish, with two sepals; the five petals, equal or somewhat unequal, separate or more or less united at base; the stamens five or three; the style branches three; the capsule with three valves and one to three, shiny, black seeds, which when ripe are shot out of the capsule by the elastic closing of the valves.

### **Miner's Lettuce**

*Móntia parviflòra*

**White**

**Spring, summer**

**West, except Ariz.**

The Indians gather these pretty succulent little plants for salad and indeed the tender, bright-green leaves look as if they would taste very nice. They grow in a loose bunch, with several stems, a few inches to a foot high. The root-leaves have long leaf-stalks and vary very much in size and shape, the earliest being long and narrow, like little green tongues, but the later ones oval, round and kidney-shaped, and they vary also in tint, in dry places being sometimes a dull yellowish-pink. The stem-leaves are quite odd, for a single pair have united around the stem and become a circular or somewhat two-lobed disk, one or two inches broad, the stalk piercing right through its center. This leaf forms a pretty, shallow saucer, with a small, loose cluster of tiny flowers, on slender flower-stalks, springing from the middle. This is common everywhere in orchards or vineyards, and in shady places in the foothills and canyons, and has long been cultivated in England for salad. It is also called Indian Lettuce and Squaw Cabbage. *M. perfoliàta* is similar.





Miner's  
Lettuce-

Montia  
parviflora.

Miner's Lettuce – *Montia parviflora*.

**Spring Beauty**

*Montia parvifolia*

**White and pink**

**Spring**

**Northwest**

This charming little flower resembles the Spring Beauty of the East, *Claytonia Virginica*, and blooms in late spring, among the ferns and wet grasses near the Yosemite waterfalls and in similar places. The white flowers, about three-quarters of an inch across, are often tinged with pink and the five stamens are violet. The tender stems, about eight inches tall, are weak and almost trailing and the pale-green leaves are smooth, the lower ones slightly thick and succulent, with little bulblets in the axils, which drop off in drying; the capsule mostly has only one seed.

There are several kinds of *Claytonia*, resembling *Montia*.

**Spring Beauty**

*Claytonia lanceolata*

**Pink and white**

**Spring**

**Northwest, Cal., Nev., and Utah**

A pretty little plant, three or four inches high, with a juicy, reddish stem and thickish, bluish-green, juicy leaves, the root-leaf narrow, the two stem-leaves broader. The flowers, over half an inch across, are white, tinged and delicately veined with pink, with a little yellow at the base of the petals; the pistil and stamens pink; the two sepals yellowish-green. This grows on moist mountain slopes, up to an altitude of nine thousand feet, sometimes at the edge of the snow, is pretty and delicate and also resembles the eastern Spring Beauty.





Spring Beauties  
*Claytonia lanceolata*. *Montia parvifolia*.

Spring Beauties  
*Claytonia lanceolata*.  
*Montia parvifolia*.



There are only one or two kinds of *Spraguea*, natives of North America; low herbs, not very succulent, with fleshy roots; the leaves alternate, or from the root; the small flowers in coiled clusters; the two sepals and the four petals all papery; the stamens one, two, or three in number; the style long, with two stigmas; the capsule roundish, with two valves, containing few or many, shining, black seeds.

**Pussy-paws**

*Spraguea umbellata*  
(*Calyptridium*)

**Pink**

**Summer, autumn**

**Northwest**

Sandy spots in the mountains are often brightened by lovely patches of the soft pink blooms of this attractive and odd-looking little plant. Near Wawona, on the Glacier Point trail, I saw at least half an acre of sand carpeted with beautiful rose-color. In moderate altitudes the plants are about ten inches tall, but they get dwarfish as they climb and on the mountain-tops they are only an inch or so high, with close mats of small leaves. They have strong tap-roots and the leaves are dull gray-green, rather thick and stiff but hardly succulent, and grow mostly in rosettes at the base, those on the stem having shrunk to mere bracts, with several, smooth, reddish stalks springing from among them. Each stem bears a close, roundish head, two or three inches across, consisting of many tightly-coiled tufts of shaded pink, each composed of innumerable, small, pink flowers, the papery, pink and white sepals and bracts being the most conspicuous part. They overlap each other and have daintily ruffled edges. The three stamens are long and protruding and the style long and threadlike. The flower-

clusters are like soft pink cushions, so the pretty little name of Pussy-paws is appropriate, both to form and coloring. Chipmunks are very fond of the small, black seeds.



Pussy-paws-      *Spraguea umbellata*.

Pussy-paws – *Spraguea umbellata*.

## **BUTTERCUP FAMILY. *Ranunculaceae***

The members of this large and handsome family vary so much in appearance that it is difficult for the amateur to realize that they are nearly related. In fact they have no very distinctive characteristics. They are all herbs, except Clematis, which is shrubby, and all have bitter juice, which is never milky or colored, numerous stamens and usually several pistils, which are superior and one-celled, bearing a single style, and all the parts of the flower are separate from each other and inserted on the receptacle. The flowers are often of eccentric forms, with spurs or hoods; sometimes they dispense with petals altogether and instead have colored sepals which resemble petals. The leaves are of all sorts and shapes, usually more or less lobed and cut, but have no stipules and often their bases clasp the stem. The fruit is an akene, pod, or berry. Many of our most beautiful and popular garden flowers are included in this family, which is large and distributed throughout the world, but not abundant in the tropics.

There are numerous kinds of *Ranunculus*, mostly perennials, with fibrous roots, growing in temperate and cold regions. Ours have yellow or white flowers, with three to five sepals and from three to fifteen petals, each of the petals with a nectar-gland at its base; the numerous pistils developing into a roundish or oblong head of akenes. The leaves are variously cut and lobed, the stem leaves alternate. Some sorts grow in the water and some have creeping stems. Some kinds of *Ranunculus* are liable to be confused with some sorts of Cinquefoils, but the calyx of a Buttercup has no bractlets, as has that of a Cinquefoil. The Latin name means "little frog," as these plants like marshes.

### **Common Western Buttercup**

*Ranúnculus Califórnicus*

**Yellow**

**Winter, spring**

**Wash., Oreg., Cal.**

The commonest kind are attractive, often coloring the fields for miles with bright gold, but the flowers are not so pretty as some common eastern kinds. The stems are branching and more or less hairy, nine inches to a foot and a half tall, with dark-green leaves, smooth, hairy or velvety, and velvety, hairy buds. The flowers are about an inch across, with from nine to sixteen, bright-yellow, shiny petals and pale-green sepals, turned closely back. The akenes have hooked beaks. This runs into many scarcely distinguishable varieties.



**Common Western Buttercup – *Ranunculus Californicus*.**

Few flowers are more beautiful and interesting in color and construction than Larkspurs. We are all familiar with their tall spires of oddly-shaped blossoms, growing in gardens, and we find them even more charming in their natural surroundings, glowing like sapphires on desert sands, or adorning mountain woods with patches of vivid color. There are many kinds; ours are perennials, with palmately-divided leaves and usually blue or white flowers, very irregular in form, with five sepals, resembling petals, the upper one prolonged into a spur at the back, and usually four petals, two of which are small and inside the calyx-spur, the larger two partly covering the pistils and the numerous stamens. The pistils, from one to five, become many-seeded pods. Some Larkspurs are poisonous to cattle. The Latin name is from a fancied resemblance of the flower to the dolphin of decorative art. Spanish Californians call it *Espuela del caballero*, Cavalier's spur.

**Blue Larkspur**

*Delphinium scapòsum*

**Blue**

**Summer**

**Ariz., New Mex.**

Though sometimes rather small, this is extremely pretty. In the Grand Canyon, on the plateau, it is about a foot tall, with rather leathery, brownish-green leaves, mostly from the root, and from five to twelve flowers in a cluster. They measure nearly an inch across and are brilliant and iridescent in coloring, as except for two small whitish petals, they are the deepest, brightest blue, exquisitely tinted with violet, with brown anthers. At Tucson, among the rocks above the Desert Laboratory, it grows to over a foot in height, with a cluster over six inches long and light dull-green leaves, slightly stiff and thick, with long leaf-stalks, the lobes tipped with a bristle, forming a handsome clump. This grows on dry plains and rocky hillsides, up to seven thousand feet. The picture is from a Grand Canyon plant.

**Larkspur**

*Delphinium Hånseni*

**White, pinkish**

**Summer**

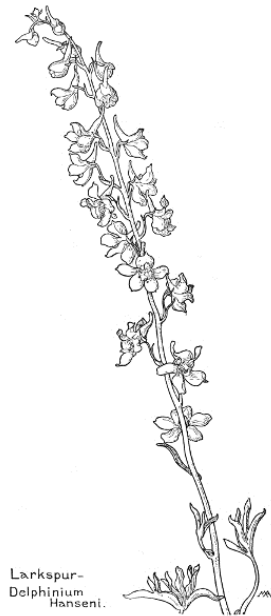
**California**

If the flowers were a little less pale in color this would be a gorgeous plant, for it sometimes grows nearly four feet high. The branching stem springs from a cluster of thick, tapering roots, each

branch terminating in a long, crowded cluster of twenty or thirty flowers, opalescent in tint, either white, with a bluish or greenish spot on the tip of each sepal, or very pale pink, with a purplish or bluish spot. The dull, yellowish-green leaves are rather thickish and downy, the pods erect. This grows in dryish places, at moderate altitudes, and freely around Yosemite.



Foothills Larkspur – *Delphinium scaposum*.



Larkspur – Delphinium Hanseni.



**Blue Larkspur**

*Delphinium bicolor*

**Blue**

**Spring, summer**

**Northwest and Utah**

A splendid flower when at its best, from six inches to a foot and a half tall, with a smooth stem, reddish below, and smooth, bright-green leaves, pale on the under side, round in general outline, the lower ones with long, reddish leaf-stalks sheathing the stem, the roots thick but not tuberous. The beautiful flowers are sometimes an inch and a half across, on long, rather spreading pedicels, few or many, in a long loose cluster, the buds slightly downy. The general effect of the flowers is deep bright-blue, but when we examine them more closely we find that the slightly woolly spurs are purplish, the blue sepals have on the back protuberances, which are pinkish on the front and greenish on the back, the two, small, upper petals are white, delicately striped with purple, and the lower ones, which are fuzzy with tufts of white down and two-cleft, are deep pinkish-purple; sometimes the whole flower is much paler in color. The anthers are large and green at first, becoming small and yellow, their threadlike filaments curling. This grows on dry hills. *D. Párryi*, of California, is about two feet tall, similar in coloring, but even handsomer, with a cluster nearly a foot long, closely crowded with beautiful flowers, each an inch and a half across. The lower leaves are slashed nearly to the center, into seven divisions, each with three, long, narrow lobes.



Blue Larkspur-  
*Delphinium bicolor*.

Blue Larkspur – *Delphinium bicolor*.

**Sacramento Larkspur**

*Delphinium variegatum*

**Purple**

**Spring, summer**

**California**

Very handsome, over a foot tall, the upper stem downy, the lower more or less hairy and the leaves more or less velvety. The flowers are an inch or more long and rather few, with long pedicels, forming a loose cluster. They are downy on the outside, all bright-purple, except the two upper petals, which are white tipped with purple, the lower petals edged and tipped with hairs, the spur stoutish and wrinkled. These flowers, though described as blue, seem to me to have more true purple than most Larkspurs. They probably vary a good deal in color. This grows in the Coast Ranges and the Sacramento Valley. There are many similar blue Larkspurs.

**Scarlet Larkspur, Christmas-horns**

*Delphinium nudicaule*

**Red**

**Spring**

**Wash., Oreg., Cal.**

Scarlet seems an odd color for a Larkspur, but there are two red ones in the West. This is an exceedingly airy, graceful plant and suggests a Columbine more than a Larkspur. The stem is slender and branching, from one to over two feet tall, with a "bloom"; the leaves thickish, smooth, dark rich green on the upper side and pale on the under. The flowers are far apart, from two to twelve, on long pedicels, forming a very loose, open cluster. Each flower is about an inch long; the sepals scarlet shading to yellow, the spur tipped with deeper red, the petals yellow tipped with crimson, not woolly, the two upper notched and much larger than the two lower ones, which are small and slashed into two

points, the edges of both sepals and petals more or less hairy; the buds pale yellowish-green, tinged with pink and red. These charming flowers have an elfin look all their own, as they swing their little pointed red caps in the light shade of cool canyons along the mountain streams they love. In southern California we find *D. cardinale*, a handsomer plant, sometimes six feet tall, its flowers larger and deeper red and forming a larger, closer cluster.



Scarlet Larkspur – *Delphinium nudicaule*.

The picturesque Columbine gets its melodious name from the Latin for "dove," because the spurs suggest a circle of pretty little pigeons, and this common name is less far-fetched than the Latin one, *Aquilegia*, which comes from a fancied resemblance of the spurs to an eagle's claws. These plants are well known and easily recognized by the peculiar shape of the flowers. Everything about them is decorative and beautiful, the foliage is pretty and the flowers large, brightly colored, and conspicuous. They are all perennials, with branching stems and compound leaves; the flowers usually nodding, with five sepals all alike and resembling petals, and five petals, also all alike, with conspicuous, hollow spurs. The stamens, the inner ones without anthers, are numerous and the five pistils develop into a head of five, erect, many-seeded pods. There is honey in the spurs, which can be reached only by "long-tongued" insects or humming birds, which thus assist in cross-pollination, and bees obviate the difficulty of having short tongues by ingeniously cutting holes in the spurs. There are a good many beautiful kinds, both East and West.

**Scarlet Columbine**

*Aquilegia truncata*

**Red and yellow**

**Spring**

**Wash., Oreg., Cal.**

This charming plant grows from one to over three feet high, is branching and smooth, and has pretty light-green leaves and nodding flowers, which are over an inch and a half across. The outside of the corolla is pale-scarlet, veined and tipped with yellow, the inside is yellow and the spurs are erect and three quarters of an inch long. The flower resembles the Scarlet Columbine of the East, but the plant is taller, with fewer flowers. It is common in moist, rich woods in Yosemite and the Coast Ranges, from the foothills well up to the alpine zone.

**White Columbine**

*Aquilegia leptocera*



**White**  
**Summer**  
**Northwest and Utah**

An exceedingly beautiful flower, a white sister of the large Blue Columbine, which is the "State flower" of Colorado, and sometimes sufficiently tinged with blue to show the relationship. It is a rather slender plant, usually with several stems, from one to two feet tall, the foliage rather bluish-green, the flowers large and usually pure-white, and is found in the mountains.



Scarlet Columbine- *Aquilegia truncata*.

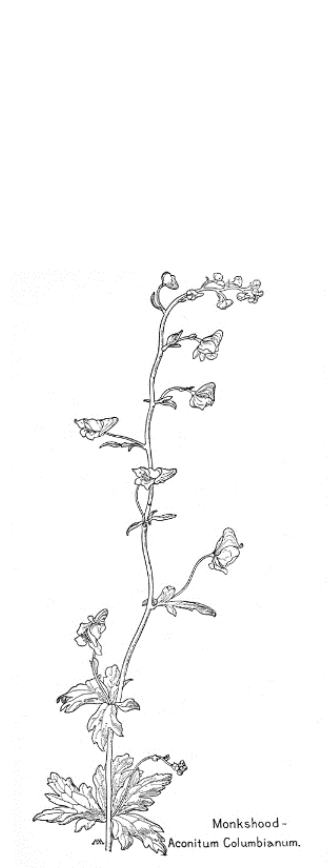
Scarlet Columbine – *Aquilegia truncata*.



Monkshoods have almost as much charm as their cousins Columbine and Larkspur, with a quaintness and individuality all their own. There are a good many kinds; mountain plants, growing in temperate regions, with rather weak stems and leaves much like those of Larkspur. The blue and white blossoms have a "hood," which gives these plants their very appropriate name. This is formed by the upper and larger one of the five, petal-like sepals arching over and forming a hood, or helmet, under which the two small petals, with spurs and claws, are hidden; sometimes there are three or more petals below, which are minute and resemble stamens. The real stamens are numerous and ripen before the pistils, thus ensuring cross-pollination, and the fruit consists of a head, of from three to five, many-seeded pods. The thick or turnip-shaped root is used medicinally and is virulently poisonous, so these plants are sometimes called Wolfsbane. Aconite is the ancient Greek name and other common names are Blue-weed and Friar's-cap.

**Monkshood**  
*Aconitum Columbianum*  
**Blue and white**  
**Summer**  
**West**

This handsome perennial, from two to six feet tall, grows near streams, in mountain meadows or open woods. The flowers measure from half an inch to over an inch long and are mostly bright-blue and white, tinged with violet, but shade from almost white to deep-blue, veined with purple. They are paler inside and grow on slender pedicels, in a long loose cluster, on a somewhat bending stem. The two, small, hammer-shaped petals are nearly concealed under the hood. The leaves are alternate, the lower ones with long leaf-stalks, and deeply cleft into three or five, toothed or lobed, divisions. This reaches an altitude of twelve thousand feet.



Monkshood – Aconitum Columbianum.



**Wild Peony**

*Paeonia Brøwnii*

**Dark-red**

**Winter, spring**

**Wash., Oreg., Cal.**

There are two kinds of Peony. This is a robust and very decorative perennial, rich and unusual in coloring, the fine foliage setting off the dark flowers to perfection. The roots are woody, the stems smooth, from eight inches to a foot and a half tall, and the leaves are smooth, rich green, but not shiny. The nodding flowers are an inch and a half across, with five or six greenish-purple sepals, five or six petals, rich deep-red, tinged and streaked with yellow and maroon; dull-yellow stamens and

green pistils. The whole flower is quite thick and leathery in texture and rather coarse, sometimes so dark that it is almost black. The flowers are often fragrant, but the plant has a disagreeable smell, something like Skunk-cabbage, when crushed. The large seed-pods, usually five, are thick, leathery and smooth, with several seeds and are a very conspicuous feature, the stems drooping as they ripen and the pods resting on the ground in big bunches. The whole plant is rather succulent and the foliage and stems are more or less tinged with red and have a "bloom," especially on the sepals. This grows in all sorts of places, in the hot plains of the south and at the edge of the snow, in northern, mountain canyons. In the south it blooms in January and is sometimes called Christmas-rose. The root is used medicinally by the Spanish-Californians and by the Indians, "to give their horses long wind." These plants were named in honor of Paion, the physician of the gods.



Wild Peony-

*Paeonia Brownii.*

Wild Peony – *Paeonia Brownii.*



There are only a few kinds of *Actaea*, tall perennials, with large, alternate, thrice-compound leaves and small, white flowers, in short, terminal clusters. The sepals number about four and resemble petals; the petals are from four to ten, or sometimes none, with claws; the stamens are numerous, with conspicuous white filaments; the one pistil has a broad, somewhat two-lobed, stigma, and the fruit is a large, showy, red or white, somewhat poisonous berry, containing many, smooth, flat seeds.

### **Baneberry**

*Actaea arguta*

**White**

**Spring, summer**

**West, except Ariz.**

This is a fine plant, from one to two feet tall, with a stoutish, smooth, branching stem and handsome leaves, prettily cut, with pointed teeth, thin and soft in texture, with conspicuous veins. The sepals and petals of the small cream-white flowers are less conspicuous than the numerous white stamens, which give a very feathery appearance to the flower-cluster, which is one or two inches long and speckled with the dark tips of the pistils. The sepals and petals drop off early and the stamens lengthen, so that the cluster becomes very airy and delicate. The general effect of the plant, which grows near shady mountain streams, is striking and graceful. It grows also in the East and is sometimes slightly sweet-scented, but often has an unpleasant smell. The handsome, poisonous berries are oval or round, red or white, with a polished surface, and contain many seeds. This reaches an altitude of ten thousand feet. A very similar kind, *A. viridiflora*, grows in the mountains of Arizona.



Baneberry – *Actaea arguta*.

**Globe-flower**

*Trollius lãxus*

**White**

**Spring U. S.**

This is our only kind of *Trollius*. It is an exceedingly beautiful flower, particularly when found growing in the snow, or near the edge of a field of melting ice, in high mountains and along the margins of glaciers. The handsome, toothed leaves are palmately-lobed or divided, the lower ones with long leaf-stalks, rich green and glossy and setting off the flowers, which grow singly at the tips of smooth, rather weak stems, from one to two feet tall, and measure about an inch and a half across.

The sepals, from five to seven in number, are large, cream-white, slightly greenish outside, and are the conspicuous part of the flower, for the petals are very small and yellow, so that they resemble stamens. From fifteen to twenty-five of these little petals, in a row, surround the numerous, real stamens and form a beautiful golden center. The fruit is a head, measuring an inch across, composed of eight to fifteen small pods, with beaks, containing many, smooth, oblong seeds. This plant looks very much like an Anemone but it has these small yellow petals and Anemones have none, and the center is larger and brighter yellow and the foliage coarser.

There are three kinds of Trautvetteria, two American and one Asiatic.

**False Bugbane**

*Trautvetteria grandis*

**White**

**Summer**

**West**

A handsome plant, with a smooth, pale-green stem, from two to three feet tall, and fine large leaves, prettily cut, smooth and rather bright green, the lower ones sometimes eight inches across. The white flower clusters are large, very pretty, airy and feathery, consisting of numerous small flowers, with small petal-like sepals, usually four, and no petals, the numerous stamens, with white filaments, being the conspicuous part and forming a little pompon. The akenes are numerous, inflated and four-angled, and form a head. It is a pity that this attractive plant has such a horrid name. It grows in moist woods at Mt. Rainier and in similar places.



False Bugbane – *Trautvetteria grandis*.

Anemones grow in temperate and cold regions everywhere. They have no petals, but their sepals, numbering from four to twenty, resemble petals. The stem-leaves are in whorls, forming a kind of involucre below the flower. There are many kinds; some have nearly smooth, pointed akenes, some densely woolly ones, and in some the akenes have feathery tails. The name, pronounced anemone in Latin and in English anémone, is appropriate to the fragile kinds, such as the eastern Wood Anemone, for it means "flower shaken by the wind."

**Canyon Anemone**

*Anemone sphenophylla*

**White**

**Spring**

## Arizona

An attractive plant, eight inches to a foot tall, with pretty flowers and foliage. The flowers are white, tinged with pink, less than an inch across, often downy outside, and the head of fruit is oblong, sleek, and silky downy. This grows on dry, rocky slopes in the Grand Canyon, above the plateau. Around Tucson the flowers are less pretty, but the foliage handsomer.

### Three-leaved Anemone

*Anemone deltoidea*

**White**

**Summer**

**Wash., Oreg., Col.**

Delicate, pale flowers, conspicuous in dark mountain woods, with slightly downy, purplish stems, from eight to ten inches tall, and pretty leaves, thin in texture, the involucre-leaves without leaf-stalks, rather light-green, dull on the upper side, paler and shiny on the under. The pretty flowers are an inch and a half to over two inches across, with five, pure-white sepals, usually two of them larger and longer than the others, and a light bright-yellow center. This is abundant at Mt. Rainier. *A. quinquefolia* var. *Grayi*, of the Coast Ranges, is similar, the flower often tinged with blue, the involucre-leaves with leaf-stalks.

### Northern Anemone

*Anemone parviflora*

**White**

**Summer**

**Northwest**

A pretty little plant, with a rather hairy, reddish stem, from four to twelve inches tall, glossy, dark-green leaves, paler and downy on the under side, and flowers about half an inch across, cream-white, tinged with purple or blue on the outside; the akenes very woolly. This reaches an altitude of ten thousand five hundred feet, growing in the East and in Asia and is the smallest of the mountain Anemones.



Northern Anemone – *A. parviflora*.

Three-leaved Anemone – *A. deltoidea*.

Canyon Anemone – *A. sphenophylla*.



**Western Anemone**

*Anemone occidentalis*

**White**

**Spring**

**Northwest**

These beautiful mountain flowers bloom in early spring, sometimes poking their pretty faces right through a hole melted in a snow-bank, and the brave little things are quite thickly covered with silky wool all over, as if to keep themselves warm. The flowers, which often bloom before the leaves expand, are about two inches across, with five to eight, cream-white sepals, tinged with blue and hairy on the outside, and are much less delicate looking than most Anemones. The stout stems are very woolly, from six to eighteen inches tall, and the leaves are beautiful, cut into numerous, very fine divisions, exceedingly feathery and pretty. The akenes have long, feathery tails and form very large, silky, fluffy heads, which are very handsome and conspicuous.

There are a good many kinds of *Caltha*, succulent marsh plants, of temperate and arctic regions; the leaves undivided, mostly from the base and more or less heart-shaped; the flowers with large, petal-like sepals and no petals. This is the Latin name of the Marigold.

**White Marsh Marigold**

*Caltha leptosépala*

**White**

**Summer**

**Northwest**

A pretty little mountain, marsh plant with a smooth, stout, purplish stem from four to eight inches tall, and smooth, light-green leaves, often veined with purple on the under side. The flowers are an inch and a quarter across, with eight or ten, cream-white sepals, tinged with blue on the outside, and pretty golden centers of numerous stamens. This blooms at the edge of the retreating snow and reaches an altitude of twelve thousand feet. *C. palústris*, the Yellow Marsh Marigold, found in the Northwest and common in the East, has beautiful yellow flowers, resembling large Buttercups.





Western  
Anemone—  
*Anemone occidentalis*

White Marsh  
Marigold—  
*Caltha leptosepala*.

Western Anemone – *Anemone occidentalis*.

White Marsh Marigold – *Caltha leptosepala*.



There are many varieties of Clematis, or Virgin's Bower, familiar to us all, both East and West, and general favorites, widely distributed and flourishing in temperate regions; perennials, woody below, which is unusual in this family. Usually they are beautiful trailing vines, which climb over bushes and rocks, holding on by their twisting, curling leaf-stalks. The flowers have no petals, or only very small ones, but their sepals, usually four, resemble petals; the stamens are numerous. The numerous pistils form a round bunch of akenes, their styles developing into long feathery tails, and these gray, plummy heads are very conspicuous and ornamental, when the flowers are gone. The leaves are opposite, which is unusual in this family, with slender leaf-stalks, and are usually compound. Some plants have only staminate flowers and some only pistillate ones, and the appearance is quite different, the flowers with stamens being handsomer.

**Virgin's Bower, Pipe-stem**

*Clematis lasiantha*

**White, pale-yellow**

**Spring**

**California**

Near the summit of Mt. Lowe, and in similar places, we find this beautiful vine clambering over the rocks. The flowers measure an inch and a quarter to over two inches across and they vary in tint from almost pure white to a lovely soft shade of pale-yellow, the handsome clusters forming a beautiful contrast to the dark-green foliage. The stamens and pistils are on different plants. The flowers, leaves, and stems are all more or less velvety and the akenes have tails an inch long, forming a head, about two inches across. The flowers are often so numerous as to make conspicuous masses of pale color on canyon sides, in the Coast Range and Sierra Nevada Mountains.





Virgin's Bower- *Clematis lasiantha*.

Virgin's Bower – *Clematis lasiantha*.

There are a few kinds of *Atragene*, resembling *Clematis*.

**Purple Clematis**

*Atragene occidentalis* (*Clematis*)

**Violet, blue**

**Summer**

**West**

This is peculiarly attractive, as the flowers are large and beautiful and the foliage very pretty. The leaves are divided into three, pointed leaflets, which are thin in texture, light bright-green and prettily cut or lobed, and the trailing or climbing stems are almost smooth, slender and purplish above and woody below. The flowers, which are not in clusters, measure from two to three inches across, with four, sometimes five, violet or blue sepals, spreading widely as the flower grows older, and the outer stamens are broad and resemble small petals. The flowers are followed by handsome feathery heads, which are large and silky. This pretty vine is found in the Grand Canyon, not far below the Rim, and in many mountain places. The foliage varies somewhat in different climates.

There are many kinds of *Thalictrum*, not easily distinguished, widely distributed, a few in the Andes, India, and Africa; perennials, with tall stems, from a short rootstock, and handsome, compound leaves; the flowers perfect or imperfect, many, small, in clusters, with four to seven sepals and no petals; the akenes tipped with the long styles and forming a head. Some of these plants have a disagreeable smell. They grow in moist places, both East and West.

**Meadow Rue**

*Thalictrum Fendleri*

**Greenish-white**

**Summer**

### **West**

Though its flowers are small and colorless, this plant is conspicuous for delicacy and grace. The leaves of tender green suggest the fronds of Maidenhair Fern and are almost as beautiful, while the flowers are odd and pretty. A shower of numerous, pale-yellow stamens, with purplish, threadlike filaments, falls from the center of four, greenish-white sepals and forms a charming little tassel. These tassels hang on the ends of very slender pedicels, in loose clusters. The smooth stems are from one to three feet tall and the smooth leaves are thin in texture, thrice-compound, with many, rounded leaflets, the lower leaves with long leaf-stalks. This Meadow Rue has its pistils and stamens on different plants, the flowers with tassels of stamens being prettier and more conspicuous than the small, green, pistillate ones. The variety *Wrightii* is common in Arizona.



Lilac Clematis.  
*Atragene occidentalis.*

Lilac Clematis – *Atragene occidentalis*.



Meadow Rue – *Thalictrum Fendleri*.

## **BARBERRY FAMILY. *Berberidaceae***

Not a large family, widely distributed; shrubs or herbs; leaves alternate or from the root; flowers perfect; sepals and petals few, many, or none, generally in several overlapping rows; stamens on the receptacle, usually as many as the petals and opposite them; pistil one, with a short style, or none; fruit a berry or capsule.

There are several kinds of *Vancouveria*, perennial herbs with slender, creeping rootstocks; named after Vancouver the explorer.

## **Конец ознакомительного фрагмента.**

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