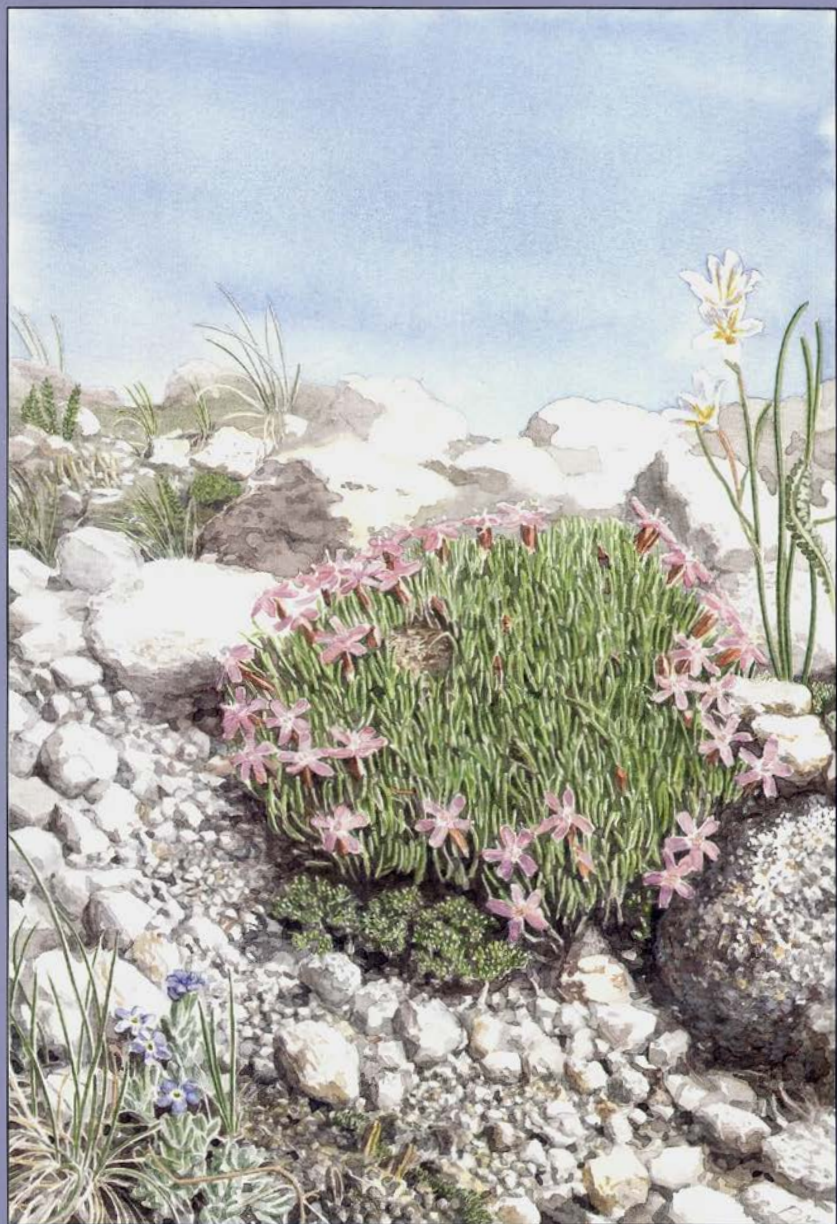


ROCK GARDEN



QUARTERLY

VOLUME 54 NUMBER 3

SUMMER 1996

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by Paul Martin of Golden, Colorado

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ROCK GARDEN

QUARTERLY

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FEATURES

- A New Garden: Starting from Scratch,
by Gwen Kelaidis 163
- Hudson Gardens: The New Rock Garden Canyon,
by Andrew Pierce 166
- Rock Garden Plants: A Beginner's List,
Database Manager, Michael Ebbs 169
- The First One Hundred: Recommended Plants for Beginners,
by Geoffrey Charlesworth 231

DEPARTMENTS

- Seed Exchange 250
Gardening Tips 252



BEFORE!

A NEW GARDEN

STARTING FROM SCRATCH

by Gwen Kelaidis

A new garden is like a blank canvas. Anything is possible, and everything depends on you. When we moved to a new property in October of 1994, I was both excited and a bit intimidated. Now have half an acre, whereas before we had a 52 by 100' lot (with a house and garage taking up way too much space). By my rough calculations the growing area (all the land not covered by buildings) is six times as great.

Much of my gardening in the last eight years had been influenced—or should I say determined—by the small scale in which I gardened. I have been a fanatic advocate of small plants: After all, the smaller the plants, the more I could jam into that space. No plant which flopped or spread rapidly was allowed to live there: too dangerous to its cohabitators, too greedy, and out of proportion to the compact proportions of the many cushion plants I grew. But now everything was brought into question, and it was a new world of gardening.

When starting fresh on a new garden, many questions arise. If you are starting a new garden, or taking a new look at your yard with the idea of rear-

ranging here are some questions to consider:

Are there trees, shrubs, and structures of the existing landscaping that should be removed?

Many times there are trees or shrubs that have no particular merit, and you want to replace them either with sun-loving perennials or with a choice woody plant. Also, most rock plants prefer sun. If you have trees, you may wish to thin them even if you are growing primarily woodlanders.

In my case, it was obvious that about 30 junipers were to be removed. A blue spruce grew in the middle of the area I anticipated as a future rock garden, so it became a Christmas tree. Sacrifices to snobbery and re-shaping the garden spaces included a spiraea, a Russian Olive, the Peking cotoneaster at the corner of the sunporch, and a privet. I have evil intentions towards the silver maple, but it provides nice shade for the side yard, and before I remove it I'll underplant it.

Where should the rock garden(s) be?

Consider your view of the rock garden. Will you be able to view it from

the house or deck? How much light will it receive? For me, there are to be several rock gardens, some shady, others bright and well-watered, another bright and dry. Actually, at least half of the yard is planned for rock garden.

Does the overall grade of the yard need to be changed?

Whether your site is on a hill or a flat piece of land, consider major grading changes before you put the rock garden in place. Unlike the perennial border, there is much labor involved in the structure of a rock garden. It's much easier to abandon even double digging than it is to move those rocks, once in place.

Here we are on a hill with over 15' of drop from the top of the lot to the bottom. When we moved in, there were a series of terraces. I plan to have at least three parallel ridges from top to bottom. I graded the top corner behind the house largely by hand, since it is inaccessible and since I wanted quite a bit of detail.

Make sure that the grade slopes away from the buildings.

Do supporting structures need to be built before the rock garden goes in?

If a rock garden is to be bordered by a fence or a wall, it is usually best to build that first.

Where will the paths be, especially to the doors and to gates?

Before you start the rock garden, try to figure out which paths will automatically be taken by the dogs, the paperboy and the mailman. Either block these paths with emphatic rock work, or cede to them and design around them. Also, if you want a meandering feel to the garden, or want to create a series of garden rooms, plan these out before you set the first rock.

Speaking of setting the first rock,

this is a great moment, which should be celebrated with champagne—or at least a drink of cool water. The first rock often sets the direction and the tone and will influence the placement of other rocks, whether you intend it to or not. Don't let yourself be rushed in this decision. Be sure that you like it before going on. I have often moved this rock five times before going on.

Where will the utility area (frames, gravel, soil stores) be located?

Choose now, rather than after the fact. You'll need access to extra materials throughout the life of the garden.

What about soil?

I still consider soil a mystery. Who really measures out one-third of this, one-third of that? I add sand, gravel, manure, leaf-mold, whatever I can get my hands on, whatever looks "right," until I have a loose, good-looking texture. It's not scientific.

What kind of rock will you use?

This is always a hot topic. The classic rock garden preference is for stratified rock. Weathered limestone is my very favorite. Its easy to arrange in credible-looking outcrops or ridges, it is attractive in its own right, it holds quite a bit of water on the surface, many plants like it, etc. I saw some beautiful rocks of this sort last year but didn't have the funds to invest. Now that particular rock yard doesn't have it any more.

Well, you should choose rock that is available and affordable for you. Sometimes this involves making an arrangement with a landowner to pick rocks out of the fields yourself. In some areas of the country, like Denver, we have the luxury of many sand and materials companies that sell rock. After a while, it seems worth it to have someone else load the truck. Also, I

have personally broken more than one set of truck springs. Delivery is expensive, but trucks are, too.

Most important of all is to get rock that pleases you personally. I have ended by choosing granite for at least one section of this garden. Choose rock for which you can find a matching gravel mulch. Sometimes large, beautiful cap rocks, formed by much weathering at the surface, have no accompanying mulch available. All the gravel that size weathered away many eons ago!

Some prefer large rocks hoisted into place by cranes. Landscape designers are often inclined to recommend these, often suggesting that they are more in scale with the house. I like smaller rocks, ones that I can move around by myself or with one other person. Selling large rocks is obviously more profitable than selling small rocks, since you pay by the ton. Keep looking until you find what you want.

Another note of caution: it is well to obtain about a third more rocks than you think you will need. No matter how many rocks you have, you always want a different one for that spot you are working on.

What will you plant?

Now for the fun! Once again, your own personal tastes should lead you in your choices. The first thing to consider is which plants are adapted to your conditions. You need to know how much shade each area receives, how much water there is, what your soil type is.

In this garden I have extremely sandy soil, modified by considerable quantities of leaf mold and cow manure. I have always had a base soil of clay loam in the past, modified with manure, sand, and gravel. Some plants simply don't care for sand, while others adore it, and I am sure I will kill

many plants along the way to developing a list of what does well here.

In practice, I try to have a site for every kind of plant. So far, I've only managed to provide a shady garden under pines. My plans include everything, from bog to dryland.

In practice, once you have a wide range of habitats, you can buy whatever is attractive to you, and that will no doubt include many, many, many plants. What you read about and can't find commercially available you can grow. What you can't grow you can trade for with other gardeners. There's nothing to be ashamed of in occasional begging, by the way. There are not a few plants after which we have lusted for 20 years. Many come to you eventually, as to Penelope. Others remain the inspiration for continued searching and communication with fellow gardeners, more like the Holy Grail.

When planting, remember that the soil will be moister at the base of a slope than at the top, just as a sponge set on end will be wetter at the bottom. Also, the north slope has quite a bit colder conditions than the south side. If you are not sure where to plant something, buy two or three and try it in different exposures. If you kill just one plant, you learn little; if one lives and two die, you have learned something.

When will construction begin?

Why now, of course! Isn't it summer? If it's raining, think of West Texas, be grateful, and start tomorrow!

Gwen Kelaidis has been starting new gardens since 1976. She claims this is her *magnum opus* and has enough gardens planned to keep her busy for at least 25 years. She gardens very near Denver, Colorado.

HUDSON GARDENS

THE NEW ROCK GARDEN CANYON

by Andrew Pierce

Hudson Gardens in Littleton, Colorado, ten miles south of Denver is one of America's youngest public gardens. It celebrated its grand opening on June 16, 1996. Hudson Gardens developed on the land of King C. and Evelyn Leigh Hudson, the owners of a charming country restaurant, now leased as The Northwoods Inn, who bequeathed the land and an endowment to foster a love and knowledge of nature. The gently rolling property borders the South Platte River not far from its grand entrance onto the Great Plains. Already the property had fine groves of giant cottonwoods and conifers, wonderful vistas towards the Rocky Mountains, and the sense of place essential for a great public garden. Although far out in the country during much of the Hudson's lifetimes, the Gardens might now be said to sit in one of America's fastest growing suburban corridors. Myriad new homeowners will be walking the paths of Hudson Gardens, notebooks in hand, looking for ideas and plant names to enhance their own home gardens. The garden encompasses 30 acres and includes 16 gardens. These run the gamut from traditional peren-

nial border and rose garden to extensive shrub borders and naturalistic gardens featuring native grasslands, wildflowers, and water.

Hudson Gardens invariably inspires comparisons with Denver Botanic Gardens some 10 miles to the north, but a visit to both institutions quickly dispels any concern of redundancy: Denver Botanic Gardens has a rectilinear, symmetrical structure—dictated by its urban setting. DBG comprises many introspective and intensively planted gardens—appropriate to its size and setting. Hudson Gardens is expansively curvilinear, echoing the curve of the Platte, the rounded foothills and mountains nearby, which are visible from every vantage point. Elliptical ponds and arching fountains are focal points of Hudson. Although the garden features an extraordinary assortment and collection of plants, they are chosen not primarily for their botanical interest and significance, but for their proven performance in the Rocky Mountain climate: Hudson Gardens are intended to be a showpiece of horticultural art featuring the best plants and plantings to inspire and educate its visitors.

The Rock Garden Canyon

Situated below the terrace of the future Horticulture and Educational Building, the Rock Garden is perhaps one of the most critical and visible areas of the entire Gardens. Here the Rock Garden Canyon is being constructed and planted.

Over 250 tons of ruby rock, originating from the Navajo Formation at the top of Table Mountain, halfway between Colorado Springs and Cañon City, have been positioned into a canyon for the initial phase of this garden. Although not the same formation as the Maroon Bells near Aspen, the color and effect of the monumental boulders used in the Rock Canyon somehow recall that landmark of the Colorado Rockies. We are not aware of any major public garden featuring giant rocks of this distinctive purplish color with its rich texture and lichens. Even without a single plant, the rock canyon has a wonderful, dramatic structure. The rocks have been placed in upright positions. By using two to four levels of rock above and behind one another, many crevices and planting pockets have been created. These have been filled with a mixture of rich scree that should provide an optimal habitat for a wide spectrum of alpine. The garden has been consciously designed so that almost all of the thousands of plants will be in contact with stone: not only will this provide an unparalleled display of rock garden art, but it will significantly reduce weeding and routine maintenance.

What immediately strikes the visitor, however, is how accessible the entire garden is to viewing: the steep canyon walls make it easy to get face to face with every plant, and the garden presents nearly a thousand linear feet of pathway to the strolling viewer. The design and placement of this garden have optimized the two comple-

mentary and challenging facets of rock gardening: It is a large-scale garden painting that may be viewed from afar from many vantage points. And yet it at close view it contains hundreds of intimate vignettes, and stands up to detailed examination all along its tremendous length.

The garden is viewed from three main pathways, from the planned entry bridge, from the path from the parking area, and from across the main pool. A large triangle has been reserved for a Colorado rock garden, which will use a few rocks positioned to mimic the Flatirons near Boulder and plantings solely of species native to the state. Many Colorado plants have been brought together in anticipation of planting day, including a sample of unique dwarf conifer selections made by Jerry Morris—the Rocky Mountain region's most eminent "broomer." This section will be unlike any rock garden in the state.

Because of the depth and direction of the canyon, two distinct microclimates for planting have been created. The north- and east-facing side is cooler and moister, and here we will feature various plants from the traditional alpine areas of the world such as the Alps, the Himalayas, and New Zealand. The southwest face is considerably drier and hotter, and here we will use North American natives more adapted to those conditions. On Saturday, June 22, 1996 volunteers and 35 members of the Rocky Mountain Chapter of the North American Rock Garden Society gathered at Hudson Gardens to plant nearly 10,000 alpine donated by chapter members, nurseries, and specialty growers from as far away as Pueblo and Fort Collins.

The alpine selected to be showcased in this garden are plants that thrive in our Colorado sun: plants that have a long blooming season and com-

pact, attractive vegetative growth. We are fortunate to have a thriving nursery industry at our doorstep that produces a wide spectrum and variety of rock garden plants. This circumstance has permitted us the unheard-of luxury of combining alpiners in color combinations—much as perennial borders are conceived: the Rock Canyon garden features a series of distinctive color “windows.” Unlike the Rock Alpine Garden at Denver Botanic Gardens—which has served as a laboratory for testing new plants and experimenting with how to grow them—the Hudson Rock Canyon will emphasize the art of combining alpiners in new, artistic ways. We believe this is unprecedented in the annals of rock garden art.

Future development

As if the dramatic Canyon were not sufficient, an adjacent large bank facing south is slated to be developed as a

traditional rock garden area with rock groupings, outcrops, and rocks where one may sit and absorb the view. A gravel trail will meander through the area to allow the visitor to see the plants close to hand and to allow easy access for staff to cultivate and tend the wide selection of rock plants. This area will include perhaps 15,000 sq. ft.

We invite you to visit Hudson Gardens and the Rock Garden Canyon the next time you are in the Front Range area. We are confident this represents a world class, utterly new expression of the ancient art of gardening with plants and rocks.

Andrew Pierce is Horticultural Director of Hudson Gardens. He is currently serving as President of the Rocky Mt. Chapter of NARGS, a position he also held in 1980—1982.



ROCK GARDEN PLANTS

A BEGINNER'S LIST

Database Manager, Michael Ebbs

Every year the volunteers of Denver Botanic Gardens manage and stage a plant sale for the Gardens which takes place the Friday and Saturday before Mother's Day. This compendium represents a portion of a massive database that has grown up in support of the volunteers and buyers at this sale. The complete database—including annuals, vegetables, perennials, and even trees and shrubs—is published and distributed among the sale personnel, as well as offered at a low price to the 15,000 or more customers of this remarkable event.

The genesis of this list came when Joan Schwarz, Chairman of the Rock Garden division in the early 1980s, let it be known that some sort of guide was needed to help beginners with the ever increasing offerings in her section of the sale. Stan Metsker, chairman of the Rocky Mountain Chapter of NARGS at the time, had recently acquired a personal computer (then a novelty). He established a network among various chapter members who also obtained computers, and the list was produced, published and expanded year after year.

When noted author and plantsman Rob Proctor chaired the Denver Botanic Gardens' sale in 1989, he and David Macke expanded the database to cover all of the thousands of plants offered that year at the sale. The entire list was published in booklet form that year as an issue to *Mountain, Plain and Garden*—Denver Botanic Gardens' magazine.

In the intervening years Michael Ebbs, a noted Denver gardener and volunteer at DBG, likewise chaired the sale and took on managing the database. Each year the dozen or so division chairmen review their offerings to make sure the list accurately reflects what is to be sold.

This list generally reflects plants that perform well in the climate of Denver and surrounding foothills. Because of Denver's central location and challenging climate, this list might prove a valuable reference for other parts of the country: realize that the numerical keys are not absolute and are referenced to a semi-arid climate of USDA zone 5a or b. What follows are only the plants designated as 12' and under and "appropriate to the rock garden."

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Acantholimon androsaceum</i> (Spikethrift, Stemless) A dwarf acantholimon; especially choice. Forms a perfect, rounded dome of gray-green spiny foliage. Dotted in summer with stemless pink blossoms. Plumbaginaceae.	pink	5 6	4 IN	8 IN	7	7	6	R
<i>Acantholimon araxanum</i> (Spikethrift, Silver) Silver rosettes of short, stubby spine foliage. The best foliage. A year 'round show. Plumbaginaceae.	rose	6 7	6	12	7	7	6	R
<i>Acantholimon armenum</i> (Spikethrift, Armenian) Evergreen mound. Bright pink flowers for a choice spot. Plumbaginaceae.	pink	5 7	6	10	9	7	6	ER
<i>Acantholimon glumaceum</i> (Spikethrift, Common) Deep-green cushions of soft needle leaves. Dense one-sided racemes of deep rose-pink flowers. Easiest of the Acantholimons to grow. Plumbaginaceae.	rose-pink	6 7	6	24	7	7	7	R
<i>Achillea ageratifolia</i> (Yarrow, Greek) Evergreen, silvery mats. Short creeper. Gray-green finely toothed leaves. White daisy-like flowers. Asteraceae.	white	4 6	3	14	8	6	8	ER X
<i>Achillea argentea</i> (Yarrow, Silver) Silver, finely divided foliage is mat-forming and very attractive. Flowers are white, small and produces in flat-headed bunches. Native to the Alps. Asteraceae.	white	5 6	6	18	8	6	6	R
<i>Achillea serbica</i> (Yarrow, Serbian) Downy white leaves make evergreen mats. Large white daisies in late spring. Asteraceae.	white	5 7	6	8	8	6	7	ER
<i>Achillea tomentosa</i> (Yarrow, Dwarf Yellow) Low mats of ferny rosettes. Umbels of deep golden yellow flowers. Miniature version of <i>Achillea filipendulina</i> . Energetic and spreading. Long lasting flowers. Asteraceae.	yellow	6 7	3	12	8	7	7	R
<i>Achillea x kellereri</i> (Yarrow, Strap-leaf) Masquerades as a choice feathery fern. Finely cut, long slender foliage of silvery gray. Heads of white, yellow centered flowers in spring. Asteraceae.	white-yellow	5 6	8	8	8	6	6	R
<i>Acinos meridionalis</i> (False Thyme) Purple faces over neat, gray mounds for sun. Like a giant thyme from the European Alps. Labiatae.	purple	4 5	3	6	7	7	7	R
<i>Adiantum pedatum</i> var. <i>subpumilum</i> (Fern, Dwarf Five Finger) Tiny relative of eastern maidenhair fern. Superb for shady nooks of the rock garden. Polypodiaceae.		0 0	3	8	5	5	4	RW
<i>Adonis amurensis</i> (Adonis) yellow	yellow	2 4	8	7	6	5	5	R

Large buttercup colored flowers as soon as ground thaws. Each blossom has 20-40 tepals which last for several weeks. Foliage that follows is lacy and fern-like. Ranunculaceae.

<i>Adonis vernalis</i> (Adonis, Spring)	yellow	3	4	8	10	7	6	6	R
Even finer foliage than the last, blooming a few weeks later in spring.									
<i>Aethionema</i> 'Warley Rose' (Candytuft, Persian)	rose/pink	5	6	4	12	8	6	6	R
As lovely as Daphne. Covered with rich rose-pink blossoms in May and June. Brassicaceae.									
<i>Aethionema armenum</i> (Stonecress)	pink	5	6	6	10	8	6	6	R
Low growing; resembles candytuft. Thrives in heat and drought. Foliage is blue green. Clusters of pink blossoms. Forms a carpet of color over foliage. Brassicaceae.									
<i>Aethionema grandiflorum</i> (Candytuft, Persian)	pink	5	6	8	8	8	6	6	R
Gray shrublets and showy flowers for a long season. Brassicaceae.									
<i>Ajuga genevensis</i> 'Pink Beauty' (Bugleweed)	pink	5	6	6	15	8	7	6	GR
Green foliage on 4-5 inch plants. Whorls of delicate pink flowers. Foliage is slightly hairy. Labiatae.									
<i>Ajuga pyramidalis</i> 'Metallica Crispa' (Ajuga, Spinach)	blue	4	5	4	6	6	5	6	GR
Dark-green tufts of curious, crimped leaves. Non-running variety. Very short racemes of deep-blue flowers. Labiatae.									
<i>Ajuga reptans</i> (Bugleweed)	lavender	5	6	4	15	5	6	5G	R
Bright Blue flower spikes. Dark green foliage adapts to any growing condition. Spreads rapidly. Labiatae. Varieties include 'Bronze Beauty', a bronze-colored form ; 'Atropurpurea', dark purple flowers, dense carpet of reddish purple foliage. Foliage turns bronze in the fall; 'Burgundy Glow', lavender flowers, spreading rosettes variegated cream, green, pink and burgundy, lovely; 'Purple Leaf' , lavender flowers, dark-leaved form , makes fine contrast for bright flowers and foliage; 'Silver Beauty', blue flowers, silver green and white foliage; 'Variegata', lavender fls., variegated carpet of pink and white.									
<i>Alchemilla alpina</i> (Lady's Mantle, Alpine)	green	5	6	3	10	5	5	5	RB
Pleated green leaves with silvery undersides. Part Sun. Subtle foliage accent. Greenish flowers in July are unimportant. Rosaceae.									
<i>Alchemilla erythropoda</i> 'Dwarf' (Lady's Mantle, Dwf)	yellow	6	7	12	10	8	5	7	BCRW
Dwarf version of A. mollis. Flower heads and stems turn orange/red in autumn. Rosaceae.									
<i>Allium christophii</i> (Giant Allium)	purple	5	6	15	12	7	6	5	RD
KEY Sun (1=full shade; 9=full sun) Soil (1=peat, 9=clay) Water (1=wet, 9=dry)									
Type (A=Architectural interest, B=Border; C=good cut flower; D=good dried flower; E= Evergreen; F=Fragrant blooms;									
G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas									

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
Gigantic purple clusters dry beautifully. Very showy. From c Asia. Liliaceae.								
<i>Allium pulchellum</i> (Onion, Firecracker)	pink	6 7	12	4	6	7	7	R
Large clusters of purple, starry blossoms. Easy to grow. Blooms look like firecrackers in early summer. Liliaceae.								
<i>Alyssoides graeca</i> (Balloon Pod)	yellow	4 5	12	10	8	7	7	ER
Vivid yellow crucifers. Grows in any sunny exposure. Neat, evergreen mounds. Brassicaceae.								
<i>Alyssoides utriculata</i> (Bladderpod)	yellow	4 5	12	12	8	7	8	ERX
Native to the rocks and cliffs in Crete. Golden flowers like those of wallflower. Gray blue fruit. Woody perennial. Mounding habit. Dark green, evergreen foliage. Brassicaceae.								
<i>Alyssum montanum</i> (<i>Aurinia m.</i> Mat of Gold)	yellow	4 6	3	7	8	8	7	FR
Low mats of gray-hairy foliage, fragrant yellow flowers in dense, short clusters. Indestructible. Brassicaceae.								
<i>Alyssum serpyllifolium</i> (Basket of Gold)	yellow	4 5	1	6	7	7	6	R
Tiny, thyme-like, bright gray leaves. Very fine and compact. Brassicaceae.								
<i>Alyssum tortuosum</i> (Alyssum, Tinyleaf)	yellow	5 6	5	10	7	7	6	R
A tiny, silvery leaved alyssum. Plant in sun. Good for a choice spot in the rock garden. Brassicaceae.								
<i>Amsonia jonesii</i> (Bluestar)	pale blue	5 6	10	8	9	5	5	NR
Gorgeous blue flowers. Native to Western Slope of Colorado. Deciduous. Long bloom period. Tough plant. Show stopper in Xeriscape gardens. Apocynaceae.								
<i>Anacyclus depressus</i> (Daisy, Mount Atlas)	white	4 6	3	10	8	7	7	RX
Loves a sunny area. Feather cartwheels end in large white daisies. Underneath is a rich reddish purple. Withstands heat and drought. Asteraceae.								
<i>Androsace carnea</i> x 'Millstream' (Rock Jasmine)	pink	5 6	2	6	6	5	5	R
A. carnea x A. pyrenaica by H. Lincoln Foster. Tiny but sturdy plant of rich green foliage. Primulaceae.								
<i>Androsace lanuginosa</i> (Rock Jasmine, Woolly)	lavender	5 6	2	3	6	5	5	R
A vigorous, easy plant, trailing habit. Purple flowers with yellow centers. Requires well-drained soil; do not allow to dry out. Native to Kashmir and Western Nepal. Primulaceae.								
<i>Androsace primuloides</i> (Rock Jasmine)	pink	5 6	3	12	6	5	5	FGR
Ground hugging, loosely spreading plant. Hairy silver rosettes bear pink, yellow-eyed flowers in spring. Native to the Himalayas. Flowers are fragrant. Primulaceae.								
<i>Androsace pyrenaica</i> (Rock Jasmine, Pyrenees)	white	5 6	2	3	6	5	5	R

Choice high alpine. Forms a neat dome of densely huddled rosettes. Studded with white flowers. Primulaceae.

Androsace villosa var. *jacquemontii* (Rock Jasmine) pink 5 6 2 8 6 5 5 R

Has small gray-green rosettes covered in russet hairs. For sunny, gritty scree. Rose pink flowers. Primulaceae.

Anemone blanda (Anemone, Wood) blue 4 5 4 7 7 7 6 R W

Vivid daisy-like flowers over neat mounds in early spring. Ranunculaceae.

Anemone hupehensis 'September Sprite' (Anemone, Dwarf Japanese) pink 8 9 12 10 4 5 5

R W Brilliant pink flowers in early autumn for a shady garden.

Ranunculaceae.

Anemone magellanica (Anemone, Patagonian) yellow 6 7 9 9 7 5 6 R

Native to South America. Large sulphur yellow flowers on 10" stems. Prefers rich soil in sun or light shade.

Ranunculaceae.

Anemone multifida ((Anemone, Dwarf) red 4 5 8 6 7 6 6 N R

Western native found in the montane and subalpine. Highly dissected leaves and dark red flowers. Rounded clumps with wiry stems. Ranunculaceae.

Anemone pulsatilla (Pasqueflower) purple 3 5 8 10 6 7 7 B R

Bell shaped flowers. Silky, globular seed heads. Fern-like leaves. Blue violet bloom color. Ranunculaceae. 'Alba' white flowers. 'Rubra' Blooms of burgundy red. Silky globular seed heads. Fern-like leaves. Ranunculaceae.

Anemone sylvestris (Anemone, Snowdrop) white 5 8 8 10 6 6 5 B F R W

Fast, deep green mat. Long bloom period. Tolerates sun with good soil and moisture. Nodding 1 1/2 - 3" flowers.

Exquisite fragrance. Native of Siberia. Ranunculaceae.

Antennaria dioica (Pussytoes) rose/white 6 7 2 6 7 8 7 B E R

Evergreen gray-green foliage. dense carpet; stems root as they spread. Flowers are rose to white. Asteraceae.

Antennaria dioica 'Minima Rubra', the most minute form. Round pink flowers on two inch stems. 'Nyewood Variety', 3" creeper forms dense mat of silvery leaves Distinctive cherry red flowers.

Antennaria parvifolia (Pussytoes) white 5 7 3 20 7 7 7 G R X

Fast spreading groundcover for sun or shade. Good xeric groundcover. Can survive on natural rain & snowfall once established. Asteraceae. 'McClintock', miniature Pussytoes. For paths or sunny scree. Asteraceae.

Antennaria rosea (Pussytoes, Rose) pink 5 6 3 10 8 9 7 R G

KEY Sun (1=full shade; 9=full sun) Soil (1=peat, 9=clay) Water (1=wet, 9=dry)

Type (A=Architectural interest, B=Border; C=good cut flower; D=good dried flower; E= Evergreen; F=Fragrant blooms;

G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
Nice pink pussytoes over neat mats. A neat carpeting plant with silvery painted leaves. Rayless pink flowers. Native to the European Alps. Asteraceae.								
<i>Antennaria speciosa</i> (Pussytoes)	white	4 5	3	10	7	7	8	R
Low mat of woolly, silver-gray leaves. Short stalks with compact clusters of furry flowers. Flowers resemble the toes of a cat. Asteraceae.								
<i>Anthemis biebersteiniana</i> (Daisy, Filigree)	yellow	5 8	12	12	9	6	7	B
Abundant clear yellow flowers on 9" stems. Beautiful, finely cut, silvery foliage in low mounds. Elegant and easy. Asteraceae.								
<i>Anthemis montana</i> (Daisy, Silverleaf)	white	6 7	12	15	8	7	7	R X
Large white daisies over rich mounds of silvery foliage for sun. Asteraceae.								
<i>Anthyllis montana</i> (Ladyfingers, Mountain)	pink	4 5	2	10	8	6	6	R
Wooly leaved alpine vetch with showy clusters of flowers. Fabaceae.								
<i>Anthyllis vulneraria</i> (Ladyfingers)	yellow	4 6	6	12	6	6	6	R
Bright orange clover flowers over silvery mounds for a long season. Fabaceae.								
<i>Aquilegia 'Biedermeier Dwarf'</i> (Columbine, Dwarf Biedermeier)	mixed	4 5	10	10	6	5	5	
R Showy, large flowered, most dwarf and most colorful hybrid of the Colorado state flower. Ranging from carmine, lilac, blue, pink and cream. Ranunculaceae.								
<i>Aquilegia akitensis</i> (Columbine, Fanleaf)	blue	5 6	5	6	6	5	5	R
Part shade. Miniature Japanese columbine with huge flowers over fan-shaped leaves. Ranunculaceae. 'Ministar'; very dwarf. Sky blue and white spurless flowers.								
<i>Aquilegia bertolonii</i> (Columbine, Dwarf Alpine)	blue	5 6	5	4	7	6	5	R
Tiny European columbine with large flowers on minuscule stems. Very choice plant. Large, rich blue upturned flowers. Ranunculaceae.								
<i>Aquilegia flabellata</i> (Columbine, Fanleaf)	blue	4 5	8	6	6	6	6	R
Thick, glaucous leaves produce a miniature mound. Flower has a distinctive top-knot. Fan shaped leaves are grayish blue. Native to Japan. Ranunculaceae. 'Nana', blue/white miniature of the above. 'Pumila', blue/white, fat, waxy, large flowers of pale lavender edged with white. Compact. 'Pumila Alba', very glaucous leaves and waxy flowers.								
<i>Aquilegia</i> hyb. 'McKana's Hybrids' (Columbine, McKana's)	mixed	5 6	6	6	12	6	5	6
R Multicolored blossoms are extra large. Dark green deeply lobed foliage. Bi-colored (lilac/white, red/yellow, pink								

shades). Graceful old-fashioned favorite. Ranunculaceae.									
<i>Aquilegia saximontana</i> (Columbine, Rky Mtn Dwarf)	blue	4	7	8	6	6	5	6	BR
Tiny, blue-and-white flowers over delicate foliage for a long season. Dwarf version of <i>A. caerulea</i> . Very rare in the wild, easy in gardens. Very choice. Ranunculaceae.									
<i>Arabis alpina</i> 'Compinkie' (Rock Cress, Mountain)	pink	4	6	6	12	5	6	6	EGR
Deep rose blooms. Evergreen. Ground cover or Rock Garden. Brassicaceae.									
<i>Arabis alpina</i> 'Snowcap' (Rock Cress, Alpine)	white	4	5	6	6	6	6	6	PR
Tufted, hairy silver gray leaves. Short, compact, white flowers. Trailing habit. Great for rockery, tub or wall. Brassicaceae.									
<i>Arabis blepharophylla</i> 'Spring Charm' (Rock Cress, Rose)	pink	4	6	6	6	5	6	6	
R Part shade. Bright pink flowered Rock Cress from California. Plant in a protected spot. Leaves are green with rose tint and white border. Brassicaceae.									
<i>Arabis caucasica</i> (Wallcress)	white	4	6	5	18	6	6	6	RG
Vigorous mat-former tolerates broad range of soils. Easy to grow. Brassicaceae.									
<i>Arabis caucasica</i> 'Variegata' (Wallcress)	white	4	5	8	12	6	6	6	R
A dependable, bright spot of foliage especially in winter. Heavily felted leaves lined in gold. Brassicaceae.									
<i>Arabis fernandi-coburgi</i> (Wallcress)	white	4	5	12	12	7	7	7	R
Mat forming cress with bright white flowers. Brassicaceae.									
<i>Arabis fernandi-coburgi</i> 'Variegated' (Wallcress, Variegated)	white	4	5	10	12	7	7	7	
R Rosettes of creamy-white leaves with a narrow center zone of green. Slowly forms a mat of cream, green and pink. Foliage is attractive all year. White 3" flower. Brassicaceae.									
<i>Arabis procurrens</i> 'Glacier' (Rockcress, Glacier)	white	4	5	10	12	7	7	7	BR
Dense mat of rosetted-foliage and brilliant white flowers. Brassicaceae.									
<i>Arabis x sturii</i> (Wallcress, Greenleaf)	white	4	5	6	12	7	7	7	R
Always a neat mound of shiny, pointed leaves. Easy to grow in any well-drained soil. Flowers are large, white and abundant in spring. Brassicaceae.									
<i>Arctostaphylos nevadensis</i> (Manzanita, Mat)	white	3	5	8	18	7	7	7	RGX
One of the most adaptable and aristocratic dwarf shrubs. Sun or part shade. Red berries; ornamental bark. Slow. White to pink flowers. Ericaceae.									

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Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Arctostaphylos uva-ursi</i> (Kinnikinnick, Bearberry) Sun or part shade. Low growing native evergreen ground cover. Pink flowers followed by small red fruits. Well-drained soil. Slow to start but until established. Ericaceae.	white	3 5	4	20	8	7	7	E G N R X
<i>Arenaria hookeri</i> (Sandwort) Sharp spiny cushions of bright green foliage. Numerous white flowers appear in late spring. Rocky Mountain high plains native. Drought tolerant. Full sun. Caryophyllaceae.	white	5 6	4	12	8	8	7	N R X
<i>Arenaria montana</i> (Sandwort) Low growing dark green ground with clouds of glistening 1" stars over a long season in late spring. Easy. Caryophyllaceae.	white	5 6	5	12	7	5	5	G R
<i>Arenaria obtusiloba</i> (Sandwort) Very low growing with hard light green and white foliage. Native to the Rocky Mountains. Provide gritty soil. Caryophyllaceae.	white	4 5	2	10	7	6	6	N R
<i>Arenaria tetraquetra</i> (Sandwort, Spanish) Magnificent dense cushion of tiny gray green leaves studded with white stars. Easy favorite for scree from the Spanish Sierras. Caryophyllaceae.	white	5 7	1	7	7	6	6	R
<i>Arisaema triphyllum</i> (Jack in the Pulpit) popular preacher of Eastern woodlands. Araceae.	green/purple	4 5	12	12	4	4	4	R (Ever
<i>Armeria juniperifolia</i> (Thrift, Sea Pink) Compact grassy bun. Charming lavender-pink. Plumbaginaceae.	pink-purple	5 6	6	6	7	5	6	R
<i>Armeria maritima</i> (Sea Thrift) Long blooming mound for many soils and exposures. Easy, popular plant. Spherical heads just above the foliage. If spent blossoms are sheared will bloom again. Plumbaginaceae. 'Dusseldorf Pride', hot rose-red flowers on low stems for a long spring-summer season. 'Dwarf', tiny cushion form. Heavy bloomer. Double rose color. 'Alba', drifts of pure white.	pink	5 7	7	12	7	6	6	R
<i>Artemisia caucasica</i> (Sagebrush, Caucasian) Neat lacy mats for hot spots. Asteraceae.	gray	7 8	5	12	8	8	7	R
<i>Artemisia frigida</i> (Sage, Dwarf) Neat mounds of gray filigree. Fragrant foliage with woody stems. Soft and delicate texture. Asteraceae.	gray	6 8	8	12	8	6	7	F R X
<i>Artemisia pycnophylla</i> 'David's Choice' (Artemisia) Fuzzy mounds of white foliage. Attractive all season. Asteraceae.	gray	7 8	12	18	4	5	7	B R

<i>Artemisia schmidtiana</i> 'Green Mound' (Sage, Green Mound)	green foliage	7	8	6	10	7	7	6	
BFR	Same as 'Silver Mound' except with green foliage. Soft aromatic, fern-like foliage. 'Silver Mound' Symmetrical mounds of deeply, glistening silver, cut leaves. From Japan; for ordinary soils and exposures. Inconspicuous white flowers.								
<i>Artemisia viridis</i> (Artemisia, Green)	green	5	6	2	10	8	7	8	RX
	Huddled evergreen sage from outer Mongolia. Prefers full sun. Makes a perfect bulb cover or specimen plant. Attractive foliage. Prefers dry soil. Asteraceae.								
<i>Arum italicum</i> (Arum, Italian)	green/white	4	5	12	10	7	4	5	R
	Attractive arrow shaped leaves appear in fall, persist though winter, disappearing in summer. Miniature "Jack-in-the-Pulpit" flowers. Orange red berries. Araceae.								
<i>Aruncus aethusifolius</i> (Goat's Beard)	cream/white	5	6	12	8	4	4	5	R
	Miniature ferny clumps with white feathery flowers. Blossoms look like Astilbe. Rosaceae.								
<i>Asarum caudatum</i> (Ginger, Western Wild)	brown	6	7	5	12	3	4	4	RW
	Fast spreading, near evergreen groundcover for shade. Aristolochiaceae.								
<i>Asarum europaeum</i> (Ginger, European Wild)	brown	6	7	4	10	3	4	4	ERW
	Shiny, kidney-shaped, evergreen leaves make neat mats in cool shade. Thrives in good soil, will survive difficult shade locations. Flowers are hidden below leaves. Aristolochiaceae.								
<i>Asperula gussonii</i> (Woodruff, Corsican)	pink	5	7	2	10	7	6	6	R
	Sun. Heat-loving cushion woodruff is a fine specimen for a choice spot. Rubiaceae.								
<i>Asperula lilaciflora</i> v. <i>caespitosa</i> (Woodruff, Lilac)	pink	6	8	1	10	6	6	6	R
	Sun or part shade. Fine mat forming woodruff for a choice spot in the rock garden. Rubiaceae.								
<i>Asperula pontica</i> (Woodruff, Pontic)	pink	5	6	1	12	7	6	6	R
	Tiny pink flowers in profusion all along the stem. Mat-forming green needle leaves. Rubiaceae.								
<i>Asplenium scolopendrium</i> 'Marginatum' (Fern, Hart's Tongue)	N/A	0	0	10	10	5	5	5	
RW	At home in wall garden or woodland garden. Prefers rich soil mixed half and half with sharp gravel. Polypodiaceae.								
<i>Asplenium trichomanes</i> (Spleenwort, Maidenhair)	N/A	0	0	6	4	5	5	5	RW
	Evergreen Rock Fern of worldwide distribution in the North hemisphere. Prefers limestone. Polypodiaceae.								

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<i>Aster alpinus</i> (Aster, Alpine) Very compact. Mound growth habit. Great cut flower. Asteraceae. 'Goliath' Very compact lilac blue with gold centers. Dark grayish green leaves. Great cut flower.	lilac	6 7	6	15	7	5	6	C R
<i>Aster dumosus</i> 'Niobe' (Daisy, Dwarf Michaelmas) A formal mound of white that blooms in late summer. Asteraceae.	white	8 9	6	12	8	7	7	R
<i>Aster himalaicus</i> (Aster, Himalayan) Large flowered spring aster for ordinary soils and sites. Sun or part shade. Asteraceae.	lavender	5 6	5	5	7	6	6	R
<i>Aster novi-belgii</i> 'Alert' (Aster, Dwarf) Screaming magenta stars over precise mats in high autumn. Compact bushy habit. Glossy foliage. Creeping roots. Flowers in dense clusters. Asteraceae. 'Prof Kippenberg' Spectacular cushions for fall bloom. Easy to grow. Splendid for cutting. Globe shaped plant topped with masses of 1/2" blooms. 'Snow Flurry', white mounds for fall color. Blooms so heavily the foliage literally disappears for several weeks. Cloud of small white flowers.	pink	8 9	12	12	8	6	6	R
<i>Aster venustus</i> (Aster, Silverleaf) Pink daisies for the sunny garden. Asteraceae.	pink	6 8	7	4	8	7	7	R
<i>Astilbe chinensis</i> var. <i>pumila</i> (Astilbe, Dwarf) Excellent ground cover tolerant of dry soils. Shade lover. Spreads gently from stolons in cool shade. Neat dwarf. Stiff erect flower spikes. Saxifragaceae.	raspberry	7 9	10	10	5	5	5	P R W X
<i>Astilbe simplicifolia</i> 'Sprite' (Astilbe, Simpleleaved) Dense clumping miniature. Perennial Plant Association selection. Saxifragaceae.	pink	7 9	12	12	5	4	4	R
<i>Astragalus kentrophyta</i> (Milkvetch, Spiny mat) Spiny cushions and tiny purple flowers for dryland gardens. Fabaceae.	pink	5 6	1	10	7	6	7	R X
<i>Astragalus spatulatus</i> (Milkvetch, Spoonleaved) Showy low growing grayish green, awl shaped foliage cushion for hot spot. Dislikes competition. Drought tolerant; needs good drainage. Fabaceae.	pink	5 6	2	6	8	7	7	R X
<i>Aubrieta deltoidea</i> (Rock Cress) For rich, well-drained crevices in sun or shade. Show, trailing, drooping, spreading plants. Trim back severely after flowering for second bloom. Brassicaceae.	purple	4 5	3	12	6	6	6	G R
<i>Aurinia saxatilis</i> (Basket of Gold) Draping, sprawling habit. Good for rock gardens, hanging baskets, etc. Likes poor or sandy soil but will adapt; takes heat	yellow	4 5	12	12	8	6	7	B R X

but water in extreme drought. Brassicaceae. 'Compactum', more compact version of previous. 'Sunny Border Apricot', softer colored version.

<i>Belamcanda flava</i> 'Hello Yellow' (Leopard Flower)	yellow	6	7	12	10	8	6	6	R
Miniature, yellow flowered version of blackberry lily. Midsummer color. Iridaceae.									
<i>Bellis perennis</i> (Daisy, English)	pink	5	7	5	8	6	6	5	R
Turf-forming daisy from Europe. Hardy, everblooming plants. 1 1/2" flowers in red, rose or white. Asteraceae.									
<i>Bergenia cordifolia</i> (Leatherleaf)	pink to white	4	5	12	14	5	5	6	BERWX
Pink clusters over leathery, evergreen leaves. Thrives in partial shade. Great groundcover along pathways or under trees. Spreads slowly, not invasive. Saxifragaceae. 'Red Start', deeper colored version of old favorite.									
<i>Bolax glebaria</i> (Azorella)	yellow	6	7	2	20	7	4	6	R
Waxy—almost plastic—very hard cushions. Sun or part shade. Small flowers. Ideal for troughs. Native to the Falkland Islands. Vegetable equivalent of Astro turf. Umbelliferae. Forma <i>minor</i> , smaller version. Good for a choice spot in the garden.									
<i>Brunnera macrophylla</i> (Elephant Ear Forget-Me-Not)	blue	4	6	10	20	4	6	6	BGR
Huge, fuzzy heart-shaped leaves. Leaves follow masses of forget-me-not flowers in spring. Can be invasive. Boraginaceae.									
<i>Calandrinia umbellata</i> (Calandrinia, Purple)	red	6	8	6	8	9	7	7	R
Long-blooming, heat and sun-loving succulent. Clusters of glowing, reddish-violet flowers. Flowers set off by tufted gray-green foliage. Portulacaceae.									
<i>Calceolaria lanceolata</i> (Calceolaria, Mat)	yellow	4	5	6	6	6	6	6	R
Dainty yellow blossoms splashed with maroon. Wiry stems on flowers. Gray-green foliage. Scrophulariaceae.									
<i>Callirhoe involucreta</i> (Wine Cups, Poppy Mallow)	purple	6	10	5	20	8	7	8	G N R X
Fast-spreading with constant succession of bloom. Native to Great Plains. Named for a Greek river goddess. Taprooted; grows in dry to moderately moist soil. Malvaceae.									
<i>Callirhoe triangulata</i> (Poppy Mallow)	magenta	7	9	4	20	8	7	8	BRX
Deep magenta, hollyhock-like flower clusters. Fuzzy, triangular, crenulate leaves on compact trailing stems. Native of Wisconsin and Illinois. Malvaceae.									
<i>Calluna vulgaris</i> (Heather)	pink	7	9	7	10	7	4	4	R

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Scottish heather, for cool, peaty soils in part sun. Blooms in late summer. Hearty heath. Both summer flowers and brilliant winter foliage color. Ericaceae. Many selections. 'County Wicklow', true Scottish heather blooming in late summer. 'Foxii Nana', tiniest heather resembles a mound of bright green moss. Foliage turns vivid wine-red in winter. 'Tom Thumb', pink flowers, probably the most minute foliage. Grows into a tiny, olive-green tree.								
<i>Campanula alpina</i> (Bellflower, Alpine)	blue	5 6	10	5	7	7	6	R
Stocky, nodding blue trumpets in early summer. Choice high alpine. Campanulaceae.								
<i>Campanula carpatica</i> 'Blue Clips' (Harebell, Carpathian)	blue	6	9	8	10	8	6	6
R Giant blue cups all summer long. From eastern Europe. Grows in compact tufts. Light green leaves with large violet/blue flowers. Blossoms bury plant in color. 'White Clips', twinkling white version.								
<i>Campanula cochlearifolia</i> (Fairybells)	blue	6 8	3	15	7	6	6	R
Mats of round, bright green leaves. Tiny blue bells. Give a well-drained soil. Stays very compact. Campanulaceae. 'Alba', with dainty, nodding pure white bells. 'Miranda', pale, giant flowered form found first by Reginald Farrer. Strongest growing variety. Chubby bells of pale icy blue sit atop a tuft of dense foliage.								
<i>Campanula dasyantha</i> (Bluebell, Japanese)	lavender	5 6	4	12	7	6	6	R
Flowers are erect, white-centered, lavender-blue flowers. Campanulaceae.								
<i>Campanula formanekiana</i> (Bellflower, Cup)	white	5 6	10	10	8	7	7	R X
Furry rosettes of silver leaves are decorative in their own right. Showy cups the second year. Campanulaceae.								
<i>Campanula garganica</i> (Bellflower, Adriatic)	blue	5 6	6	10	7	6	6	E R
Blue stars over evergreen mounds of holly-shaped leaves. Thrives in sun or shade. Long cultivated, easily grown Foliage is basal and thick. Native to Europe. Campanulaceae.								
<i>Campanula portenschlagiana</i> (Campanula, Adriatic)	blue	6 7	3	10	7	6	7	R W X
Lush evergreen mounds covered with violet bells in late spring. Part shade. Campanulaceae.								
<i>Campanula poscharskyana</i> (Bellflower, Siberian)	blue	6 8	5	18	7	7	6	G R
Pale blue star-like flowers. Vigorous creeper. Very compact. Superb grown among rocks or tumbling over a wall. Scalloped heart-shaped leaves. Campanulaceae.								
<i>Campanula rotundifolia</i> (Bluebells of Scotland)	blue	6 9	9	6	7	5	5	B N R
Native bluebell with slender, hair-like stems. Large 1" blue flowers. Very cold hardy. Plants form three inch high clumps. Campanulaceae.								
<i>Campanula tridentata</i> (Caucasian Bluebell)	blue	5 6	5	4	7	7	6	R

Violet flowered cushion campanula for gritty soils. Campanulaceae.									
<i>Campanula</i> x 'Birch Hybrid' (Bluebell)	purple	6	7	6	18	7	6	7	R
A robust growing, free-flowering hybrid. Very effective wall and crevice plant. Campanulaceae.									
<i>Castilleja integra</i> (Paintbrush, Southwestern)	orange-red	6	8	6	4	8	7	8	N R X
Southwestern native. Hemiparasite; grow with <i>Artemisia</i> or native grasses. A challenge to establish, then easy. Orange-red bracts; inconspicuous flowers. Scrophulariaceae.									
<i>Ceanothus pumilus</i> (Dwarf Ceanothus)	purple	5	6	2	24	7	7	7	R
Tiny-leafed creeper with fluffy pale purple flower heads. Rhamnaceae.									
<i>Cerastium alpinum</i> 'var. lanatum' (Chickweed, Woolly)	white	5	6	8	14	7	7	6	ER
Very compact <i>Cerastium</i> with silvery, woolly leaves. Short-stemmed white blooms. Best planted on north or east slope. Evergreen. Caryophyllaceae.									
<i>Cerastium candidissimum</i> (Chickweed, Mouse-ear)	white	6	6	10	16	8	7	6	R
Silvery mounds of narrow leaves with bright white flowers in early summer. From Greece. Caryophyllaceae.									
<i>Cerastium tomentosum</i> (Snow-in-Summer)	white	6	7	6	20	8	7	6	B G R
Fast-spreading, subtle silvery gray mat. Shear after flowering. Nice in winter. Masses of 3/4" flowers. Can become invasive, responds well to discipline. Caryophyllaceae.									
<i>Ceratostigma plumbaginoides</i> (Leadwort)	blue	8	10	9	12	6	5	5	BRW
Cobalt blue flowers. Foliage turns deep mahogany in autumn. Peacock blue flowers. Prefers high level of organic matter. Mulch in winter. Plumbaginaceae.									
<i>Cheilanthes gracillima</i> (Lacefern)	N/A	0	0	6	6	7	5	5	R
Plants native to dry, rocky situations. Suited to the sunny rock garden. Polypodiaceae.									
<i>Chrysanthemum m.</i> 'Little Miss Muffet' (Daisy, Shasta)	white	6	8	12	15	8	6	6	B C R
Giant white daisies all summer. Excellent for cutting. Asteraceae.									
<i>Chrysanthemum maximum</i> 'Snow Lady' (Daisy, Shasta)	white	7	10	10	12	7	7	7	C R
Cultivar of Shasta daisy. Asteraceae.									
<i>Chrysanthemum weyrichii</i> (Mum, Ground Cover)	white	8	10	9	12	7	6	6	GR Trim
white or pink daisies over deep green mats in spring and fall. Fast spreading. Asteraceae. 'Pink Bomb', soft pink version of 'White Bomb' with fewer but larger flowers. Very resistant to frost. Increasing pink blush as they age. Ideal for run-									

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ning through crevasses of sunny wall. Asteraceae.								
<i>Chrysogonum virginianum</i> (Green and Gold)	yellow	6 8	4	12	4	4	4	R
Spreading. Long season of brassy, five-petalled daisies. Benefits from afternoon shade. Asteraceae.								
<i>Claytonia megarhiza</i> (Spring Beauty)	pinkish white	5 6	2	16	7	6	6	NR
Fleshy shiny leaves form rosettes. Bears pinkish white flowers in early summer. A Colorado alpine native. Extremely challenging to grow. Portulacaceae.								
<i>Convallaria majalis</i> (Lily-of-the-valley)	white	5 6	8	6	4	5	4	BFGRW
Deliciously fragrant, excellent ground cover; prolific. Divide when overcrowded. Many bell-like flowers on strong stems. Top dress with manure spring or fall. Liliaceae.								
<i>Coreopsis auriculata</i> 'Nana' (Tickseed)	orange	6 8	12	12	8	5	8	CR
Bright orange-yellow flowers. Spreads by stolons to form mat. Long blooming season if faded flowers are removed. Not fussy about soil. Asteraceae.								
<i>Coreopsis grandiflora</i> 'Baby Sun' (Coreopsis, Dble Dwf)	yellow	6 8	10	12	8	5	7	BCRX
Long season of summer color. Easy in most soils. Asteraceae. 'Early Sunrise', first to win gold medals in both AAS and Fleuroselect trials. Bears golden, semi-double blooms. No insects or disease. Tolerant. 'Gold Fink', first really dwarf coreopsis. Strong stems, bright yellow blooms.								
<i>Coreopsis verticillata</i> 'Moonbeam' (Coreopsis)	yellow	5 10	10	15	7	5	5	BCR
Carefree variety. Fine fern-like foliage. Pale yellow flowers in great abundance. Drought and mildew resistant. Plant of the Year in 1992. Nice in container. Asteraceae.								
<i>Corydalis solida</i> 'George Baker' (Crimson Fumewort)	red	3 4	7	5	6	6	6	R
Crimson spikes of two lipped fls from a tuber. Very easy to grow in part shade, cool scree or woodland. Fumariaceae								
<i>Cotula minor</i> (Cotula, Tinyleaf)	yellow	5 6	1	10	5	5	4	R
Fast spreading carpeter from New Zealand. Superb filler for flagstone paths. Asteraceae.								
<i>Cotula squalida</i> 'Minor' (Cotula)	yellow	5 6	1	10	7	6	5	R
Very tiny ground cover in deep green for moister sites. Asteraceae.								
<i>Crepis lanata</i> (Silver Hawkweed)	yellow	5 9	6	10	8	7	7	R
Yellow dandelion flowers over superb, white, felty leaves. For hot spots. Asteraceae.								
<i>Cryptogramma crispa</i> (Fern, Parsley)	N/A	0 0	5	5	5	5	5	R
From acid cliffs of the West. Rock Fern with spiky fertile leaves and ruffled green foliage. Polypodiaceae.								

<i>Cyclamen hederifolium</i> (Cyclamen, Hardy)	pink	8	9	3	8	5	4	5	GRW
Showy, variegated leaves appear in fall. Best in shade of deciduous trees. Primulaceae.									
<i>Cypripedium acaule</i> (Ladies Slipper, Red)	rose-pink	4	5	12	8	3	3	3	RW
Native American orchid of moist woodlands and bogs. Likes shade and acidic soils. Likes deep leaf mold. Can be frustrating due to unique requirements. Orchidaceae.									
<i>Delosperma cooperi</i> (Iceplant, Purple Hardy)	purple	5	10	4	12	9	8	7	BRX
Showy purple flowers for much of summer season. Very hardy in sunny, hot spots. Aizoaceae.									
<i>Delosperma nubigenum</i> (Iceplant, Hardy)	yellow	4	6	2	15	8	7	6	BGRX
Emerald mats turn ruby red in winter. Superlative ground cover for sunny problem spots. Aizoaceae.									
<i>Delosperma sutherlandii</i> (Iceplant, Sutherland)	purple	5	6	3	6	8	6	7	R
Low perennial with hairy leaves. Single daisy-like flowers are 2 1/2" in diameter. Shaggy flowers are held 2—4" above leaves. Aizoaceae.									
<i>Delphinium grandiflorum</i> 'Blue Butterfly' (Larkspur)	blue	6	8	12	8	7	7	6	R
Select form of type. Superlative midsummer color. Ranunculaceae.									
<i>Dianthus</i> 'Dottie 608' (Pink, Dottie 608)	white	5	6	10	10	8	7	6	BFR
White blooms with pink dots on petals. Tiny gray grass-like leaves. Caryophyllaceae.									
<i>Dianthus</i> 'Frost Fire' (Pink, Frost Fire)	pink	5	6	4	15	8	7	6	R
Fragrant. Flowers are double red. Blue gray foliage. Long blooming period. Caryophyllaceae.									
<i>Dianthus</i> 'Pikes Pink' (Dianthus, Pikes Pink)	pink	5	6	10	10	8	7	6	R
Dense silver mats with showy pink blooms over long season. Caryophyllaceae.									
<i>Dianthus alpinus</i> (Pink, Alpine)	pink	5	6	2	8	7	6	6	BFR
Low clumps of mid-green leaves. Profuse, fragrant, single flowers. Native to the Alps. A real gem of the genus. Caryophyllaceae.									
<i>Dianthus amurensis</i> 'Siberian Blues' (Pink, Amur River)	mauve	5	6	10	12	7	6	6	R
Purple-blue selection of long blooming summer Pink. Caryophyllaceae.									
<i>Dianthus barbatus</i> 'Pixie' (Pink, Pixie)	pink	5	6	6	10	7	6	6	R
Old-fashioned border flower that never loses its appeal or fragrance. Caryophyllaceae.									
<i>Dianthus caryophyllus</i> (Carnation, Clovelike)	mixed	5	7	12	15	8	7	6	BCPR

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Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
Mats of narrow, pointed, decorative leaves. Fragrant flowers borne in profusion. Best if grown in full sun, will tolerate some shade. Makes a good cut flower. Caryophyllaceae.								
<i>Dianthus deltoides</i> (Pink, Maiden)	pink	5 6	8	8	7	6	6	R
Low mats of green foliage covered with bicolored flowers. Spreads from seed. Blooms all summer. Caryophyllaceae.								
<i>Dianthus deltoides</i> 'Zing Rose' (Pink, Zing Rose)	pink	5 6	8	8	7	6	6	B F R
Evergreen mats covered by bright rose-red flowers with soft, spicy fragrance. Best in full sun, tolerates some shade. Plant in masses with taller, spiked plants. Caryophyllaceae.								
<i>Dianthus erinaceus</i> (Pink, Hedgehog)	pink	6 7	2	8	7	7	7	R
Very spiny cushion plant for well drained scree conditions. Excellent for the Alpine garden. Caryophyllaceae.								
<i>Dianthus freynii</i> (Pink, Cushion)	pink	4 6	3	8	8	7	7	R
Tiny gray cushions studded with large pink stars. A classic for crevices or troughs. Easy to grow. Caryophyllaceae.								
<i>Dianthus gratianopolitanus</i> (Pink, Cheddar)	pink	5 6	6	8	8	7	7	R
The familiar cheddar pink is a fine cushion for rock gardens. Great for the front of the border. Caryophyllaceae.								
<i>Dianthus monspessulanus</i> (Pink, Montpelier)	white/pink	5 6	10	15	7	6	6	R
Grows in tufts. Produces deeply fringed rose red flowers. Flowers are fragrant. Native to stony alpine meadows from Portugal to Yugoslavia. Caryophyllaceae.								
<i>Dianthus nitidus</i> (Pink, Balkan)	pink	5 6	6	4	8	7	6	R
Tight tufts of emerald foliage. Easy to grow. Glorious pink stars with dark purple calyx in mid-spring. Caryophyllaceae.								
<i>Dianthus simulans</i> (Pink, Small Balkan)	pink	5 6	2	6	7	6	6	R
Miniature cushions with tiny pink flowers. Prefers sunny area. Superb for troughs or small gardens. Caryophyllaceae.								
<i>Dianthus superbus</i> (Pink, Lace)	pale pink	5 6	10	15	7	6	6	R
Tall, intensely fragrant Lace Pink. Caryophyllaceae.								
<i>Dianthus x allwoodii</i> (Pinks, Allwood)	pink	5 6	6	8	7	7	6	F R
Pink blooms most of summer in a sunny spot. Sweet scented, even in winter. Attractive with silvery cushions of foliage. Often proves Perennial in our climate. Caryophyllaceae.								
<i>Diascia</i> 'Ruby Fields' (Twinspur, Ruby Field)	rosy-pink	5 8	12	12	6	5	5	R
Hybrid of <i>D. barbarae</i> and <i>D. cordata</i> . Brick rose flowers all summer in loamy soil. Scrophulariaceae.								
<i>Dicentra canadensis</i> (Squirrel Corn)	white	5 5	6	6	5	5	8	R
Especially lacy foliage and white, pink-tinged flowers. Fumariaceae.								

<i>Dicentra eximia</i> (Bleeding Heart, Fringed)	pink	5	10	9	12	4	5	5	R W
Rare eastern wild flower. Produces sprays of bloom most of the summer in shady spots. Fumariaceae.									
<i>Dicentra eximia</i> 'Luxuriant' (Bleeding Heart, Fringed)	pink	5	10	12	12	4	4	4	BR
Carmine flowers are free blooming. Easy to grow in well-drained humusy soils. Prefers some shade, but tolerant of full sun. Fumariaceae.									
<i>Dicentra eximia</i> 'Snowdrifts' (Bleeding Heart, Wild)	white	5	7	10	15	4	5	5	R
White form of fringed bleeding heart. Foliage grayish green and finely divided. Neat clump, will self-sow. Fumariaceae.									
<i>Dicentra eximia</i> 'Zestful' (Bleeding Heart, Fringed)	red	5	8	10	20	4	5	5	BR W
Dark flowered, possibly hybrid. Vigorous mounding plant blooms for a long season. Fumariaceae.									
<i>Dicentra formosa</i> (Bleeding Heart, Wild)	pink	4	8	10	15	4	4	4	R
Likes a forest setting. Will form large colonies of ferny leaves and light lilac hearts. Fumariaceae.									
<i>Dicentra oregana</i> (Oregon Dicentra)	white	5	5	6	6	5	5	8	R
A true rock plant. Not difficult given perfect drainage. Fumariaceae.									
<i>Digitalis thapsi</i> (Foxglove, Dwarf Pink)	pink	5	6	12	8	6	6	6	R
Dense mounds of hairy leaves and heavenly pink trumpets in midsummer. Scrophulariaceae.									
<i>Dodecatheon alpinum</i> (Shooting Star, Alpine)	purple	5	6	1	4	6	6	8	R
Extremely dwarf, western high alpine native. Primulaceae.									
<i>Dodecatheon hendersonii</i> (Shooting Star, Henderson's)	purple	5	6	8	10	7	5	5	R
Vivid red-purple flowers. Decorative foliage base of round, fleshy leaves. Primulaceae.									
<i>Dodecatheon poeticum</i> (Shooting Star, Poet's)	red	5	6	6	3	6	7	5	R
Popular and easy. Dark, nearly red flowers. Primulaceae.									
<i>Dodecatheon pulchellum</i> (Shooting Star, Western)	pink	5	6	12	5	7	5	3	R W
Famous shooting star of western mountains. Thrives in moist soils. Good in sun or shade. Primulaceae.									
<i>Douglasia laevigata</i> (Douglasia)	pink	5	6	2	8	7	6	5	R
Cushion forming plants for sunny scree or alpine house. Primulaceae.									
<i>Draba aizoides</i> (Draba, Common)	yellow	3	5	2	4	8	7	7	R
Tiny draba with hairy margined leaves. Long bloom season. Makes neat mounds in rock gardens or troughs. Brassicaceae.									

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Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Draba bruniifolia</i> (Draba, Cushion) Fast spreading mats of green and yellow flowers. Brassicaceae.	yellow	3 4	3	12	8	7	6	R
<i>Draba cappadocica</i> (Draba, Cappadocian) Tight gray-green velvety buns. Golden yellow flowers cover plant. Brassicaceae.	yellow	5 6	3	5	7	7	6	R
<i>Draba hispanica</i> (Draba, Spanish) Spiny cushions produce symmetrical mounds of bloom. Hairy leaves create intricate patterns. Thrives in sunny rock garden. Brassicaceae.	yellow	3 4	3	10	8	7	7	R
<i>Draba oligosperma</i> (Draba, Mat) Miniature draba from the Rockies. Loves a sunny crevice. Tiny mats of saxifrage-like foliage. Brassicaceae.	yellow	3 4	2	7	8	7	7	R
<i>Draba olympica</i> (Draba, Olympic) Spreading mossy-green cushion with compact clusters of yellow flowers. Easiest of all. Brassicaceae.	yellow	3 4	3	12	8	7	6	R
<i>Draba paysonii</i> (Draba, Payson's) Ranks as one of the finest American, gray-leaved species. Compact yellow flower clusters. Brassicaceae.	yellow	3 4	3	6	8	7	6	R
<i>Draba repens</i> (Draba, Cushion) Minute bright green mounds of tiny leaves. Part shade. Vivid yellow spring flowers. Brassicaceae.	yellow	3 5	4	10	7	7	6	R
<i>Draba rigida</i> (Bun Draba) Fabulous cushion for rock garden treatment. small flowers on dark, wiry stems. Many selections available.	yellow	3 4	3	6	8	7	6	R
<i>Draba streptocarpa</i> (Draba, Twisted-pod) Low mounds of bristly rosettes and screaming yellow flowers. Choice Rocky Mountain native. Brassicaceae.	yellow	4 5	4	3	7	7	6	R
<i>Dracocephalum botryoides</i> (Dragonhead, Cutleaf) Gray, lobed leaves are obscured with pink dragonheads. Labiatae.	purple	5 7	3	9	7	6	6	R X
<i>Dracocephalum renati</i> (Dragonhead, Fragrant) Aromatic gray leaves form symmetrical mound. Produces white blooms all summer. Labiatae.	white	5 8	8	8	7	6	6	R
<i>Dracocephalum speciosum</i> (Dragonhead) Especially large flowers in cobalt blue. Vigorous. Labiatae.	blue	5 8	10	8	7	6	6	R
<i>Echinocereus fendleri</i> (Cactus, Hedgehog) Stout columns with dramatic spines. Cactaceae.	purple	5 6	10	6	8	8	8	R X
<i>Echioides longiflorum</i> (Prophet Flower) Exotic shade-lover. Large yellow flowers that open with bright brown spots that fade. Boraginaceae.	yellow	5 7	10	12	6	4	5	R

<i>Edraianthus pumilio</i> (Edraianthus, Cushion)	purple	5	6	2	6	7	6	6	R
Tight cushions of tiny, grass-like leaves. Foliage covered with purple flowers in mid spring. Campanulaceae.									
<i>Epimedium alpinum</i> (Barrenwort)	red	4	5	10	12	4	4	5	RW
Deep red and white four-petalled flowers. Wonderful russet tinged airy foliage. Berberidaceae.									
<i>Epimedium grandiflorum</i> (Barrenwort)	purple	4	5	10	10	4	4	5	RW
Giant white or purple spidery flowers on slow spreading clumps. Berberidaceae.									
<i>Epimedium x rubrum</i> (Barrenwort)	red-white	4	5	6	6	4	4	5	RW
Red-tinged foliage. A rapid deciduous spreader. Bicolored flowers of crimson and white. Aristocrat of ground covers. Berberidaceae.									
<i>Epimedium x versicolor</i> 'Sulphureum' (Barrenwort)	yellow	5	6	12	12	4	4	5	B E G R W
Soft yellow flowers on vigorous, spreading clumps. Berberidaceae.									
<i>Epimedium x youngianum</i> 'Niveum' (Barrenwort)	white	4	5	6	6	4	4	5	RW
One of the lowest growing Epimediums. Sprays of graceful snow-white pendulous flowers. Berberidaceae.									
<i>Erica tetralix</i> 'Pink Star' (Heath)	pink	8	10	6	12	7	4	5	R
Waxy, soft-pink bells. Beautiful silver-gray foliage. Ericaceae.									
<i>Erica vagans</i> 'Nana' (Heath, Cornish)	white	8	10	6	12	7	4	5	R
Spikes of creamy white flowers. Attractive light green foliage with gold tips. Ericaceae.									
<i>Erigeron caespitosus</i> (Daisy, Cushion)	white	5	6	4	6	9	8	7	R
Mounded native cushion producing many white daisies. Asteraceae.									
<i>Erigeron compositus</i> (Fleabane, Cutleaf)	white	4	9	4	6	8	7	8	BR
Easily grown cushion. Very neat and attractive gray leaves. White daisy flowers. Long bloom. Native to North America. Sometimes spreads from seed. Asteraceae.									
<i>Erigeron pinnatisectus</i> (Daisy, Pinnate)	purple	5	6	3	4	8	7	6	R
Tight mounds of ferny, green leaves. Glorious violet daisies on low stems for much of spring. Asteraceae.									
<i>Erigeron scopulinus</i> (Daisy, New Mexican)	white	5		1	7				R
Sun. Tiny native cushion producing many white daisies. Easy to grow. Asteraceae.									
<i>Erinus alpinus</i> (Erinus)	purple	3	4	3	3	8	7	7	R
Tiny tufts of small spatulate leaves spread by seed and persist. Likes crevices between shady rocks in garden of minia-									

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tures. Each plant lasts only a few years. Scrophulariaceae.								
<i>Eriogonum effusum</i> (Buckwheat, Baby's Breath)	white	8 9	12	15	9	9	8	R
Symmetrical mound with white flowers. Prefers full sun. Red winter color. Polygonaceae.								
<i>Eriogonum flavum</i> (Buckwheat, Yellow)	yellow	5 6	6	8	8	8	7	ENRX
Low cushion, almost ever-gray mat of foliage. Very easy to grow once established. Does well in dry, ordinary soil. Excellent for sunny rock garden. Polygonaceae.								
<i>Eriogonum jamesii</i> (Buckwheat, James')	white	5 7	12	12	9	8	8	ERX
Creamy umbels of everlasting flowers turn rusty by summer's end. Dusty ever-gray rosettes. Polygonaceae.								
<i>Eriogonum subalpinum</i> (Sulfur Flower, Subalpine)	yellow	5 7	8	10	8	8	8	RX
Beautiful red foliage in winter. Polygonaceae.								
<i>Eriogonum umbellatum</i> (Sulfur Flower)	yellow	5 7	10	10	8	8	8	CENRX
Evergreen mounds with papery yellow flowers for much of summer. Very easy once established. Does well in dry, ordinary soil. Beautiful dark red winter foliage. Polygonaceae.								
<i>Erodium chrysanthum</i> (Cranesbill, Yellow)	yellow	5 9	5	15	8	7	7	R
Silvery cushions sport straw-yellow flowers for much of the year. Geraniaceae.								
<i>Erodium macradenum</i> 'Roseum' (Cranesbill)	pink	5 8	8	10	8	7	7	R
Quite hardy in rocky soil. Lacy fresh green foliage. Geraniaceae.								
<i>Eryngium alpinum</i> (Sea Holly, Alpine)	silver	6 7	12	8	7	7	5	DR
Unusual pineapple shaped blue flowers on 2 1/2' plants. Excellent for drying. Umbelliferae.								
<i>Erysimum helveticum</i> (Wallflower, Swiss)	yellow	3 6	10	7	7	6	5	R
Compact mats of bright green. Vibrant yellow through the spring. Brassicaceae.								
<i>Erysimum x allionii</i> 'Golden Bedder', Wallflower.)	yellow	5 5	10	8	6	7	6	BR
Long season of shocking orange Wallflowers. Brassicaceae.								
<i>Euphorbia amygdaloides rubra</i> (Spurge, Wood)	yellow/green	5 5	12	10	8	6	7	BER
Dark red-stained leaves and contrasting chartreuse blooms in early summer. Euphorbiaceae.								
<i>Euphorbia myrsinites</i> (Spurge, Succulent)	yellow	3 5	3	15	8	8	8	RX
Sedum-like mounds of gray foliage. Flowers for a long season. Can be very invasive. Good for dry, sunny sites. Euphorbiaceae.								
<i>Euphorbia epithymoides</i> (<i>polychroma</i> ; Spurge, Cushion)	yellow	5 6	8	15	6	6	7	BRX

Unusual accent plant, foliage turns red in the fall. Free of diseases and pests. Chartreuse flowers. Self sows; aggressive in rich, moist soil. Euphorbiaceae.

<i>Festuca cineria</i> (Fescue, April Green)	steel blue fol.	0	0	8	6	9	7	8	ABEPRX
Evergreen rounded clump grass with steel blue foliage. "Rainbow effect" in early spring Tolerates most soils. Cool hardy to 9,000' Gramineae.									
<i>Festuca glacialis</i> (Grass, Fescue)	N/A	0	0	2	10	8	7	7	R
Easy but slow growing tiny tufts of blue-gray foliage. Gramineae.									
<i>Festuca ovina</i> var. <i>glauca</i> (Grass, Blue Fescue)	blue	6	7	12	10	8	7	6	BRX
Blue-green foliage is attractive all summer. Good xeriscape plant. Grows in 4-10" rounded tufts. Dry soil with good drainage. Gramineae. 'Elijah Blue' particularly bright silver blue, uniform clone.									
<i>Fragaria americana</i> (Strawberry, Wild)	white	5	7	6	8	7	7	7	RY
An attractive ground-cover or edging plant. Edible fruit. Rosaceae.									
<i>Fragaria</i> 'Pink Panda' (Strawberry, Pink Panda)	pink	5	6	8	18	5	5	7	GRY
Nice ground cover. Edible fruits. Rosaceae.									
<i>Fragaria vesca</i> (Strawberry, Runnerless)	white	5	7	8	8	7	7	7	GRXY
Fast-growing groundcover or edger with edible red fruit. Produces delicious tangy fruit. Plants stay neat. Produces no runners. Rosaceae.									
<i>Fritillaria pallidiflora</i> (Yellow woodland fritillary)	yellow	4	5	12	7	5	4	5	R
Large, soft yellow flowers for a long season. Very easy and permanent in cool scree or woods. Liliaceae.									
<i>Galium odoratum</i> (Woodruff, Sweet)	white	5	6	8	12	3	5	7	FGRX
Fast spreading ground cover for shady moist areas. Do not place near choice, tiny plants. Leaves are small and smell like new mown hay. Used to flavor May wine. Rubiaceae.									
<i>Genista tinctoria</i> var. <i>humifusa</i> (Broom)	yellow	5	6	2	12	8	7	7	R
Prostrate branchlets are densely clothed. Has neat, little shiny leaves. One of the best dwarfs. Fabaceae.									
<i>Gentiana acaulis</i> (Gentian, Trumpet)	blue	4	6	3	8	7	5	5	R
Giant flowered spring gentian of the Alps. Gentianaceae.									
<i>Gentiana affinis</i> (Gentian, Narrowleaf)	Blue	6	8	10	8	7	6	6	R
Gray leaved. Deep blue, narrow blooms in midsummer. Native to mountain parkland. Gentianaceae.									

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<i>Gentiana angustifolia</i> (Gentian) A distinct "acaulis type" with decidedly narrow, dull green leaves. Gentianaceae.	blue	4 4	3	12	7	5	5	R
<i>Gentiana cachmerica</i> (Gentian, Kashmir) A prostrate species with rosette foliage. Tubular bright blue flowers in late summer and autumn. Gentianaceae.	blue	8 9	4	12	8	6	6	R
<i>Gentiana decumbens</i> (Gentian, Sprawling) Deep green rosettes and vibrant sprays of true blue much of the summer. Course but useful in the wild garden or border. Gentianaceae.	blue	5 6	10	10	8	7	7	R
<i>Gentiana gracilipes</i> (Gentian) A slightly more retired meadow Gentian of the decumbens group. Indestructible. Gentianaceae.	purple-blue	7 8	12	10	8	7	7	BR
<i>Gentiana loderi</i> (Gentian, Loder's) Cool blue cups at the height of summer. Very easy Gentian for anyone to grow. Gentianaceae.	blue	6 7	5	8	7	6	6	R
<i>Gentiana paradoxa</i> (Gentian, Threadleaf) Grassy, whorled leaflets make an airy clump. Stunning deep blue cups in late summer. Superb. Gentianaceae.	blue	8 10	12	8	7	6	5	R
<i>Gentiana scabra</i> (Gentian, Autumn Japanese) Deep blue fls in autumn over purple tinted foliage: superb. Gentianaceae.	blue	9 10	10	10	8	7	6	GR
<i>Gentiana septemfida</i> (Gentian, Summer) Most easily grown summer gentian. Clusters are long lasting. Deep blue, white throats. Grows well in ordinary soil. Gentianaceae.	blue	7 9	10	10	8	7	6	GR
<i>Geranium cinereum</i> 'Splendens' (Geranium, Pink) Giant pink fls over neat tufts of foliage. Geraniaceae.	pink	5 6	8	10	7	6	6	R
<i>Geranium</i> x 'Ballerina' (Geranium, Alpine) Tiny, green cutleaf geranium. Pink flowers with darker veining and purplish centers. Looks delicate but very hardy and long lived. English import. Geraniaceae.	lavender	6 7	7	10	7	6	6	R
<i>Geranium dalmaticum</i> (Geranium, Dalmatian) Super miniature geranium for loamy soils in part sun. Superb fall color. Geraniaceae.	pink	6 7	5	8	7	6	5	R
<i>Geranium endressii</i> 'Wargrave Pink' (Cranesbill) Pale pink stars over vigorous mounds of foliage. Splendid fall color. Native to England. Attractive, bright green, notched leaves. So vigorous, it's weed proof. Geraniaceae.	pink	6 9	12	15	7	6	6	BR
<i>Geranium macrorrhizum</i> (Geranium, Balkan)	pink	5 7	10	18	6	7	7	R

Beautiful winter foliage. Superb clump forming ground cover. Spicy fragrance of lvs. perfumes the air. Grows so densely it inhibits weeds. Geraniaceae.

<i>Geranium sanguineum</i> 'Album' (Cranesbill, Bloody)	white	5	8	10	24	5	5	5	BR
Foliage turns deep burgundy in fall. Forms soft mounds. Long blooming season. Low-growing spreader. Geraniaceae. Var. <i>striatum</i> (Cranesbill) Salmon pink blossoms cover the green, lobed foliage. Deeply veined flowers on sturdy stems. Highly drought resistant. Geraniaceae.									
<i>Geranium x cantabrigense</i> 'Biakovo' (Cranesbill)	pink	5	8	5	10	7	6	6	R
Flowers are bright pink. Blossoms carried above a 6" carpet of mid-green foliage. Foliage is spicily fragrant. Geraniaceae. 'White', pale pink to white variant of the type.									
<i>Geranium x magnificum</i> (Cranesbill, Blue)	blue	5	6	12	20	7	6	6	BR
Vigorous, true blue hybrid for border or wild garden. Geraniaceae.									
<i>Geum coccineum</i> 'Borisi' (Geum, Orange)	orange	5	7	10	15	7	7	6	R
Glorious orange stars over neat green, ferny rosettes. Best in partial shade. Rosaceae.									
<i>Geum montanum</i> (Geum, Mountain)	yellow	6	7	3	12	7	6	6	R
Easy with mats of dark, glossy leaves. Large yellow flowers with prominent stamens. Rosaceae.									
<i>Geum reptans</i> (Avens, Creeping)	yellow	5	6	6	12	7	6	6	NR
Large 1 1/2" blooms on long stems. Good border plant. Forms rosettes of divided hairy leaves. Mat forming. Native alpine plant. Rosaceae.									
<i>Gilia subnuda</i> (Gilia, Navajo)	red	6	8	12	10	8	8	8	RX
Wonderful succulent rosettes. Constant sprays of near scarlet trumpet blooms all summer. Polemoniaceae.									
<i>Globularia cordifolia</i> (Globularia, Mat)	blue	5	6	3	12	8	6	6	EGR
Low, woody, fast spreading evergreen with bright blue powderpuffs. and roundish leaves. So thick it suppresses weeds. South European native. Globulariaceae.									
<i>Globularia meridionalis</i> (Globularia, Cushion)	blue	5	6	4	6	7	7	7	R
Forms tangled leafy dome rather than a mat. One of the best. Globulariaceae.									
<i>Globularia repens</i> (Globularia, Tiny)	blue	5	6	3	8	7	7	7	R
Minute, leathery leaves with round heads of blue flowers. Good in troughs. Globulariaceae.									
<i>Globularia trichosantha</i> (Globularia)	blue	5	6	9	18	7	7	7	GR

KEY	Sun (1=full shade; 9=full sun) Soil (1=peat, 9=clay) Water (1=wet, 9=dry)
Type (A=Architectural interest, B=Border; C=good cut flower; D=good dried flower; E= Evergreen; F=Fragrant blooms; G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas)	

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
Larger than the other species. Makes an attractive groundcover in all season. Globulariaceae.								
<i>Goniolimon tataricum</i> (Statice, German)	white	6 7	10	12	8	7	7	BCRX
Covered with masses of tiny flowers. Attractive smaller plant for perennial border. Good dried flower. Easy to grow. Needs well drained soil. Plumbaginaceae.								
<i>Gypsophila cerastioides</i> (Baby's Breath)	white	5 6	2	10	7	7	7	R
Low mounds of rounded velvety leaves. Best in rich scree or trough. Caryophyllaceae.								
<i>Gypsophila repens</i> (Baby's Breath, Creeping)	white/pink	5 7	4	12	8	7	6	BDR
Vigorous, gray green trailing mat thrives in sunny climates. Covered by masses of 1/4" flowers. Beautiful veil-like effect. tumbling over walls. Prized for drying. Caryophyllaceae. 'Rosea', clouds of tiny pink blooms. Loves a hot spot.								
<i>Gypsophila tenuifolia</i> (Baby's Breath, Cushion)	white	5 6	8	6	7	7	7	R
A tight, round bun of short, grassy leaves. Numerous wiry stems of dainty white flowers. Caryophyllaceae.								
<i>Hacquetia epipactis</i> (Buttons, Brass)	yellow	3 5	4	8	4	3	5	R
Compact woodland mat with brassy bloom and trim clumps of lvs. Easily grown. Umbelliferae.								
<i>Helianthemum 'Wisley Pink'</i> (Sunrose)	pink	5 7	10	18	8	5	7	ER
Royal Horticulture Society selection. Cistaceae. 'Wisley Primrose', yellow. Cistaceae.								
<i>Helianthemum apenninum</i> (Sunrose, Apennine)	white/yellow	6 7	12	20	8	7	7	ER
Wonderfully silvery evergreen leaves. Long season of bloom. Cistaceae.								
<i>Helianthemum canum v balcanum</i> (Sunrose, Hairy)	yellow	5 6	1	8	8	7	7	R
Miniature, silver-leaved alpine. Wonderful. Cistaceae. Variety <i>scardicum</i> , tiny round leaves covered with silver hairs. Easy to grow.								
<i>Helichrysum basalticum</i> (Everlasting, Basalt)	yellow	6 8	10	15	7	6	6	R
Densely silver mats of oblong leaves. Yellow clusters of bloom in summer. Asteraceae.								
<i>Helichrysum marginatum</i> (Everlasting)	snow white	8 10	10	10	6	5	6	R
Silver edged deep green leaves and white everlastings. Asteraceae.								
<i>Helichrysum milfordiae</i> (Everlasting, Milford's)	white	6 7	2	8	6	5	5	R
Silvery, hairy rosettes form mats. Produces rustling everlastings in early summer. A must for your rock garden. Asteraceae.								
<i>Helichrysum virgineum</i> (Everlasting, Mt Athos)	white	5 6	8	12	8	7	7	RX
Woolly white rosettes like giant pussytoes. Spicy pink flowers are white when first open. Asteraceae.								

<i>Helleborus niger</i> (Christmas rose)	white	1	4	10	10	6	5	5	ERW
Waxy white flowers open through the winter months. Neat evergreen fountains of bloom. Self-seeds under right conditions. Ranunculaceae.									
<i>Helleborus orientalis</i> (Lenten Rose)	purple	2	4	12	10	6	5	5	RW
Lovely flowers of varying shades of pink. Blossoms usually delightfully speckled with red. Ranunculaceae.									
<i>Helleborus viridis</i> (Hellebore, Green)	yellow/green	2	4	10	8	5	5	5	R
Deciduous, winter blooming Hellebore. Easy to grow in shade or part sun. Ranunculaceae.									
<i>Hepatica acutiloba</i> (Liverleaf)	pink	5	6	6	9	4	4	4	RW
Plants for rich, leafmold of the woodland garden. Native to rocky hillsides and dry woods. Fuzzy flower stems arise from clump of old foliage, new leaves later. Ranunculaceae.									
<i>Herniaria glabra</i> (Rupturewort)	green	4	5	1	10	8	6	6	GR
Minuscule leaves form filmy mat of vegetation for a sunny spot. Great for troughs. Good ground cover. Leaves are bronze-red in winter. Green flowers. Caryophyllaceae.									
<i>Heuchera bracteata</i> (Alumroot)	green	5	6	6	8	6	5	6	R
Forms dense mats. Likes to be planted in rock crevices. Leaves are sharply pointed and persistent. Leaves turn bright red in fall. A Colorado montane native. Saxifragaceae.									
<i>Heuchera hallii</i> (Alumroot, Hall's)	white	5	6	8	3	6	7	6	R
Tiny alumroot for cool, dry exposures. Saxifragaceae.									
<i>Heuchera sanguinea</i> 'Alba' (Coral Bells, White)	white	6	8	12	12	5	5	6	BR
Mounds of dark green leaves. Bears dainty white bells on spikes. Saxifragaceae. 'Splendens' Vigorous, deep crimson selection.									
<i>Hieracium villosum</i> (Devil's Paintbrush)	double yellow	6	7	12	12	7	6	8	R
Densely hairy gray leaves and rich golden yellow blooms in early summer. Asteraceae.									
<i>Hosta</i> 'Gold Drop' (Plantain Lily)	lavender	7	7	8	12	4	4	4	R
For shade or moist places in sun. Nearly heart shaped leaves of unusual light golden green color. Liliaceae.									
<i>Hosta</i> 'Rock Princess' (Plantain Lily)	lavender	7	7	6	12	4	4	4	R
For shade or moist places in sun with dark heart shaped leaves. Liliaceae.									
<i>Hosta venusta</i> (Plantain Lily, Dwarf)	purple	7	7	7	12	4	4	4	R

KEY	Sun (1=full shade; 9=full sun) Soil (1=peat, 9=clay) Water (1=wet, 9=dry)
Type (A=Architectural interest, B=Border; C=good cut flower; D=good dried flower; E= Evergreen; F=Fragrant blooms; G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas)	

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
For shade or moist places in sun with very small leaves. Light purple flowers. Liliaceae.								
<i>Houttuynia cordata</i> 'Chameleon' (Chameleon)	white	5 6	12	20	6	4	4	R
Fascinating multi-hued leaves and white button-like blossoms. Loves moisture and spreads readily. Blooms all summer. Saururaceae.								
<i>Hymenoxys acaulis</i> (Sunflower, Woolly Alpine)	yellow	5 6	10	8	8	7	7	NR
Widespread native daisy blooms for much of the season. Adaptable and indispensable. Asteraceae.								
<i>Hymenoxys argentea</i> (Mat Perky Sue)	yellow	7 9	4	12	8	6	8	RX
Stunning in rock gardens. Creeping plant with silvery leaves. Yellow daisy flowers. Full sun, dry soil. May repeat bloom in fall. Asteraceae.								
<i>Hypericum cerastioides</i> (<i>H. rhodopeum</i> , St John's Wort)	yellow	5 6	6	18	7	7	7	R
Low mounds of soft hairy gray foliage and pretty golden flowers. Care free. Hypericaceae.								
<i>Hypericum reptans</i> (St John's Wort, Creeping)	mixed	5 8	3	10	8	7	7	R
Mats of tiny dark-green foliage and brassy yellow suns. Hypericaceae.								
<i>Iberis saxatilis</i> (Candytuft)	white	4 5	3	10	8	7	7	R
Abundant snow white flowers. Lowest growing. Native to central Europe. Brassicaceae.								
<i>Iberis sempervirens</i> (Candytuft, Evergreen)	white	4 6	10	14	8	7	7	BER
Glaring white flowers over dark green mounds. Old-fashioned favorite, still a standard. Evergreen foliage, woody stems, abundant flowers. Native to S. Europe. Brassicaceae.								
<i>Iberis sempervirens</i> 'Autumn Snow' (Candytuft)	white	4 5	10	14	8	7	7	BER
Autumn reblooming variant of this classic garden plant. Brassicaceae.								
<i>Incarvillea delavayi</i> (Gloxinia, Hardy)	rose	6 7	12	10	6	4	4	R
Bright rosy trumpet flowers. Ferny foliage. Moist shade. Bignoniaceae.								
<i>Incarvillea sinensis</i> (Gloxinia, Hardy)	pink	6 7	10	10	8	6	6	R
Delightful, tough species thrives with heat and sun. Very showy. Bignoniaceae.								
<i>Inula ensifolia</i> (Sunflower, Caucasian)	yellow	6 9	12	15	8	6	6	R
Lovely dome of golden bloom in midsummer. A classic. Asteraceae.								
<i>Iris cristata</i> (Iris, Crested)	blue	6 6	6	6	5	5	5	R
A woodland dwarf with a running habit in loose, humus-rich soil. Iridaceae.								
<i>Iris gracilipes</i> 'Alba' (Iris, Graceful)	white	5 5	6	6	5	5	5	R

The most elegant of all miniature Iris. For light shade and rich acid soil. Iridaceae.

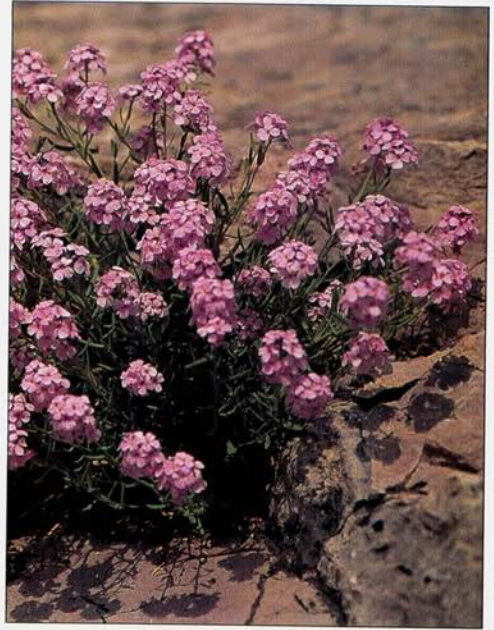
<i>Iris verna</i> (Iris, Vernal)	blue	5	5	8	8	3	4	5	R
Compact clumps of glossy, evergreen foliage. Elegant orange-blotched flowers of brilliant blue. Needs acid soil.									
<i>Kalimeris pinnatifida</i> (Sunflower, Cutleaf)	yellow	6	7	12	10	6	7	7	R
Wonderful. Long blooming perennial with neat nosegay flowers. Tough. Asteraceae.									
<i>Lamium armenum</i> (Lamium, Cushion)	pink	6	7	5	10	5	6	6	R
Spectacular, sugar pink helmet-like bloom through whole spring. Wonderful acquisition. Labiatae.									
<i>Lamium galeobdolon</i> 'Herman's Pride' (Lamium, Var.)	yellow	4	11	6	12	6	4	3	B E G R
Exceptional ground cover. Silver leaves edged with narrow band of green. Spreads rapidly, especially in moist, organic soils. Prefers light shade. Evergreen. Labiatae.									
<i>Lamium maculatum</i> (Spotted Dead Nettle)	pink	5	8	12	12	3	5	6	BR
Easy plant for shady places. Can be invasive. Lamiaceae. 'Beacon Silver' Fast spreading groundcover with decorative leaves. Part shade. Showy rose pink flower clusters. Metallic silver leaves with narrow green margins. 'White Nancy', as above, but flowers white, "like a choir of hand-puppets." 'Shell Pink', with pale pink flowers.									
<i>Lavandula angustifolia</i> 'Hidcote' (Lavender, Hidcote)	blue/purple	5	7	12	15	8	7	7	B DFHRX
Denser, deep cobalt-flowered variant of the familiar herb. Labiatae. 'Purpurea Nana', dwarf version of garden lavender. Ideal for small gardens.									
<i>Leontopodium alpinum</i> (Edelweiss)	white	6	7	6	6	6	6	6	R
Famous edelweiss thrives under ordinary rock garden culture. European classic. Star-like woolly white flowers. Gray green foliage is covered with woolly hair. Asteraceae.									
<i>Leptospermum humifusum</i> (Leptospermum)	white	6	6	3	24	6	6	6	RG
A true alpine, perfectly hardy small groundcover with glossy leaves. Pure white flowers. Myrtaceae.									
<i>Lewisia cotyledon</i> (Lewisia)	pink	5	6	12	10	6	6	6	R
Showy flowers on shiny, evergreen, often crinkled rosettes. Needs perfect drainage, avoid winter wet. Pink to salmon, often 'striped'. Portulacaceae.									
<i>Lewisia rediviva</i> (Bitter Root)	rose/white	5	6	12	10	6	6	6	R
Huge flowers. Quill foliage which goes dormant in late spring at or prior to flowering. Foliage appears again after first fall rain. Withhold summer irrigation. Portulacaceae.									

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G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas	

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Lewisia tweedyi</i> (Lewisia, Wenatchee) Huge apricot flowers over lax succulent rosettes. Magnificent plant for rock walls. Portulacaceae.	pink	5 6	6	10	5	6	6	R
<i>Liatris punctata</i> (Blazing Star) Easily grown. Prefers alkaline soil and full sun. Common on prairies. Taprooted, very drought tolerant. Silvery foliage. Good cut or dried flower. Asteraceae.	purple	7 9	10	5	8	8	8	BCDNRX
<i>Limonium globularifolium</i> (Sea Lavender, Roundleaf) Round leaved miniature Statice. Tough. Plumbaginaceae.	violet	7 8	12	10	8	5	7	R
<i>Limonium gougetianum</i> (Statice, Compact) Dwarf Statice for sun. Plumbaginaceae.	lavender	6 7	10	8	8	6	7	R
<i>Linum alpinum</i> (Flax, Dwarf Blue) Compact, deep blue Flax. Linaceae.	blue	4 6	10	6	8	7	7	R X
<i>Linum arboreum</i> (Flax) Sub-shrubby, blue-leaf Flax for Xeriscape. Linaceae.	yellow	5 7	12	8	8	7	6	R X
<i>Linum capitatum</i> (Flax, Balkan) Long-blooming yellow Flax for sun. Linaceae.	yellow	5 6	10	15	8	7	7	R
<i>Linum flavum</i> 'Compactum' (Flax, Dwarf Yellow) Compact form of well-known border plant. Greener rosettes than common Flax. Linaceae.	yellow	5 6	8	10	8	7	7	B R
<i>Linum perenne</i> 'Dwarf Sapphire' (Flax, Dwarf Sapphire) R Particularly deep blue variety. Linaceae.	blue	5	7	10	10	8	7	6
<i>Loiseleuria procumbens</i> (Azalea, alpine) Superlative circumboreal cushion shrub: challenging in hot regions. Ericaceae	pink	4 5	2	10	3	4	5	R
<i>Lomatium dissectum</i> (Lacy Biscuit Root) Wonderfully cut foliage with yellow umbels. Tolerates dry spells in summer. Umbelliferae.	yellow	4 5	10	12	7	6	6	R
<i>Lychnis x arkwrightii</i> 'Vesuvius' (Campion, Scarlet) Giant orange-red stars of bloom much of the summer. Caryophyllaceae.	Scarlet	6 8	8	7	6	6	5	R
<i>Lychnis viscaria</i> (Campion, Red) Mid-sized early blooming Meadow Champion. Tough customer. Caryophyllaceae.	rose	4 5	12	8	7	6	6	R
<i>Mahonia repens</i> (Grape Holly, Creeping) Superb ground cover for sun or shade, moist or dry. Evergreen. Purple-bronze leaf color in the fall. Show yellow flowers.	yellow	5 6	12	14	7	7	8	G R X



Adonis vernalis
photo, Panayoti Kelaidis



Aethionema grandiflorum
photo, Randy Tatroe

Allium christophii
photo, Panayoti Kelaidis



Androsace villosa
photo, Panayoti Kelaidis





Anemone blanda
photo, Panayoti Kelaidis

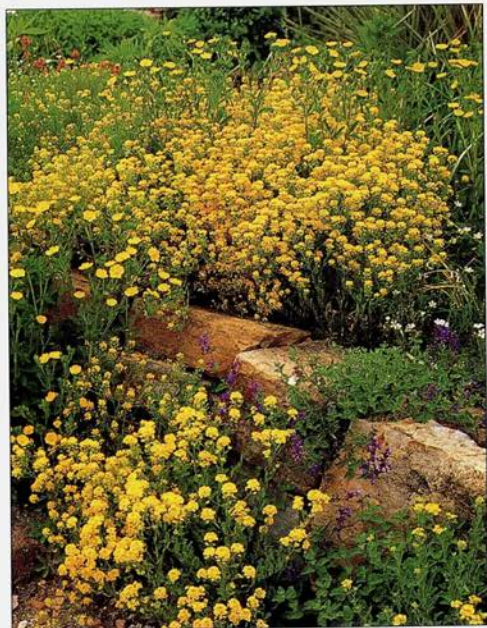


Aubrieta deltooides
photo, Randy Tatroe

Aster alpinus
photo, Randy Tatroe



Aurinia saxatile
photo, Randy Tatroe





Bergenia ciliata
photo, Panayoti Kelaidis



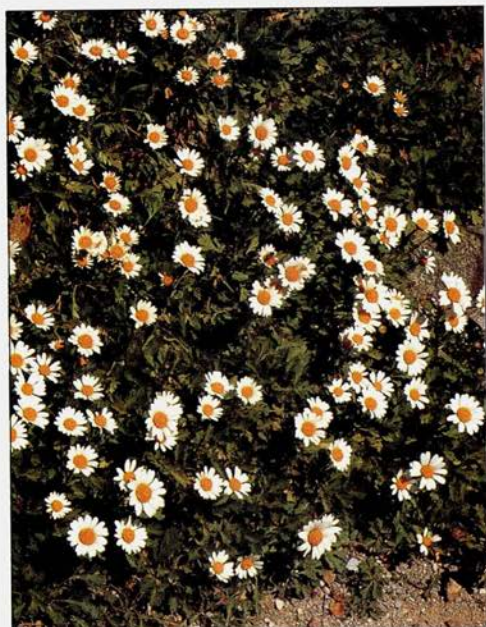
Anemone sylvestris
photo, Randy Tatroe

Campanula carpatica 'Blue Clips'
photo, Randy Tatroe



Centaurea uniflora
photo, Panayoti Kelaidis





Chrysanthemum weyrichii
photo, Panayoti Kelaidis



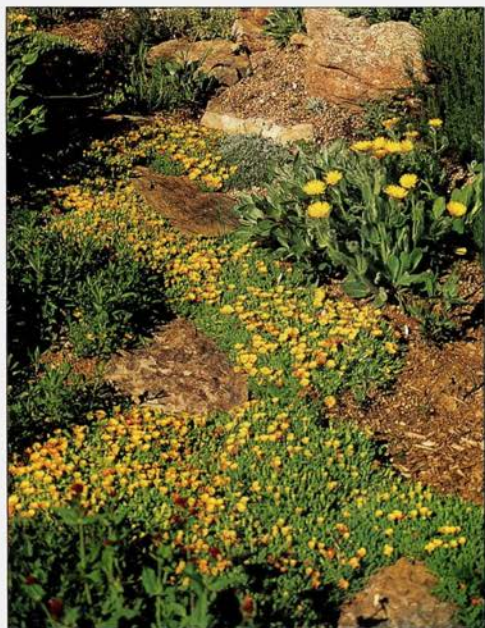
Coreopsis auriculata 'Nana'
photo, Panayoti Kelaidis

Corydalis solida 'George Baker'
photo, Panayoti Kelaidis



Delosperma cooperi
photo, Randy Tatroe





Delosperma nubigenum
photo, Randy Tatroe



Epimedium alpinum
photo, Panayoti Kelaidis

Erigeron scopulinus
photo, Panayoti Kelaidis



Euphorbia epithymoides (syn. *polychroma*)
photo, Randy Tatroe





Fritillaria pallidiflora
photo, Panayoti Kelaidis



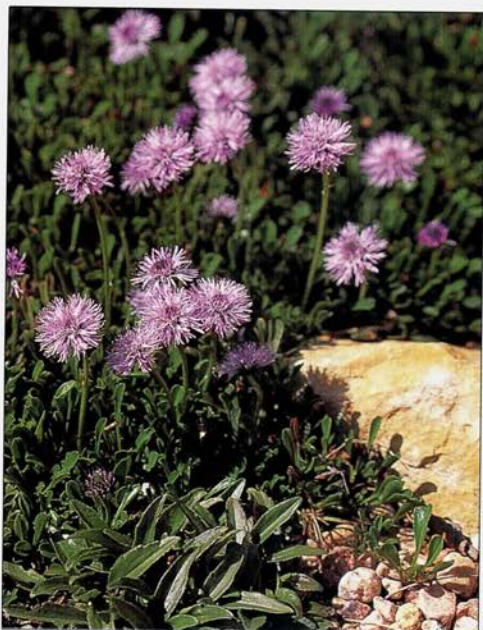
Geranium x 'Ballerina'
photo, Panayoti Kelaidis

Geranium cinereum var. *subcaulescens*
photo, Randy Tatroe



Gentiana scabra
photo, Randy Tatroe



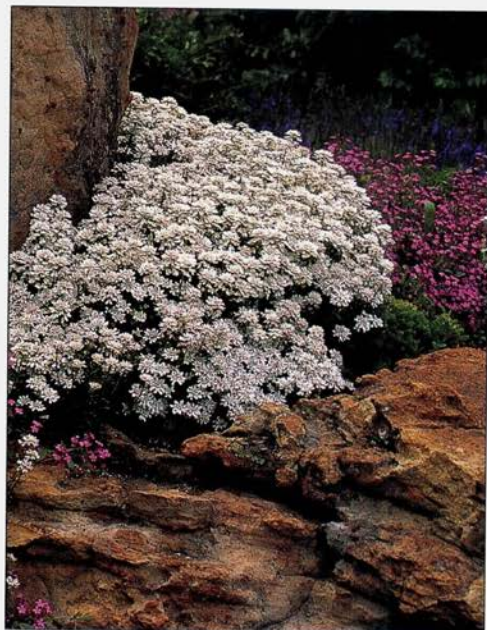


Globularia repens (syn. *nana*)
photo, Randy Tatroe



Hacquetia epipactis
photo, Panayoti Kelaidis

Iberis sempervirens
photo, Randy Tatroe

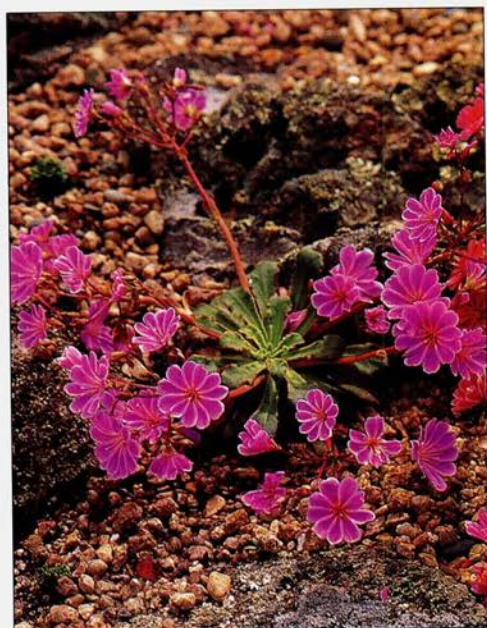


Lamium maculatum 'White Nancy', *Geranium macrorrhizum*; photo, Randy Tatroe



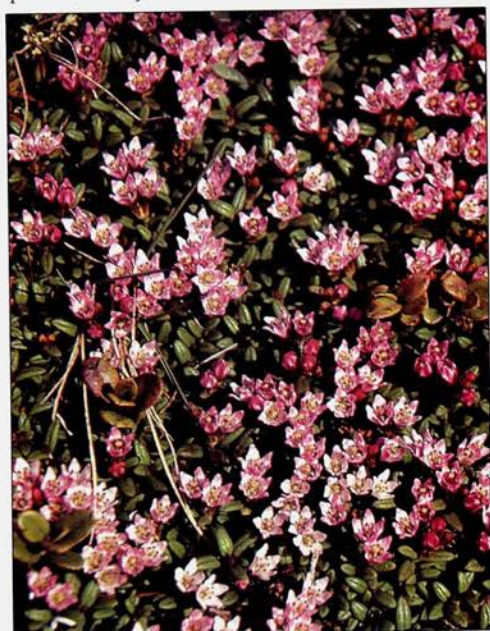


Lamium maculatum 'Shell Pink'
photo, Randy Tatroe

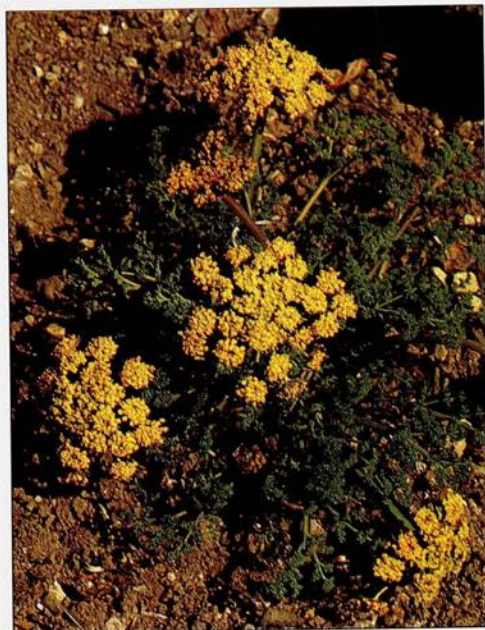


Lewisia cotyledon
photo, Randy Tatroe

Loiseleuria procumbens
photo, Panayoti Kelaidis



Lomatium dissectum
photo, Randy Tatroe





Linum capitatum
photo, Randy Tatroe



Lychnis x arkwrightii 'Vesuvius'
photo, Randy Tatroe

Marrubium rotundifolium
photo, Randy Tatroe



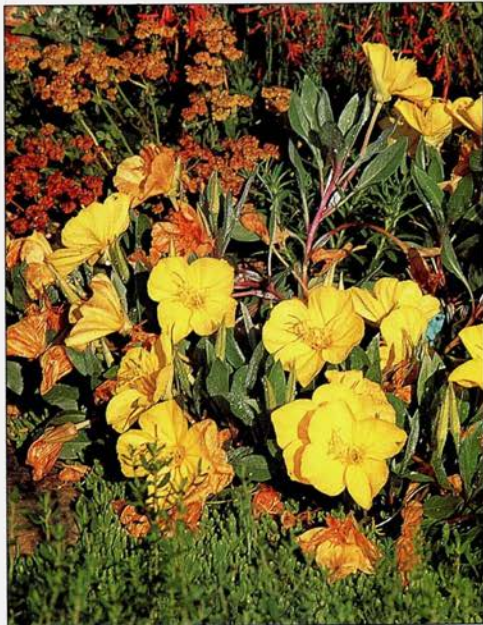
Nepeta mussinii
photo, Randy Tatroe





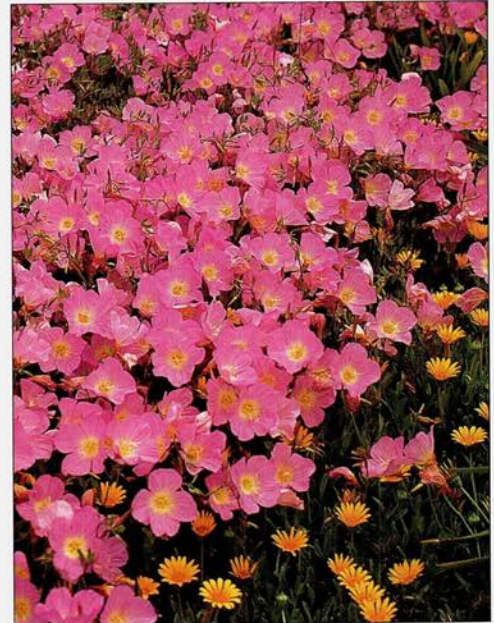
Nierembergia rivularis
photo, Panayoti Kelaidis

Oenothera macrocarpa
photo, Randy Tatroe



Omphalodes verna
photo, Randy Tatroe

Oenothera speciosa
photo, Randy Tatroe



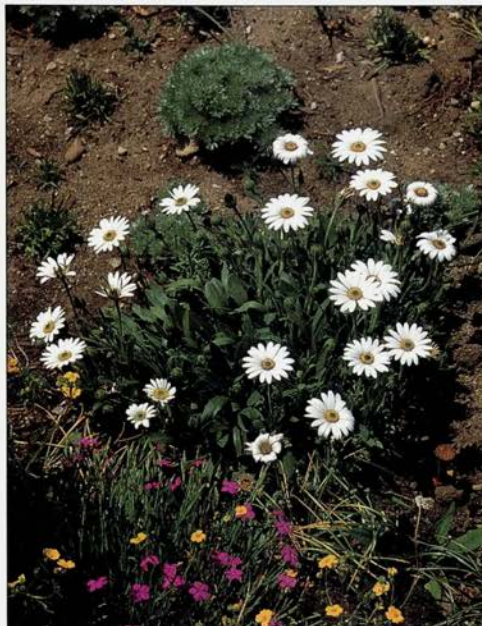


Onosma alboroseum
photo, Panayoti Kelaidis



Onosma echioides
photo, Randy Tatroe

Osteospermum ecklonis
photo, Panayoti Kelaidis



Oxalis 'Ione Hecker'
photo, Panayoti Kelaidis



Papaver nudicaule
photo, Randy Tatroe

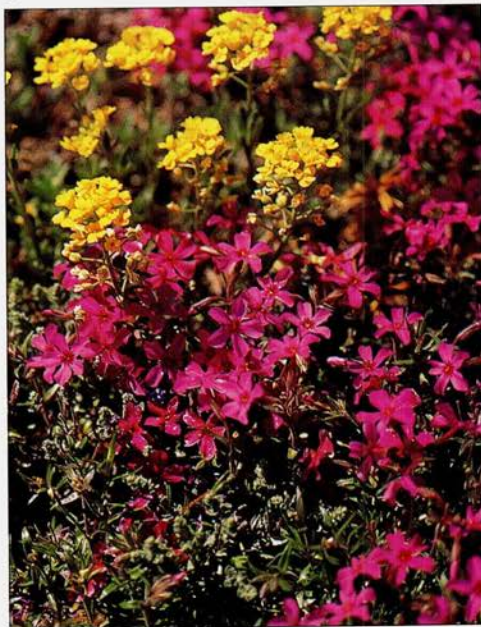


Papaver alpinum
photo, Randy Tatroe

Penstemon virens
photo, Randy Tatroe



Phlox subulata
photo, Randy Tatroe





Primula denticulata
photo, Randy Tatroe

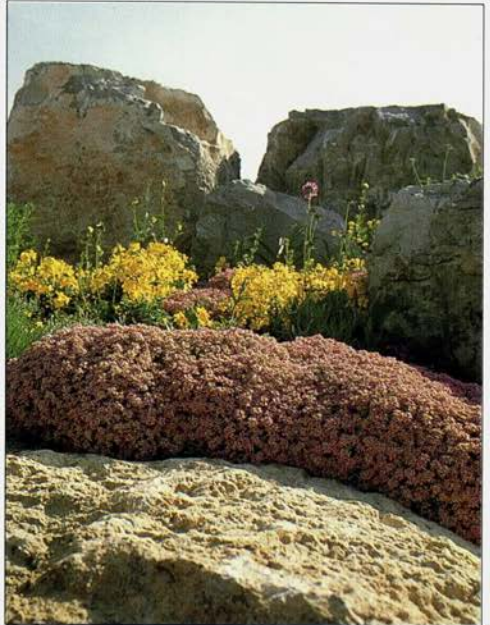


Primula veris
photo, Randy Tatroe

Primula vulgaris
photo, Panayoti Kelaidis



Ptilotrichum spinosum
photo, Sandy Snyder





Ranunculus montanus 'Molten Gold'
photo, Sandy Snyder

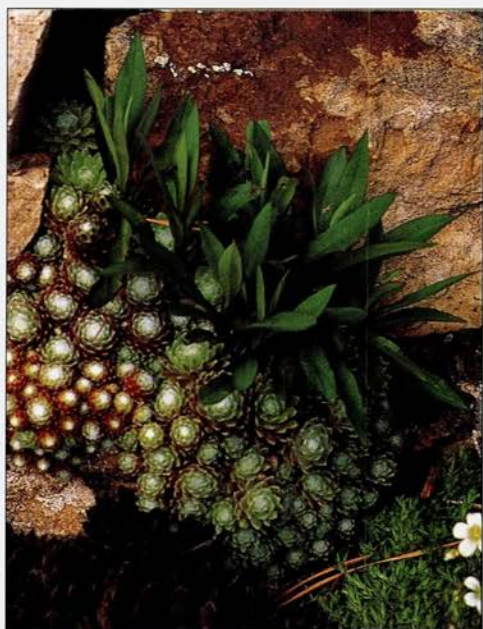


Salvia argentea and *Petunia integrifolia*
photo, Randy Tatroe

Ruta graveolens, *Santolina virens*
photo, Randy Tatroe

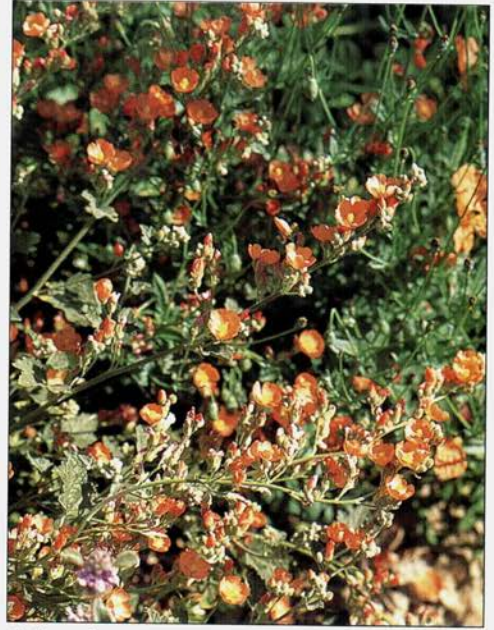


Sempervivum arachnoideum
photo, Randy Tatroe





Silene alpestris
photo, Panayoti Kelaidis



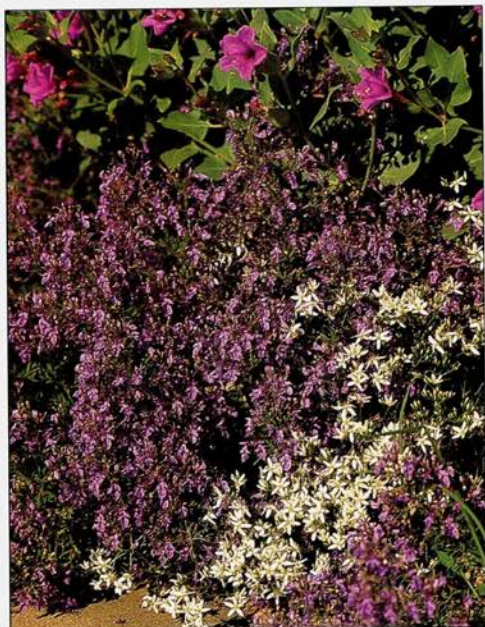
Sphaeralcea munroana
photo, Randy Tatroe

Stachys nivea
photo, Randy Tatroe



Thymus neceffii
photo, Panayoti Kelaidis





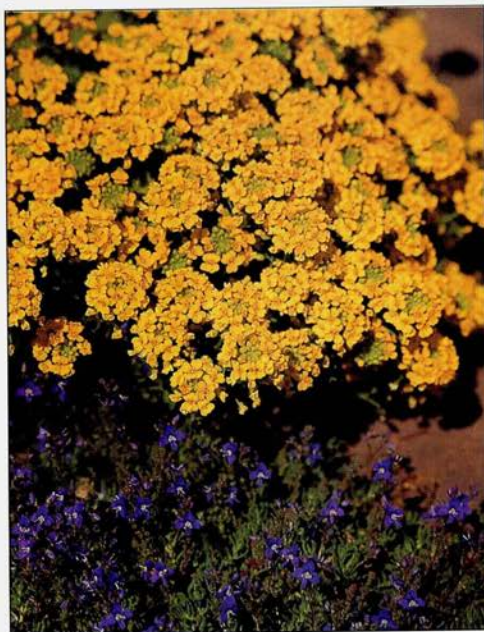
Teucrium orientale
photo, Randy Tatroe



Townsendia alpigena
photo, Panayoti Kelaidis

Alyssum montanum, *Veronica tauricola*
photo, Randy Tatroe

Veronica liwanensis, *Sempervivum*
photo, Randy Tatroe



Blue fruit. Berberidaceae.

Marrubium rotundifolium (Horehound, Silver) silver 6 7 4 12 8 8 8 R

Evergreen mats of silvery foliage make fine crevice plant. Good for the rock garden. Labiatae.

Mazus reptans (Mazus) lavender 6 7 1 10 7 4 4 GR

Fast spreader for moist, cool soils. Splendid between flagstones in shaded areas. Withstands light traffic.

Scrophulariaceae.

Meconopsis cambrica (Poppy, Welsh) orange 5 6 12 6 5 5 5 R

Easily grown almost anywhere. Showy poppies all summer. Can become somewhat weedy. Papaveraceae.

Meconopsis horridula (Poppy, Spiny Blue) blue 4 6 10 6 5 5 5 R

Spiny leaves and stems with heavenly sky blue flowers. Superb in higher altitudes. Papaveraceae.

Melampodium leucanthum (Daisy, Blackfoot) white 7 9 10 10 8 8 8 NRX

Everblooming, neat native daisy for hot spots. Useful in parkways and bordering sidewalks. Well-drained soil.

Asteraceae.

Mertensia alpina (Bluebells, Alpine) blue 4 5 3 6 7 6 5 R

Tiny fragrant alpine mound for the cool scree. Boraginaceae.

Mertensia lanceolata (Languid Lady) blue 4 6 12 8 7 6 6 R

Native, dryland bluebells with narrow, glaucous leaves. Boraginaceae.

Mimulus guttatus (Monkeyflower) yellow 5 7 3 8 7 4 3 RW

Vivid, yellow flowers over a long season. For moist spot in sun or shade. Scrophulariaceae.

Mimulus primuloides (Monkeyflower) yellow 5 7 2 12 6 4 4 RW

Neat little species from California. Spreads gently by runners without being a nuisance. Protect from full sun. 2" stems of yellow flowers. Scrophulariaceae.

Minuartia caucasica (Sandwort, Caucasian) white 3 6 3 8 8 6 5 R

Sunny rock garden. Low mounds studded with white stars in late spring. Caryophyllaceae.

Minuartia kashmirica (Sandwort, Kashmir) white 5 6 3 7 8 6 6 R

Low mat of deep green needles topped with white stars. Sunny crevice of Rock Garden. Caryophyllaceae.

Monardella odoratissima (Bergamot, Fragrant) lavender 7 9 10 10 8 7 7 FHN R

Extremely variable native Mint. The best forms have deep purple balls of color all summer. Lamiaceae.

KEY

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G= Groundcover; r=rock garden; W=Woodland plant; X=good for dry areas

Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Nepeta amethystina</i> (Catmint, Cutleaf) Deeply cut leaves and deep blue spires of flowers in late summer. Labiatae.	lavender	7 9	10	12	7	5	6	BHR
<i>Nepeta concolor</i> (Catnip) Decorative and restrained groundcover for hot spots. Extremely tough evergreen clumps with blue flowers all summer. Labiatae.	lavender	6 10	10	15	8	8	8	EGRX
<i>Nepeta mussinii</i> (Persian Catmint) Sun or shade. Fast spreading groundcover for practically any spot. Not for choice spots. Poor to average soil. Nice for the border. Downy gray foliage. Labiatae.	lavender	6 9	10	18	8	7	7	BGRX
<i>Nepeta phylloclamys</i> (Catnip, Cushion) Good for the sunny rock garden, walls. Pale pink flowers produced all summer. Corrugated evergreen leaves. Attractive habit. Labiatae.	pink	6 8	8	10	8	7	8	ERX
<i>Nepeta x fassenii</i> 'Snowflake' (Catmint, Persian) Wonderful white variation of everblooming Catmint. Labiatae.	white	5 7	10	20	8	7	7	R
<i>Nierembergia rivularis</i> (Silver cups) Wonderful white cups much of the summer. Superb between stepping stones. Solanaceae.	white	6 8	2	10	7	5	5	R
<i>Oenothera caespitosa</i> (Evening Primrose) Attracts hawkmoths. 3-4" fragrant flowers open in afternoon Flower fades to pink. Blooms all summer. Gray-green, fuzzy leaves. Requires well-drained soil. Onagraceae.	white	5 7	10	14	8	8	8	NFRX
<i>Oenothera macrocarpa</i> (Syn. <i>O. missouriensis</i> (Eve. Pr., Missouri) Fragrant, canary yellow flowers; day-blooming. Sprawling crimson stems. Fascinating giant seedpods. Sun, light gravelly, well-drained soil; dry. Long lived. Onagraceae.	yellow	5	7	8	12	8	7	7BRX
<i>Oenothera speciosa</i> (Evening Primrose, Summer) Vigorously spreading mats with pearly pink fls. all summer. Onagraceae.	pink	6 9	10	20	8	7	7	BRX
<i>Omphalodes verna</i> (Blue Eye Mary) Bright blue forget-me-nots over neat mats of lancolate lf. Boraginaceae	blue	4 5	5	18	4	5	5	R
<i>Onosma alboroseum</i> (Lady's Eardrop) Sunny rock garden. Frosted silvery foliage produces white trumpets that turn rose. Choice. Boraginaceae.	pink, white	6 7	12	8	8	7	7	R
<i>Onosma echioides</i> (Lady's Eardrop, Yellow) Long blooming spires of nodding yellow trumpets. Bristly hairs on stems and lf irritate some people. Boraginaceae.	yellow	6 7	12	8	8	7	7	R

<i>Origanum acutidens</i> (Oregano, Turkish)	lavender	7	9	10	10	7	7	7	R
Chartreuse bracts for long summer season. Easy to grow. Labiatae.									
<i>Origanum libanoticum</i> (Shrimp Plant, Hardy)	pink	7	9	10	15	8	7	8	ERX
Shrimp-like pink flowers over a long season in late summer. Long bloom season. Evergreen mats. Good for the sunny rock garden. Labiatae.									
<i>Origanum rotundifolium</i> (Oregano, Roundleaf)	pink	7	8	9	18	8	7	8	R
Needs open sunny position and well-drained soil. Pink flowers appear between hop-like bracts. Labiatae.									
<i>Roostachys furusei</i> (Japanese Live Forever)	yellow	8	9	3	10	8	7	6	R
Masses of smooth, gray rosettes. Succulent rosettes of glaucous lavender foliage. Yellow candles of bloom in late summer. Fascinating. Crassulaceae.									
<i>Osteosperma ecklonis</i> (White African Daisy)	white	5	8	10	15	6	6	6	R
Shimmering fls all summer. Super. Asteraceae.									
<i>Oxalis</i> 'Tone Hecker' (Shamrock, Sorrel)	pink	5	6	3	6	7	7	7	R
Clumps of elegant folded gray leaves from a slowly multiplying bulb. Oxalidaceae.									
<i>Oxytropis lambertii</i> (Locoweed, Lambert's)	pink/magenta	5	6	8	10	8	6	8	BNRX
Gray-green basal leaves. Bright magenta, pea-like flower spikes in summer and late fall. Poisonous to livestock. Dry, gravelly soil. Needs good drainage. Fabaceae.									
<i>Oxytropis sericea</i> (Locoweed)	white	4	6	12	8	8	8	8	RX
Huge clusters of white pea-flowers resemble Hyacinths from a distance. Great in Xeriscape. Fabaceae.									
<i>Papaver alpinum</i> (Poppy, Alpine)	mixed	5	8	5	4	8	6	6	R
Short lived perennial for scree. Mounds of lacy foliage produce white, pink, yellow or orange flowers. Early bloomer. Long season of showy bloom. Papaveraceae.									
<i>Papaver miyabeianum</i> (Poppy, Miyabe's)	yellow	5	6	6	3	7	6	6	R
Tiny, furry mounds. Lemon yellow flowers over interesting compact foliage. Native to Japan. Covered for weeks with yellow cups of crepe-like blossoms. Papaveraceae.									
<i>Papaver nudicaule</i> (Iceland Poppy)									
<i>Penstemon albertinus</i> (Penstemon, Alberta)	electric blue	5	6	12	6	8	7	7	BER

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Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
True blue spires of bloom in early summer. Long-lived and adaptable. Scrophulariaceae.								
<i>Penstemon ambiguus</i> (Penstemon, Phlox)	white	6 9	12	7	9	8	8	DRX
Brown seedpods for flower arrangements. Requires sandy, well-drained soil. Lacy, spreading clumps. Native to grasslands and dry washes. Scrophulariaceae.								
<i>Penstemon angustifolius</i> (Penstemon, Robin's Egg)	blue	6 9	10	5	9	8	8	RX
Narrow, gray leaves topped with aquamarine flowers in mid spring. Superlative native. Scrophulariaceae.								
<i>Penstemon caespitosus</i> (Penstemon, Mat)	blue	4 5	1	8	8	7	8	ERX
Neat ever-gray mats with showy, aquamarine flowers just above the foliage. Xeriscape or sunny slope. Native to Colorado and Wyoming. Scrophulariaceae.								
<i>Penstemon cardwellii</i> (Penstemon, Cascade)	lavender	4 5	10	18	6	6	6	R
Shrubby penstemon for cool soils in part sun. Superb in mountains. Bright lavender flowers. Scrophulariaceae.								
<i>Penstemon davidsonii</i> (Penstemon, Davidson's)	purple	4 5	1	8	7	6	6	R
Succulent mats studded with bright lavender trumpets. Thick firm leaves. Large rose-purple flowers. A gem of the genus. Scrophulariaceae.								
<i>Penstemon davidsonii</i> ssp. <i>menziesii</i> (Beard-Tongue)	purple	4 5	6	10	6	6	5	R
Semi-woody plant has small gray-green flesh leaves. Flowers are deep pink to purple. An exceptional shrubby penstemon. Scrophulariaceae.								
<i>Penstemon eriantherus</i> (Penstemon, Hairy)	lavender	6 7	4	2	8	7	8	NPRX
Leaves covered with sparkling hairs. Large, rose-lavender flowers with speckles. Prominent, yellow tongue. Colorado native. Good for troughs. Scrophulariaceae.								
<i>Penstemon heterophyllus</i> v <i>purdyi</i> (Penstemon, Purdy's)	blue	5 8	10	12	7	7	7	R
Mounds covered with turquoise trumpets in spring. Superlative rock garden plant. Scrophulariaceae.								
<i>Penstemon hirsutus</i> 'Pygmaeus' (Penstemon, Pygmy)	violet/purple	5 6	4	10	6	5	6	R
Abundant lavender flowers with white tips. Self sows readily. Beautiful dwarf variety. Attractive red-green foliage. Scrophulariaceae.								
<i>Penstemon linarioides</i> (Penstemon, Toadflax)	lavender	5 7	10	12	7	7	8	NRX
Spikes of flowers, mounding growth habit. Soft green, narrow foliage. Native to pinyon/Juniper forests. Open, rocky soil. Snapdragon-like flowers; early bloomer. Scrophulariaceae. Variety <i>coloradoensis</i> , absolutely drought tolerant.								
<i>Penstemon nitidus</i> (Penstemon, Blue Spring)	blue	3 5	12	3	8	7	8	BRX

	Sky blue flowers in early spring. Needs lime and good drainage. Succulent blue rosettes. Scrophulariaceae.								
<i>Penstemon pinifolius</i> (Penstemon, Pine-leaf)	red	6	9	10	15	8	7	7	DGRX
	Constant succession of orange red flowers. Bright green, needle-like leaves. Hummingbirds love this. Likes any soil in full sun or partial shade. Scrophulariaceae. 'Mersea Yellow' Pure yellow mutation.								
<i>Penstemon rydbergii</i> (Penstemon, Rydberg's)	blue	5	6	12	8	7	6	6	R
	Clusterhead, bright blue penstemon for moist sun or part shade. Easily grown. Scrophulariaceae.								
<i>Penstemon teucroides</i> (Penstemon, Germander)	blue	5	6	1	8	7	6	6	R
	Green mats with bright blue trumpets. Linear foliage. Large blue to purple flowers with white throats. Scrophulariaceae.								
<i>Penstemon virens</i> (Penstemon, Blue Mist)	lavender	5	6	1	8	7	6	6	R Clouds of
	lavender, bell like bloom. Easy in scree. Scrophulariaceae.								
<i>Petrophytum caespitosum</i> (Spiraea, Rock)	white	7	7	4	6	6	6	6	R
	A miniature shrub that forms a mat. Covers rocks when planted in a crevice. Rosaceae.								
<i>Petrophytum cinerascens</i> (Spiraea, Rock)	white	7	7	4	12	6	6	6	R
	A miniature shrub forming a mat that covers rocks well. Rosaceae.								
<i>Petrorhagia saxifraga</i> 'Double White' (Tunic Flower)	white	8	8	8	18	8	7	7	R
	Easy summer flowering alpine, perfect for any sunny spot. Pure white double flowers. Caryophyllaceae. 'Rosette' Pure pink double flowers.								
<i>Phacelia sericea</i> (Purple Fringe)	purple	4	6	10	8	8	7	7	R
	Long stamened alpine very easy to grow in sunny scree. Hydrophyllaceae.								
<i>Phlox adsurgens</i> (Phlox, Siskiyou)	pink	6	7	3	12	6	5	5	R
	Woodland plant. Large bicolor flowers of glowing salmon-pink, deeper midvein. One of the best. Polemoniaceae.								
<i>Phlox bifida</i> (Prairie Phlox)	white /violet	5	6	6	12	4	4	5	RFW
	Utterly distinct, cleft blossoms for a long season.								
<i>Phlox divaricata</i> (Phlox, Woodland)	blue	5	6	10	8	5	5	5	BGRW
	Trailing habit; oval leaves, creeping underground shoots root at nodes. Flowers in loose terminal clusters on erect leafy stems. Sun, open shade, sandy soil, dry. Polemoniaceae. 'Clouds of Perfume', wonderfully fragrant selection. 'Fuller's White', vivid white stars, fine woodlander for a cool spot. Variety <i>laphamii</i> , attractive ground cover. Spreads quickly. Cut back after flowering. 'Chatahoochee', deep maroon eyes to pale blue flowers, mounds of color in early summer.								

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<i>Phlox</i> (Phlox, Mexican) 'Arroyo', cerise blossoms the size of a quarter. The largest and most vigorous of the Mexican phloxes. Rich deep pink flowers with yellow eyes. Wide branching habit. Polemoniaceae. 'Mary Maslin', Chinese red flowers for well-drained scree. Finest selection of the Mexican Phlox family. 'Paul Maslin', large, clear, lemon-yellow flowers with eye-ring formed by purple "V" at the base of each petal. 'Vanilla', white stars over neat mounds all summer. Superlative rock garden plant.	various	5 10	10	12	8	7	6	BR
<i>Phlox procumbens</i> 'Millstream Pink' (Phlox, Creeping) Deep green mats smothered with clear pink stars. The Best Pink. Strong compact grower.	pink	4 5	3	15	8	7	7	GR
<i>Phlox stolonifera</i> 'Blue Ridge' (Phlox, Running) 50-year-old variety. Large sky blue flowers. Evergreen. Fuzzy green leaves. Polemoniaceae. 'Pink Ridge', likes a woody soil that doesn't flood or dry out, with a little shade. An excellent ground cover under trees and shrubs, creeping habit.	blue	5 5	6	12	5	5	5	EGR
<i>Phlox subulata</i> (Phlox, Creeping) Easily grown. Needle-like, semi-evergreen leaves. Perfect ground cover, spreads rapidly. Prefers dry, well-drained soil. Shear back after flowering. Polemoniaceae. Many selections. 'Atropurpurea', red flowers with needle-like evergreen leaves. Forms a dense ground cover. 'Blue Emerald', 4-6" tall, pale blue flowers. 'Boothman's Variety', lavender stars with deep purple hearts. Showy display in height of spring. Fast spreading. 'Coral Eye', pink/red eye, soft pink, star-shaped flowers with red eye. 'Emerald Pink', pink flowers, moderately large variety. 'Scarlet Flame', dark pink flowers, vigorous grower. 'White Delight', white flowers, moderate size plant. Other excellent varieties include 'Millstream Jupiter', lg. lavender fls; 'Millstream Daphne', lg. pink fls;	mixed	4 5	2	12	7	6	6	BGR
<i>Phlox x stolonifera</i> 'Blue Ridge' (Phlox, Running) 50-year old variety. Large sky blue flowers; evergreen, fuzzy green leaves. Likes woody soil, not too wet or dry, a little shade. from E. USA. Polemoniaceae.	blue	5 5	6	12	6	5	5	GER
<i>Physaria alpina</i> (Bladderpod, Alpine) Silvery starfish produces large, orange flowers in early spring. Choice native alpine. Brassicaceae.	yellow	3 4	1	4	7	7	7	R
<i>Physaria dornii</i> (Twinpod, Dorn's) Recently described desert species with spectacular bloom. Perfect for troughs. Brassicaceae.	yellow	3 5	2	4	8	8	8	R
<i>Platycodon grandiflorus</i> v <i>nanus</i> (Balloon Flower) Stocky-dwarf form of huge flowered oriental campanulad. Campanulaceae.	blue	7 8	10	6	7	7	6	BR
<i>Polemonium carneum</i> (Jacob's Ladder)	apricot	7 8	12	12	5	5	5	R

From the woodlands of Siskiyou and Southern Cascade Mountains. Polemoniaceae.

<i>Polemonium reptans</i> (Jacob's Ladder)	blue	4	6	10	10	7	5	5	R
Flowers of bright blue with prominent orange stamens. Native to USA. From open woodlands in the east and midwest. Polemoniaceae.									
<i>Potentilla argyrophylla</i> v. <i>atrosanguinea</i> (Cinquefoil, Scarlet)	red	5	6	12	8	9	6	6	
R Powdery white strawberry leaves produce spires with blood red stars of bloom in early summer. Rosaceae.									
<i>Potentilla cinerea</i> (Cinquefoil)	yellow	6	7	2	12	7	7	7	R
Prostrate silver-leaved creeper. Forms a carpet of clear-yellow flowers in summer. Rosaceae.									
<i>Potentilla fragiformis</i> (<i>megalantha</i>) (Cinquefoil, Strawberry Leaf)	gold	5	6	10	6	9	6	6	
R Densely hairy clumps of coarse, attractive leaves. Huge yellow flowers in spring. Rosaceae.									
<i>Potentilla hippiana</i> (Cinquefoil, Horse)	yellow	6	7	12	10	8	7	7	R X
Silvery, ferny rosettes. Many spikes of yellow stars in early summer. Very tough. Rosaceae.									
<i>Potentilla tabernae-montana</i> (Cinquefoil, Carpet)	yellow	4	6	2	15	7	6	5	GR
Fast spreading mats of vivid green leaves. Buttercup-like yellow stars in mid-spring. Rosaceae.									
<i>Potentilla tabernae-montana</i> 'Nana' (Cinquefoil, Cushion)	yellow	4	6	3	10	7	7	6	BER
Slow growing mutant much better suited to small gardens. Dwarf compact variety. Ideal border or bedding plant. Bright yellow flowers on low evergreen plants. Rosaceae.									
<i>Potentilla tridentata</i> (Cinquefoil)	white	6	7	5	24	7	4	7	R
Glossy-green, leafy mat with blood-red autumn color. Ideal bulb cover. Rosaceae.									
<i>Primula</i> 'Peter Klein' (Primrose, Peter Klein)	pink/white	3	5	10	5	5	5	4	R W
Hybrid of <i>P. rosea</i> and <i>P. clarkei</i> . Easily grown. Adaptable woodland plant. Primulaceae.									
<i>Primula abschasica</i> (Primrose, Abschasian)	purple	3	5	3	7	5	5	5	R W
Extremely vigorous and showy relative of common Primrose. Vividly colored flowers. Primulaceae.									
<i>Primula auricula</i> (Primrose, European Alpine)	mixed	4	5	6	8	5	6	5	E F R W
Numerous showy, waxy flowers, leathery rosettes of fleshy leaves. Flowers one-sided, fragrant, many colored. Leaves are usually coated with farina. Primulaceae.									
<i>Primula cortusoides</i> (Primrose)	pink	4	6	12	4	4	3	5	B R W
Wand-like spires of hot pink flowers for a long season in spring. For woodland garden. Primulaceae.									

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<i>Primula denticulata</i> (Primrose, Drumstick) Very easily grown, for moist, cool exposures. VERY early. Spherical heads of crowded flowers on stout stems before the woolly leaves. From the Himalayas. Primulaceae.	mixed	3 4	10	8	5	5	5	B R W
<i>Primula elatior</i> (Oxlip), Very easily grown, long-lived plant Primulaceae.	yellow	4 5	10	8	5	5	5	B R W
<i>Primula frondosa</i> (Primrose) Lovely farinose rosettes. Pink lilac heads. Primulaceae.	rose/purple	4 5	5	5	5	6	5	R W
<i>Primula juliae</i> (Primrose, Julia's) Tiny moisture loving mat former with vivid purple flowers. Used for hybridization. Primulaceae.	purple	4 5	2	6	5	5	3	R W
<i>Primula marginata</i> (Primrose, Margined) Showy white-margined wavy foliage with fragrant blue trumpets. Primulaceae.	blue	4 5	4	7	6	5	5	R W
<i>Primula rosea</i> (Primrose, Rosy) Shocking, rose-pink flowers in earliest spring. Likes moisture. Primulaceae.	rose	3 4	8	4	6	5	3	R W
<i>Primula saxatilis</i> (Primrose, Siberian) Chalk pink stars over serrate, oval, hairy leaves. Peat loving primula from Siberia. Primulaceae.	pink	5 6	12	8	5	5	5	R W
<i>Primula sieboldii</i> (Primrose, Woodland) Crinkled, oval foliage produces a mass of snowflake flowers. Very hardy and good. Primulaceae.	pink	4 5	8	9	5	5	5	R W
<i>Primula veris</i> (Cowslip) Corrugated leaves and showy, nodding bells. Excellent garden plant. Fragrant, delicate blossoms. Ideal as a cut flower. Not too much heat, humidity or drought; easy nevertheless. Primulaceae.	yellow	4 5	8	6	5	5	5	C F R W
<i>Primula vulgaris</i> (Primrose) Stemless primrose of English folklore and gardens. Primulaceae.	yellow	4 5	3	8	5	5	5	C F R W
<i>Prunella grandiflora</i> 'Loveliness' (Self-Heal, Loveliness) Superior selection of shade-loving Self-Heal. Lamiaceae.	lilac	5 7	10	18	6	7	7	R
<i>Prunella laciniata</i> (Self-Heal, Cutleaf) Extremely tough, adaptable Prunella blooms for a long summer season. Lamiaceae.	pink	5 7	12	12	6	7	7	R
<i>Psilostrophe bakeri</i> (Paper Flower) Silvery rosettes by everlasting flowers. Cut back to basal rosette in fall. Periodic deep watering prolongs bloom period. Self-sows; no insect or disease problems. Asteraceae.	yellow	5 9	12	10	9	9	8	N R X

<i>Pterocephalus parnassii</i> (Mat Scabiosa)	purple	5	6	3	18	7	7	7	R
Short furry foliage, somewhat silver. Stemless, light-purple Bachelor Button flowers. Dependable. Dipsacaceae.									
<i>Ptilotricum spinosum</i> 'Purpureum' Shrub Alyssum)	purple	5	6	10	15	7	7	7	R,X
Dense cushion shrub with heavenly bloom. Long lived and easy. Cruciferae.									
<i>Pulmonaria angustifolia</i> (Lungwort)	blue	4	5	8	12	6	6	6	R
Piercing blue bells over slowly spreading mats bloom much of spring. Great with yellow primroses. Boraginaceae.									
<i>Pulmonaria longifolia</i> 'E. B. Anderson' (Lungwort)	violet	4	5	10	12	6	6	5	R
Deep blue trumpet blooms and richly mottled, narrow leaves. Boraginaceae.									
<i>Pulmonaria montana</i> (rubra) (Red Lungwort, Red)	red	5	5	8	12	5	5	5	R
Spring flowering plants for shade. Hairy leaves. Red-orange flowers. Boraginaceae.									
<i>Pulmonaria saccharata</i> 'Mrs Moon' (Soldiers and Sailors)	pink	4	5	12	12	3	5	4	BRW
Unusual leaves. Pink flowers turn blue with time. Boraginaceae.									
<i>Pulsatilla patens</i> (Pasqueflower)	lavender	3	5	8	4	7	6	6	RX
Does well in dry, sandy soils. Native to open forests and sagebrush. Pale flowers with lavender tones. Delicate, finely divided leaves. Wispy white seedheads. Ranunculaceae.									
<i>Pulsatilla vulgaris</i> (Pasqueflower, European)	purple	3	5	6	8	6	6	6	BRWX
Easily grown. Spreads quickly; remove seed heads to control. Once established, do not disturb. Finely cut gray green leaves and woolly buds. Ranunculaceae.									
<i>Ranunculus gramineus</i> (Buttercup)	yellow	5	7	10	6	7	7	7	R
Slender stalks bear sprays of 1 in. shining yellow flowers. Any good soil. Ranunculaceae.									
<i>Ranunculus montanus</i> 'Molten Gold' (Buttercup)	yellow	5	7	6	10	6	7	7	CR
Abundant late spring blooms of large rounded flowers. Dark cut foliage. Dwarf; won't spread. Unsurpassed as a cut flower. Ranunculaceae.									
<i>Raoulia australis</i> (Scabplant, New Zealand)	yellow	6	7	1	10	8	6	5	R
Impossibly low silver mats are surprisingly easy to grow. Tiny flowers. Hardy to 8,000' Provide dry winter conditions (cover with a pane of glass). Asteraceae.									
<i>Raoulia glabra</i> (Scabplant)	white	5	6	1	12	7	5	7	R
Fast spreading mat of light green rosettes and white flowers. The hardiest and quite easy. Asteraceae.									

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<i>Rosularia aizoon</i> (Rosularia) Produces many spikes of dusky pink flowers in early summer. Waxy, neat symmetrical rosettes. Crassulaceae.	yellow	5 6	6	5	7	6	7	R
<i>Rosularia chrysantha</i> (<i>R. pallida</i>) (Rosularia, Hairy) Hairy mounds of symmetrical rosettes. Straw-yellow stars produced in early summer. Crassulaceae.	yellow	5 6	6	10	8	7	7	R
<i>Rosularia muratdaghensis</i> (Rosularia, Smooth) Rosettes of smooth, fleshy leaves. Creeper. Leaves are bright green and tinged with russet. Crassulaceae.	white	5 6	2	12	7	7	7	R
<i>Ruta graveolens</i> (Rue) The classic rue of herb gardens is a super foliage plant in xeriscapes and rock gardens as well. Rutaceae.	yellow	6 7	10	10	7	7	7	H,R,X
<i>Sagina subulata</i> (Scotch Moss) Moss-like mats of leaves for moist part-shade. Starry tiny white flowers in early summer. Caryophyllaceae.	white	5 6	1	8	8	5	5	G R
<i>Sagina subulata</i> 'Irish Moss' (<i>aurea</i>) (Scotch Moss) Deep emerald green, dense, moss like evergreen foliage. Excellent between flagstones or as a ground cover. Tiny white flowers. Caryophyllaceae.	white	6 7	1	8	8	5	5	E G R
<i>Salvia argentea</i> (Sage, Silver) Possibly the most dramatic foliage plant for temperate gardens, elephant ear lf covered with white felt. Lamiaceae.	white	5 6	36	18	7	7	6	R,X,H
<i>Salvia</i> x <i>superba</i> 'Blue Queen' (<i>Salvia</i>) Dense mounds of rich blue flowers last all season if dead-headed. Labiatae.	deep violet	7 8	12	10	8	6	6	B R
<i>Sanguinaria canadensis</i> 'Multiplex' (Double Bloodroot) Woodland groundcover with flowers like white water-lilies. Papaveraceae.	white	4 5	8	10	4	4	5	R
<i>Santolina ericoides</i> (Lavender Cotton, Green) Deep green mounds of attractive foliage. Brassy button bloom in summer. Asteraceae.	cream	6 8	10	18	8	7	8	R X
<i>Saponaria ocymoides</i> 'Splendens' (Soapwort, Meditrr.) Bright pink stars over neat mats of gray leaves. Thrives in sunny rock gardens. Compact, trailing stems will cover up to 3". Caryophyllaceae.	pink	5 6	8	15	8	7	7	G R
<i>Saxifraga</i> 'Garnet' (Saxifrage, Mossy Garnet) Deep green leaved mossy Saxifrage with strawberry red flowers. Saxifragaceae.	red	5 6	10	12	5	4	4	R
<i>Saxifraga caespitosa</i> (Saxifrage, Purple Robe) Fast-spreading mat of mossy leaves for cool shade. Glorious purple-red stars for much of spring. Saxifragaceae.	red	4 6	7	15	5	5	5	R
<i>Saxifraga ferdinandi-coburgi</i> (Saxifrage, Balkan)	yellow	3 4	3	12	6	6	5	R

	Dark green mats of mossy rosettes. Smothered with yellow flowers in early spring. Saxifragaceae.								
<i>Saxifraga moschata</i> v <i>kingii</i> (Saxifrage, Small Mossy)	white	5	6	3	20	5	6	5	R
	Super fine mat of tiny green leaves and delicate white flowers. Saxifragaceae.								
<i>Saxifraga paniculata</i> (<i>S. aizoon</i>) (Saxifrage, Silver)	white	5	6	12	10	6	6	6	R
	Neat rosettes encrusted with white lime deposits. Showy flowers. Saxifragaceae. Variety <i>brevifolia</i> , tiny encrusted rosettes with white spires. For troughs or choice spot. 'Lutea', a yellow flowered variant.								
<i>Saxifraga</i> x <i>arendsii</i> (Saxifrage, Mossy)	red	4	5	8	12	5	5	5	R
	Mossy cushion. Bright green foliage. Cup-shaped rose pink flowers. Saxifragaceae.								
<i>Scabiosa graminifolia</i> (Scabious, Grassleaf)	lavender	6	8	10	10	8	7	7	R
	Huge powder blue flowers over silvery mats of attractive leaves. Dipsaceae.								
<i>Scleranthus uniflorus</i> (New Zealand Polster)	green	6	8	1	8	8	6	4	R
	Minuscule flowers, but fascinating orangy-green mound. Part shade in the Rock Garden. Caryophyllaceae.								
<i>Scutellaria diffusa</i> (Skullcap, Diffuse)	lavender	7	9	5	8	8	7	6	R
	skullcaps over neat green mounds. Labiatae.								
<i>Scutellaria pontica</i> (Skullcap, Pontic)	pink	5	6	5	6	7	6	6	R X
	Shiny, round green leaves and glowing pink skullcaps in late spring. Labiatae.								
<i>Scutellaria prostrata</i> (Skullcap, Mat)	lavender	6	9	3	12	7	7	6	R
	Neat, tiny mats of crinkled, gray leaves. Showy bicolored flowers over a long season. Labiatae.								
<i>Scutellaria supina</i> (Skullcap, Yellowbloom)	yellow	6	9	5	12	8	7	7	R X
	Neat mounds of green leaves produce vivid yellow skullcaps. Flowers in spring and again in fall. Labiatae.								
<i>Sedum</i> 'Rosy Glow' (Sedum, Rosy Glow)	pink	8	9	8	10	8	7	7	R
	Large pink flower clusters in late summer. Deciduous. Crassulaceae.								
<i>Sedum acre</i> (Sedum)	yellow	5	6	3	15	8	8	8	E G R
	Aggressive mat; prune to keep in bounds, don't mix with choice plants. Does well in poor soils, between paving stones. Bright new growth. Evergreen. Crassulaceae.								
<i>Sedum album</i> (Sedum, White-Flowered)	white	7	7	4	10	8	8	8	R
	Fat, round, mid-green leaves forming large, aggressive mats. Evergreen. Prune drastically to keep neat. Crassulaceae. Selection <i>murale</i> , leaves and stems suffused reddish-purple when dry or flowering. Green in winter.								

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Scientific Name (Common Name)	Fl. Color	Bloom time	Ht.	Width	Sun	Soil	Water	Type
<i>Sedum anacampseros</i> (Sedum, Bigleaf) Bluegreen succulent for sun and well drained soil. Crassulaceae.	pink	7 8	9	10	8	7	8	R
<i>Sedum brevifolium</i> (Sedum, Stout-leaved) Fat leaves in four columns flush red in winter. Very cute trailing plant. Not aggressive. Crassulaceae.	white	7 7	2	6	8	8	8	R
<i>Sedum dasyphyllum</i> (Sedum, Chubby Blue) Chubby glaucous blue leaves for close-packed clumps. Foliage topped with little pink flowers. Restrained. Crassulaceae.	pink	6 7	2	5	8	8	8	R
<i>Sedum ewersii</i> (Sedum, Ewers') Upper leaves glaucous and flat, toothed. Flowers late in summer. Leaves are deciduous in winter. Good late color. Crassulaceae.	pink	8 9	5	7	7	7	6	R
<i>Sedum glaucum (hispanicum)</i> (Sedum, Spanish) Tiny beaded rosettes with starry whitish flowers in early summer. Crassulaceae.	pink	5 6	2	5	6	6	6	R
<i>Sedum hybridum</i> (Sedum, Double-flowering) Extremely durable low groundcover. Blooms again in August. Narrow green leaves turn red in fall. Mounded plant. From Siberia and Mongolia. Deciduous. Crassulaceae.	yellow	5 9	3	10	8	8	8	G R
<i>Sedum kamschaticum</i> (Sedum, Kamtschatka) A bushy clump of toothed leaves, topped with bright yellow flowers. Border plant. Variegated forms.	yellow	6 9	5	10	8	8	8	B G R
<i>Sedum obtusatum</i> (Sedum, Obtuse) Flowers from pale yellow to orange, prefers some shade. Basal leaves encircle stem. Crassulaceae.	yellow	6 6	1	5	6	6	6	R
<i>Sedum pachyclados</i> (Sedum, Pakistan Stonecrop) Fine, clump-forming sedum with glaucous foliage. Crassulaceae.	white	6 7	3	8	7	6	6	R
<i>Sedum reflexum</i> 'Crested' (Sedum, Reflexed) Husky blue-green mounds. Crassulaceae.	yellow	7 7	12	12	8	8	7	R
<i>Sedum spathulifolium</i> 'Cape Blanco' (Sedum, Pacific) Neat mats of gray foliage with contrasting bright yellow flowers. Crassulaceae.	yellow	5 6	3	7	5	6	5	R
<i>Sedum spurium</i> (Sedum, Dragon's Blood) Invasive, with large, showy heads of pink flowers in late summer. Several flower and foliage colors. Crassulaceae. Selection 'Dragon's Blood' with bronze stems, star-shaped crimson flowers. Dark green foliage turns red bronze in autumn.	pink	7 8	4	12	8	8	7	G R
<i>Sedum</i> x 'Vera Jameson' (Sedum, Trailing)	red	7 8	12	24	8	8	7	R

	Deep reddish foliage with rose flowers in late summer. Crassulaceae.								
<i>Sempervivum arachnoideum</i> (Hens-and-Chicks, Spiderweb)	pink	6	8	7	10	8	7	6	
	R Choice sempervivum with white cobwebs and bright pink flowers. Crassulaceae.								
<i>Sempervivum tectorum</i> (Hen-and-Chickens)	pink	6	7	12	10	8	7	6	R
	Rosettes of bright green to red. Thousands of worthy selections. Crassulaceae.								
<i>Sideritis taurica</i> (Woolly Wand Mint)	yellow	7	8	10	12	8	7	6	BR
	Woolly lambs ear mats and soft yellow wands of bloom in June. Labiatae.								
<i>Silene acaulis</i> (Campion, Moss)	pink	4	5	1	8	7	6	5	R
	High alpine requires scree. Choices form from Oregon. An incredibly tight-knit bun. Tiny bright green leaves. Sessile red-purple flowers. Excellent in troughs. Caryophyllaceae. 'Alba' clone is quite generous with its pure white flowers. 'Pedunculata', one of the best free-flowering forms								
<i>Silene alpestris</i> (Catchfly, Alpine)	white	4	5	10	10	6	5	5	R
	Soft green mats of trim foliage. Clouds of starry white flowers in early summer. Caryophyllaceae.								
<i>Silene californica</i> (Catchfly, California)	red	5	6	10	8	7	6	6	R
	Spectacular scarlet flowers. Caryophyllaceae.								
<i>Silene glauca</i> (Catchfly, Beach)	white	5	6	4	10	7	5	5	R
	Silvery mounds of narrow leaves are covered with swollen white cups. Caryophyllaceae.								
<i>Silene hookeri</i> (Campion)	red	4	4	3	10	7	6	7	R
	Gray down foliage and deeply-cleft salmon flowers. For pure, rocky scree. Has brittle root. Caryophyllaceae.								
<i>Silene laciniata</i> (Pink, Indian)	vermilion	7	9	10	5	7	7	6	R X
	Orange stars through the summer months over dusty gray mound of foliage. Versatile. Caryophyllaceae.								
<i>Silene saxifraga</i> (Catchfly, Rock)	white	5	7	8	8	6	6	6	R
	Tiny leaved rock plant with starry flowers over much of the summer. Caryophyllaceae.								
<i>Silene virginica</i> (Fire Pink)	red	5	6	10	8	7	6	5	R
	Showy scarlet flowers over dark foliage. Caryophyllaceae.								
<i>Sisyrinchium albiflos</i> (Blue-eyed Grass)	white	5	6	10	6	7	6	5	R
	Very long blooming. Rush-like foliage. Profusion of small white flowers with notched petals. Iridaceae.								
<i>Sisyrinchium angustifolium</i> (Blue-eyed Grass, Common)	blue	5	7	10	6	8	6	5	

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R Deep blue stars over grassy clumps. Iridaceae.								
<i>Sisyrinchium bellum</i> (Blue-eyed Grass)	blue/yellow	6 7	10	10	7	6	5	B R
Bright blue yellow-eyed flowers. Great border plant. Iridaceae.								
<i>Sisyrinchium macounii</i> v. <i>alba</i> (Blue-eyed Grass, Macoun's)	white	5	6	4	6	7	6	5
R Large pure-white bloom over stout, evergreen, miniature Iris foliage. Iridaceae.								
<i>Sisyrinchium macrocarpum</i> (Yellow-eyed Grass)	yellow	5 6	8	4	8	6	5	R
Giant yellow stars over gray-green spears of foliage. Showy Patagonian wild flower. Iridaceae.								
<i>Sisyrinchium montanum</i> (Blue-eyed Grass)	blue	5 6	8	4	7	5	5	R
Grassy, glaucous tufts of leaves. For moist pockets. Vivid blue stars in late spring. Iridaceae.								
<i>Solidago minutissima</i> (Goldenrod)	yellow	8 9	3	6	7	7	7	R
Loaded with cluster of starry-yellow flowers in late summer. Tiny enough for a trough. Asteraceae.								
<i>Solidago spathulata</i> v. <i>nana</i> (Goldenrod)	yellow	8 9	5	8	7	7	7	R
A strong growing dwarf from the Wallowa Mountains of Oregon. Asteraceae.								
<i>Sphaeralcea coccinea</i> (Cowboy's Delight)	orange	5 7	5	12	8	7	8	R X
Unusual orange flowers over silvery carpet of deeply lobed leaves. Malvaceae.								
<i>Sphaeralcea munroana</i> (Cowboy's Delight)	orange	6 8	8	12	7	8	8	RX
Silvery mounds of foliage and long season of luminous orange cup. Malvaceae.								
<i>Sphaeromeria capitata</i> (Tansy, Rocky Mountain)	yellow	6 7	1	36	8	7	7	R X
Dense silver mats of foliage with yellow ball-shaped blooms. Xeriscape gem. Asteraceae.								
<i>Stachys monieri</i> (Lamb's Ear)	pink	6 7	10	8	7	7	7	R
Hairy green mats of foliage and hot pink pokers in June and July. Labiatae.								
<i>Stachys nivea</i> (Caucasian Stachys)	white	5 6	12	8	8	7	7	R
Large ivory clusters of white over neat gray clumps of leaves. Labiatae.								
<i>Synthyris missurica</i> (Synthyris, Bigleaf)	blue	3 4	10	8	5	5	5	E R
True blue spires in early spring and glossy round evergreen leaves. Scrophulariaceae.								
<i>Synthyris reniformis</i> (Synthyris, Small-leaf)	purple	3 4	4	6	5	5	5	R
First flower to bloom in spring. Easy to grow. Endures deep shade and root competition. Scrophulariaceae.								
<i>Synthyris stellata</i> (Synthyris, Roundleaf)	blue	3 5	8	7	5	4	5	R
Showy spires of blue flowers and shiny round evergreen leaves. Scrophulariaceae.								

<i>Talinum spinescens</i> (Fameflower, Spiny)	pink	6	8	6	8	9	8	7	R
Cushions of succulent leaves with bright pink stars. Portulacaceae.									
<i>Tanacetum densum</i> var. <i>amani</i> (Partridge Feather, Tansy)	yellow	6	7	10	15	8	7	7	
R White-hairy finely cut mats with yellow buttons in early summer. For the front of dry, sunny borders. Prefers dry soils. Strongly aromatic. Asteraceae.									
<i>Teucrium aroanium</i> (Germander, Styx)	lavender	6	10	3	7	8	7	6	R
Silvery mounds with spidery lavender flowers in summer. Labiatae.									
<i>Teucrium chamaedrys</i> (Germander, Wall)	purple/white	7	9	10	24	9	7	6	BGR
Lovely border plant. Leaves used for mild-flavored tea. Pale to deep purple flowers. Used as edging in knot gardens. Small woody evergreen shrub. Labiatae. Selection 'Prostratum', groundcover with purple flowers in late summer. Fast spreading.									
<i>Teucrium orientale</i> (Germander, Asian)	lavender	6	8	10	12	8	7	8	RX
Finely divided leaves form a clump. Clouds of bright lavender spidery flowers all summer. Labiatae.									
<i>Teucrium polium</i> 'Purpureum' (Germander, Mediterranean)	purple	6	9	5	8	8	7	8	
R Very white woolly leaves. Small vivid purple flowers for a long season. Labiatae.									
<i>Teucrium sypsiense</i> (Germander, Low)	pink	6	8	6	10	8	7	8	R
Pale pink flowers over neat mounds. For rock garden or front of border. Likes sun and heat. Labiatae.									
<i>Thymus doerfleri</i> (Thyme, Hairy)	lilac	6	7	1	7	8	7	7	GR
Hairy mat for choice spot in hot rock gardens. Labiatae.									
<i>Thymus glabrescens</i> v. <i>loevyanus</i> (Thyme, Bigleaf Mat)	lilac	6	7	2	18	8	7	8	GR
Fast spreading mound for groundcover. Labiatae.									
<i>Thymus latifolius</i> (Thyme, Wideleaf)	lavender	6	7	1	8	8	8	8	R
Neat mat with pink flowers. Labiatae.									
<i>Thymus necefii</i> (Thyme, Crossleaf)	pink	4	5	2	10	8	7	7	R
Fabulous mats of intricate, overlapping gray leaves and glowing rose flowers in early summer. Labiatae.									
<i>Thymus praecox</i> (Thyme, Early)	pink	6	7	1	12	8	7	7	R
Neat creeping thyme with distinctive flowers and aroma. Labiatae. 'Pink Chintz' selection, , vivid pink flowers.									
<i>Thymus pseudolanuginosus</i> (Thyme, Woolly)	lavender	6	7	1	12	6	7	7	FGRHX

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Well-known carpeter for sunny warm spots forms thick, woolly, silver-gray, aromatic mat. Will tolerate drier conditions, light traffic. Seldom flowers. Labiatae.								
<i>Thymus serpyllum</i> (Thyme, Creeping)	lavender	6 7	1	15	8	7	7	R
Low, fine-leaved mats. Labiatae. 'Albus', Pale green mats of foliage studded with white; 'Aureus' (Golden Thyme), Golden leaved variant; 'Minus' (Thyme, Dwarf), very dense, mounding form, stays smaller.								
<i>Thymus thracicus</i> 'Lavender' (Thyme, Lavender)		5 6	3	12	9	5	5	G O R
Fragrance reminds one of Lavender. Labiatae.								
<i>Thymus vulgaris</i> 'Argenteus' (Thyme, Silver)	lavender	6 7	8	10	8	7	7	B H R
Neat silver-edged leaves. Startling focus in the sunny border. Labiatae.								
<i>Tiarella cordifolia</i> (Foamflower)	white	4 5	12	10	5	5	5	R W
Mat forming woodlander with Heuchera-like leaves. Creamy spires of bloom in spring. Saxifragaceae.								
<i>Tiarella wherryi</i> (Foamflower, Wherry's)	rose/white	4 5	10	10	5	5	5	R
Toothed oval leaves in compact clump. Candle-like spires of creamy flowers. Saxifragaceae.								
<i>Townsendia alpigena</i> (syn. <i>montana</i> , Mt. E. Daisy)	purple	4 6	1	3	7	7	7	R X
Intensely colored fls and compact tufts are perfect for troughs. Asteraceae.								
<i>Townsendia exscapa</i> (Daisy, Easter)	white	2 4	1	4	8	8	8	N R X
Early blooming native with silver mounds. Asteraceae.								
<i>Townsendia rothrockii</i> (Daisy, Lavender Easter)	blue-purple	3 5	2	5	7	5	5	E N R
Mound of bluish purple daisies. Colorado native. Rare plant. Early bloomer. Evergreen. Easy to grow. Asteraceae.								
<i>Tradescantia longipes</i> (Spiderwort)	blue	5 8	9	9	7	7	7	R
Dwarf perennial emerges in late spring. Abundant three-petalled flowers on 3-4 inch stems. Commelinaceae.								
<i>Trillium grandiflorum</i> (Trillium, White)	white	4 5	12	8	5	5	5	R
Showy woodlander thrives in shade with good garden soil. Liliaceae.								
<i>Trillium luteum</i> (Trillium, Yellow)	yellow	4 5	10	10	4	4	5	R
Soft yellow flowers over mottled foliage. Liliaceae.								
<i>Vella spinosa</i> (Spiny Golden Cress)	biscuit yellow	4 6	10	12	8	7	6	R
Very dense dwarf shrub with spiny stems. Biscuit yellow flower in late spring. Brassicaceae.								
<i>Verbascum dumulosum</i> (Mullein, Shrubby)	yellow	6 7	10	12	8	7	7	R
Magnificent mound of woolly foliage. Showy flowers for well drained sunny crevice. Scrophulariaceae.								

<i>Verbena bipinnatifida</i> (Verbena, Dakota)	purple	5	9	3	10	8	8	8	N R X
Native to prairies, mesas, uplands. Low-growing, rounded clusters; reclining stems root in loose soil; self-sows. Rose to purple and maroon. Well-drained soil. Verbenaceae.									
<i>Verbena wrightii</i> (Verbena, Wright's)	lavender	6	10	10	15	8	7	7	R
Lavender whorls of bloom through the summer months. Verbenaceae.									
<i>Veronica armena</i> (Speedwell, Armenian)	blue	5	6	3	9	7	6	6	R
Easy plant for well drained sunny locations. Forms a neat mat. Scrophulariaceae.									
<i>Veronica bombycina</i> (Speedwell, White-leaf)	blue	5	6	2	6	8	7	7	R
One of the most silver-leaved plants known. Avoid over-watering. Scrophulariaceae.									
<i>Veronica filiformis</i> (Veronica, Bird's Eye)	blue	4	5	1	9	7	6	6	G R
Rampageous carpet of scalloped, pale-green leaves. Irresistible baby blue flowers. Can easily become a weed. Scrophulariaceae.									
<i>Veronica incana</i> (Veronica, Silver)	blue	6	7	12	10	7	7	7	B R
Silvery mats with spikes of pale blue in early summer. Easy for sun or part shade. Scrophulariaceae.									
<i>Veronica latifolia</i> (Veronica, Wide Leaf)	blue	5	6	10	12	7	7	7	R
'Crater Lake' Startling blue mound of starry bloom in late spring. Scrophulariaceae. Selection 'Royal Blue', rich blue flowers.									
<i>Veronica liwanensis</i> (Veronica, Turkish)	blue	4	6	1	15	8	7	8	G R
Outstanding mats of dark-green, succulent leaves, very low. Cobalt blooms early summer. Very hardy and versatile. Either sun or shade. Scrophulariaceae.									
<i>Veronica orientalis</i> (Veronica, Oriental)	blue	5	6	5	12	8	7	7	R
Gray leaves obscured by cobalt blue flowers in late spring. Exceptional for rock garden. Scrophulariaceae.									
<i>Veronica pectinata</i> (Veronica, Woolly)	blue	4	6	3	12	8	7	7	G R
Choice, dark green feathered mats. Pure blue stars for a long season. Scrophulariaceae. Variety 'Rosea', bright pink fls.									
<i>Veronica repens</i> (Veronica, Creeping)	blue	4	5	3	10	8	7	7	G R
Tight mats of rounded foliage with pale spattering of stars. Scrophulariaceae.									
<i>Veronica tauricola</i> (Veronica, Toros Mt.)	blue	4	6	3	12	8	7	7	G R X
Dense cushions of wavy lf and intense blue fls. Scrophulariaceae.									

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<i>Veronica spicata</i> '(Speedwell) 'Red Fox', reddish-pink spires of bloom over neat mats for front of border. Scrophulariaceae. Selection 'Blue Rug', compact mats of trim foliage and blue spires of bloom	red	5 7	12	10	8	7	7	B R
<i>Veronica thymoides</i> var. <i>pseudocinerea</i> (Ver., Thymeleaf) Superlative white foliage plant with deep blue stars. Scrophulariaceae.	blue	5 6	1	7	8	7	7	R
<i>Vinca minor</i> (Periwinkle, Myrtle) Well known carpeter for cool spots. Apocynaceae.	blue	3 5	8	18	5	5	5	B G R
<i>Viola adunca</i> (Violet) Easily naturalizes. Violaceae.	purple	4 6	3	4	7	7	7	R
<i>Viola bertolonii</i> (Pansy, Wild) Long blooming relative of pansies. Looks appropriate in the wild garden. Violaceae.	lavender	3 5	3	8	6	6	5	R
<i>Viola cuneata</i> (Violet, Wedgeleaf) Needs little or no summer-fall water. Upper petals are purple; lower are blue. Violaceae.	purple	3 5	5	5	8	7	8	R X
<i>Viola variegata</i> (Violet, Variegated) Round, mottled leaves resemble Cyclamen. Reseeds readily. Violaceae.	pink	3 9	3	3	5	6	5	R
<i>Waldsteinia ternata</i> (Barren Strawberry) Evergreen three-part leaves. Showy yellow blooms. Outstanding groundcover. Rosaceae.	yellow	4 5	4	10	4	5	6	G R
<i>Zauschneria californica</i> (Fire Chalice) Scarlet trumpets of fuchsia-like bloom for sunny spot in late summer. Showy plant for a dry garden. Attracts hummingbirds. Transplant in spring. Onagraceae. 'Solidarity Pink', soft pink flowers. Var. <i>latifolia</i> , scarlet trumpets over silvery mounds from midsummer to frost.	red	7 10	7	15	8	7	8	R X
<i>Zauschneria garrettii</i> (Rocky Mountain Fuchsia) Profusion of brilliant red trumpet shaped flowers. Low foliage is leathery, sharply toothed. Attracts hummingbirds. Transplant in spring. Earliest <i>Zauschneria</i> . Onagraceae.	red-orange	6 9	10	20	7	6	6	R X
<i>Zauschneria septentrionalis</i> (Fuchsia, California) Spreads by underground stems. Dwarfed and tufted habit. Forms a neat, non-invasive mound. Onagraceae.	red	7 9	8	18	8	7	6	R

THE FIRST ONE HUNDRED: RECOMMENDED PLANTS FOR BEGINNERS

by Geoffrey Charlesworth

When you finally arrive at rock gardening, there seems to be an overwhelming number of plants from which to choose. Do more expensive plants give more pleasure? Is it better to go for the inexpensive ones and get more plants for the same money? Shall I start with a color scheme in mind? Shall I collect a single genus? Shall I grow exactly what X or Y is growing? (The answer to all these questions is No). I started out by wanting a beautiful rocky outcrop with colorful mats flowing over the rocks and delightful buns tucked into pockets of soil between the rocks, with a few taller plants for variety. My ideal would start flowering in early April and continue nonstop through September at least. Maybe this is your aim too. How to do it? Without some experience, growing plants from seed is a lottery and hardly a viable way of filling a garden as quickly as an eager beginner would like. Then there are plant sales at the chapter meetings. You can get excellent bargains and excellent plants too, but it is not a swift and reliable way to fill a garden. You can't expect to find at a sale the particular plant you have just seen or read about and

have set your mind on growing. There is no point in taking your want list to a sale. The chance is too remote that anyone else knows what you want or could supply it if they did. The best way to get something you want is from a reliable mail-order nursery, but you still may have to adjust your want list to what is available. Of course you must visit local nurseries too, to find out what is available there. The plants you buy there will probably establish better than plants that have been subjected to the indignities of air travel. But once you open a mail-order catalog you realize that the world of plants is far bigger than your local nursery can handle.

Here follows a list of plants that are "easy." That is they will probably prosper if you give them reasonable care; they are also easy in the sense that they are obtainable. It is not a comprehensive plant list for beginners, I am recommending plants that I would recommend to a friend who was just starting out and wanted advice to follow or ignore. The virtue of these plants is that they were available recently and will probably be available for several years, as they all

have durable value. I ransacked all the catalogs that arrived in January and February to look for the plants that everybody should grow. Sometimes I give the description offered by the nursery and sometimes my own experience. There are many other plants other than rock garden plants offered, but I have included only plants suitable for a rock garden which has relatively good drainage, plenty of sun, and is free from the competition of shrub and tree roots and large perennials with big leaves. Some plants are woodlanders and will be described as shade plants. You can decide whether to have a special woodland area or whether to try them in the shadier spots in your rock garden. In any case, the soil for them would need to contain more humus and not drain as rapidly as for alpiners.

Most of the plants we grow from seed are species; that is they are plants you would expect to find in the wild. If an observant gardener finds a plant with some unusual quality, such as larger than normal flowers, double flowers, or variegated leaves, he or she wants to spread it around. Plants grown from seed nearly always vary from each other and from their parents, so the only reliable way to propagate a special plant is vegetatively—by cuttings or division. Such a set of plants is called a clone. The best distributors of such clones are nurseries. They have the skills and equipment needed to produce the hundreds of plants of each good form or hybrid which will satisfy the nation's gardeners. Most forms and hybrids are given fancy names designating them as having a special quality that most wild plants don't have. Not only beginners but more experienced gardeners are always on the lookout for new and good forms. I like to try out every new plant I can find and afford, to evaluate

it against my own idea of beauty and interest and to see whether it likes the conditions in my garden.

I shall not recommend many clones explicitly because to appreciate an unusual form you ought first to know what the standard wild form looks like. But don't be deterred from getting a named form—that may be all that is available. Besides visitors who know only the standard species will be fascinated to see an unusual color form or a dwarf form growing in your garden. There is one caveat: if every plant in your garden is a large-flowered form, a double-flowered form, or has variegated leaves, the garden will not look very alpine. It will lose its innocence and appear artificial. This may be the effect you want, and that is fine. But if what you really want is a natural mountain-top effect, sooner or later you will have to grow the species plants, and that probably means growing some plants from seed. Nurseries also propagate many alpiners from seed, and the absence of a fancy name implies that even though the plant may have been propagated from cuttings it is a true species and not a man-made hybrid.

In the following descriptions of the plants I have quoted excerpts from some of the fine descriptions of the nurseries themselves. A quote from a particular nursery doesn't mean that the plant is only available there. Some nurseries don't write descriptions at all. A list of mail-order nurseries follows and you might want to do some comparison shopping, although there is no way of comparing quality and size without seeing the plants. There are also many good nurseries that I have never used. More importantly there are hundreds of plants a beginner could grow, and this list is meant to lead you on rather than limit your vision.

The authors of these affectionate puffs are unknown and will be designated by a letter showing the name of the nursery. But I imagine Baldassare, Betty Ann, Nancy, Evie, Dick, Rene, Eleanor, Marty, and all the other nursery operators will give credit to their writers. It is fascinating how different eyes notice different aspects of the same plant.

S.= Siskiyou Rare Plant Nursery;

R.=Rice Creek*; M=Montrose*;

NG.=Nature's Garden;

C.=Cricklewood; W.=WeDu;

Rk.=Rocknoll; WR.=Woodland

Rockery; CA.=Colorado Alpines* [*no longer selling by mail—Ed.] Any

remark not in quotes is my own opinion.

There are several other good nurseries selling these plants. The ones listed above have the best descriptions.

Achillea ageratifolia. "A permanent mat of little silvery lance-shaped leaves and numerous white-petalled flowers with off-white centers. The white-on-white effect is most appealing." S. "A cheerful plant." WR. There are a number of useful yarrows. This one is as large a plant as you would want in a small rock garden, and you could even use it at the front of a border. This has better flowers than most. This *Achillea* is often called *Anthemis aizoon*.

Actinea herbacea: "Large yellow daisies on a dwarf plant makes a bright accent in the spring garden" R. This plant is described as a form of *Hymenoxys acaulis* (see later), which is essentially a high mountain cushion but is also a plains plant about six inches high and takes up as much space as *Aster alpinus*. Could even be used as a front of the border plant.

Aethionema 'Warley Rose'. "Dwarf shrub for hot, dry positions. Tiny col-

orful blue-green leaves smothered in rose-pink. Daphne-like blossoms in May and June." S. "Evergreen bushlets with Daphne-pink rosebuds." Rk. This plant is probably a form of *A. armena*. Other aethionemas such as *A. pulchellum* are just as good, but you may have to start them from seed. They may then self-sow attractively in cracks and crannies. 'Warley Rose' is a good color but never produces seedlings for me.

Aethionema grandiflorum: "The steel-blue, needle-like foliage is lovely all winter, and in spring heads of delicate pale pink flowers are produced. Give it sun." M.

Aethionema oppositifolia: "One of the tiniest woody shrubs known. A delightful plant that creates a flat even mat of gray, fleshy, round leaves less than an inch high. Short stems carry heads of pale lavender flowers in very early spring. A hardy plant from the mountains of Lebanon." S. It has lived for me through the harshest of winters without protection. The leaf-flower color combination is ravishing, and it blooms with the earliest drabas. It may be listed as *Eunomia oppositifolia*.

Ajuga: Don't plant ajugas in your rock garden. The only exception might be a form of *Ajuga* usually called 'Metallica Crispa'. "Curly bronze leaves. Non-spreading. Looks like red dwarf spinach." R. "Speckled silver and purple curled and shiny leaves." Rk. "A foxy specimen plant for a partially shady area. It's composed of congested crinkled leaves with a purplish sheen that emit short racemes of deep-blue flowers." WR. There is also a form with redder leaves.

Alchemilla alpina: "Dark green foliage with silver edge and reverse." C. This is primarily a foliage plant. The flow-

ers are greeny yellow. At its most attractive after rain when drops of water sit in the upturned umbrellas. The leaves are quite large for a small rock garden. *A. mollis* is more often seen, but it is far too large and weedy for a rock garden. Both species merit space only if you are very fond of leafy landscapes.

Anacyclus depressus: "Wheel-like patterns of lacy, grayish-green foliage develop white, red backed, daisy-like blooms at their tips." Rk. There is a good reason to get this from a nursery; the seed you get from exchanges is very rarely viable. This beautiful daisy comes from North Africa and southern Spain, so you wouldn't expect it to be hardy in Massachusetts. It survives and self sows.

Androsace lanuginosa. "A vigorous, easy plant from the Himalayas with silvery trailing stems ending in clusters of lavender pink, white-eyed flowers. Valued for long summer bloom. Zone 4." S. "Easy Himalayan." CA. This is one of the few *Androsaces* that are perfectly happy outside. It is not a bun and not really a mat, but it needs a foot of room to sprawl around. The stems don't seem to root down.

Androsace sarmentosa: "Hardy Himalayan species with hairy, silver foliage rosettes that spread by stolons densely covered with light pink. Verbena-like blossoms in April and May. Zone 3." S. This is the first *Androsace* to plant and a never ending source of delight. You can move bits of it around when it roots down. There are a number of forms equally good. *A. primuloides* is the same or a very similar plant. "Makes a patch of furry buttons that sends up quantities of pink flowers in May. Even out of bloom the silvery rosettes are attractive." R. *A. semper-*

vivoides is neater but not so reliable.

Anemone x lesseri: "Bright red flowers. Will grow to 12" in maturity. Likes a moist soil in sun or part shade." R. It doesn't actually need moisture. The color is unusual since most rock garden anemones are white.

Anemone multifida: "Full sun, good drainage. Elegant finely divided foliage; cream, red or yellow colored flowers on long stalks in late spring. Native to the rockies." W.

Anemone nemorosa: "An endearing early spring blooming wildflower which carpets woods and shady hill-sides of N. Europe to N.W. Asia. The species has lovely white flowers, light pink reverse. Plant the woody rhizomes horizontally, 2in. deep." S. There are several color forms from white to deep blue and red, also some doubles. A broad sheet of them in a woodland would be great, but the pretty forms look good singly in a shady part of the rock garden.

Anemonella thalictroides: "This native perennial is happy in a woodland setting or in a shaded rock garden. The blue-green foliage provides a collar for the delicate white to pink flowers. It grows from a tuberous root and occasionally reblooms in the fall; however it disappears during the summer. To 9" but usually much shorter. Zones 3-10." M. "Extremely delicate in appearance, but tough and long-lived in the garden. White or pinkish anemone-like flowers in earliest spring; often bloom sporadically through the season." W.

Antennaria dioica: "Dwarf carpeting, mountain plants, easy in full sun and well-drained soil." S. "Flat silvery-white mats." Rk. Pussy-toes is a spreader but easy to control. The flowers of some of the forms are worth

having, the usual species flower is a little dingy. It adds a gray patch to the green mats of summer.

Aquilegia bertolonii: "One of the smallest and finest. Large rich blue upturned flowers". S. There are a number of miniature aquilegias for a beginner. Taller ones also are at home in the rock garden, but there is a good deal of crossing goes on and the subsequent self-sowing will give you a mixed bag of sometimes uncontrollable seedlings. Some people want this effect, but once you have it, it is hard to change.

Aquilegia flabellata: is probably more permanent than *A. bertolonii*. "A wonderful Japanese native well suited to our climate. It grows to about 15" and blooms with blue and white flowers in early spring. The lovely, blue-green foliage is more resistant than most to leaf miner. Semi-shade. Zones 3-10." M. "Fleshy fringed foliage produces 3-4" stems of long-lasting deep blue and white flowers with recurved spurs. Blooms early summer. Prefers a cool position." CA. "Prefers a mostly sunny site." WR. Note the differences between advice from North Carolina, Vail, CO., and Michigan. In Massachusetts it doesn't mind sun. There are dwarf forms, some all white.

Arabis ferdinandi-coburgii 'Variegata': "A valuable foliage *Arabis* forming a mound of neat rosettes of 1in. creamy-white leaves, each with a narrow center zone of green. White flowers on 5 in. stems." S. Another *Arabis* you can get from any local nursery is *A. caucasica*. This is not to be despised but must be kept tidy by shearing and not allowed to ramp unchecked. There is a variegated form of this too but *Arabis ferdinandi-coburgii* is neater, though the flowers are not as good. Another name

for *A. caucasica* is *A. albida*, and there is a double form "which blooms all spring and makes an effect like popcorn. An old-fashioned plant that has become rare." R.

Arenaria montana: "Clouds of large pure white flowers smother the plant in early summer. Attractive dark green foliage year round. Alps. Zone 5, but grown in Zone 4 with winter mulch." S. "Myriads of white cup-shaped flowers. Foliage is deep green needle-like in mats. Classic rock plant." R. This is one of the best sandworts for flowers. I have found it impermanent without protection in the Berkshires, but I have seen it growing very happily in Hartford a little bit south of here. *Arenarias* on the whole are easy, but this one is worth a little extra trouble.

Armeria juniperifolia (= *A. caespitosa*): "Minute hummocks of leaves. Long lasting white flowers nestle right on the foliage. 2"." R. "Dense buns sprout short stems topped with papery, rose-pink flower-heads. This little fellow prefers a mostly sunny area with a well-drained soil." WR. "Spherical pink flowers rise just above the foliage." CA. White and pink forms are first-rate plants. Perhaps the best of the thrifts. When it begins to look shabby after a few years you can easily propagate it by pressing tufts of foliage into sand.

Armeria maritima: This is a plant of wide distribution on both sides of the Atlantic. It has white, cherry-red, and pink forms. "Foliage makes a fine-textured grassy mat" R. "The fine, ever-green leaves will form a tight bun, and you will be rewarded with heads of mauve-pink flowers in spring." M.

Asarum hartwegii: "The cyclamen-leaved ginger is doubtless one of our

best native plants. Green leaves with conspicuous silver veining. Requires extra gritty, woodland soil. Succeeds even in Zone 4 though usually rated zone 6." S. Indeed it is hardy for us. This is a woodlander with large glossy leaves, but it might be happy in a shady, moist spot at the foot of a cliff.

Asperula gussonii: "Compact cushion of short, needle-like leaves which become covered with small, fragrant pink flowers." CA "A mini-mat of dark green leaves nearly hidden by the abundance of small, tubular, flesh-pink blossoms in late spring." WR.

Asperula sintenisii (= *A. nitida* var. *puberula*): "Makes a light green cushion smothered in a sheet of pink tubular star flowers in spring. Zone 6" S. Actually both these *asperulas* seem to be OK in Zone 4-5 if they are planted in fast draining scree. Keep trying until you get one of them established. I have heard it said that hairy-leaved *A. suberosa* would also survive with proper care but I have only been successful with this in the alpine house.

Aster alpinus: "Daisies in spring above clustered leaves" R. Color forms vary from deep mauve, pink and white. At least one color should be found in everybody's garden. Note that most other asters bloom in the fall and this distinguishes them from *Erigeron*.

Astilbe chinensis 'Pumila': "A nearly flat mat of heavily dissected foliage and 10-12" spikes of fuzzy, shocking-pink blossoms. A dependable summer bloomer for a partially shady rock garden." WR. Or you can put it in a woodland setting where it is vigorous enough to fend for itself. Most of the *Astilbe* cultivars only look right in a border or formal woodland garden; this one has a natural look but gives

lots of color at a low point in the year. *Aubrieta deltoidea*: "Classic rock plants" S. The forms of this species are legion and splendid. Plant several to find out whether you like the reds or the lilacs and near blues. The one with variegated foliage was easier to establish for me than many of the hybrids from England. They are easy enough from seed, but you will get some of the less clear colors. If you succeed with growing this species from seed, go on to other species of *Aubrieta* which are less flashy but very good plants.

Aurinia saxatilis: Basket-of-Gold is obtainable at any local nursery. There are some color forms, pale yellow and even a buff color. Also double and compact forms. "Pale moonlight-gold flowers. Soft gray-green foliage." Rk.

Bolax glebaria: "Glossy green leaf rosettes make an intriguing armor-like pad. Little yellow flowers." S. "Tough, plastic-like, glossy green foliage produces a low, spreading mat." CA. True for both the normal size plant and the tiny leaf variety. In shade the "pad" is more lax but is a refined ground cover like an out-of-flower mossy saxifrage.

Callirhoe involucrata: "Full sun; good drainage. Midwestern native. Procumbent plant with long trailing stems, forming a loose mat. Beautiful, silky wine-colored flowers over a long period in midsummer." W. Winecups is the common name. It sprawls around the rock garden without doing much harm to its neighbors.

Campanula barbata: "Flat foliage rosette, pale blue fussy bell flowers." C. This is a short-lived perennial and may be biennial in your garden, but it seeds around sensibly.

Campanula carpatica: A very depend-

able campanula, a little on the large side but well within acceptable size for a rock garden or a wall garden. It will self sow quite readily and forms extensive colonies but also will sow itself charmingly in crevices that are otherwise unplantable. "It blooms all summer just like an annual". R. "Compact tufts of heart-shaped leaves." Rk. The white form is pretty, too.

Campanula cochlearifolia: "Fairy children of dusky blue on 2" stems. Spreads into a nice patch." R. "Profuse, dainty, bell-shaped light blue flowers. Needs well-drained soil." CA. In my experience it runs around at random invading but rarely harming other plants. It may die out so let it go where it thinks best. Some forms are difficult to establish.

Campanula kemulariae: "An easy, valuable groundcover and wall plant for shade, under shrubs, even in dryish soil. From a creeping rootstock rise tufts of shiny leaves and foot-long pendulous stems carrying many big open blue bells in June." S. "Showers of deep lavender bells just above attractive glossy leaves." R. "Toothed leaves and decumbent 10-12" stems of good-sized bluish-mauve bells. It is best grown in a sunny wall, or where it can cascade over rocks." WR. I have it growing and mingling with *Geranium dalmaticum* and both survive their close relationship. The blue is good and goes well with the pink of the *Geranium*, the color may depend on soil and exposure. In another raised bed it flows poetically over the sunny side but also tries to creep backwards into the drabas and other small fry. It has to be periodically restrained.

Chrysanthemum weyrichii: "Large pink daisies hug the shiny deep green carpeting foliage in late summer." R.

"Year round a neat spreading plant of cut shining green leaves and in summer 3" wide pink daisies on 4" stems. Ideal running through crevices of a sunny wall." S. "Darling pink daisies." Rk. "Leathery, glossy green foliage." CA. "a spattering of pink, daisy-like blossoms in late summer." WR. It always takes me by surprise in mid July. It hugs a large rock next to a path and runs along the base in a long line not trying to invade the path. The flowers are summery pink but the size of fall chrysanthemums, and it looks like a rock plant, not a bedding chrysanthemum.

Chrysogonum virginianum: "Yellow daisies above bright green foliage mats." R. "This is a splendid long-blooming native plant which is happy in sun or shade. It produces bright yellow flowers from early spring through fall and is nearly evergreen with leaves disappearing only after extreme cold." M. "Six inch quarter sized gold buttons. April to frost." Rk. "Lavish clumps of hairy green leaves and bright-yellow flowers...well-drained soil that leans towards the acid end of the scale. It should do fairly well in a mostly sunny garden if it is not allowed to go bone-dry during the summer." WR. A composite with lots of character and a useful carpet-former at the edge of a wood. The low form is superior and more commonly found.

Claytonia virginica: "A delicate native plant, less than a foot high which thrives in shade or sun. Growing from a corm, it makes a brief appearance from winter into very early spring. The flowers which are pink or white with pink stripes are produced in racemes." M.

Cotoneaster apiculata: A good small shrub for a small garden. Plant it next

to a rock and watch it mould itself to cover the rock. 'Tom Thumb' is a good dwarf form; 'An elfin form of the 'Cranberry Cotoneaster' with dainty near-oval leaves. Quite slow growing, but will root where its little branches touch the ground and form a small mat after a few years." WR.

Cyclamen hederifolium: "Makes colonies of marbled leaves." R. "This is one of the hardiest species. The beautiful leaves are infinitely variable even on a single plant and the white or pink flowers are produced occasionally during the summer and in abundance throughout the fall." M. You may have trouble with cyclamen if animals discover the corms. The wrong combination of cold and wet may decimate them, but grown in the right place there is nothing to compare with a sweep of *C. hederifolium* or in a warmer spot, *C. coum*.

Cytisus decumbens: "Low shrub, 6-10" tall by 3-4' wide. Bright yellow flowers." CA. There are a number of good rock garden brooms. Some will provide medium-sized shrubs for large accent. Some are spiny. A good hybrid which some catalogs have sometimes is *C. x kewensis*. Grow something near brooms that self-sows a little, such as *Erinus alpinus* or *Chaenorhinum oreganifolium*, so that when the shrub expands you won't need to rescue anything precious.

Daphne cneorum: A lovely sweet scented low shrub. After *D. mezereum* this is the most often seen in gardens and therefore has less rarity value than the cult species that can be troublesome to grow and hard to find. But it is probably the best of them all. *Daphne mezereum* is one of the first plants to flower in the whole garden and therefore worth keeping in spite of its

slightly weedy habit. *Daphne cneorum* never misbehaves except to die off in patches without adequate explanation. "Covered with masses of intensely fragrant pink flowers." CA.

Delosperma nubigenum: "Full sun; good drainage. Very low-spreading; succulent, yellowish foliage; bright yellow-orange flowers in June." W. "This succulent-leaved plant makes a fine ground cover in a sunny location. It is drought tolerant and non-invasive, producing bright yellow flowers in spring. The vivid green foliage turns red in the winter sun. It is 1" high and hardy enough to grow in the Denver Botanic Garden." M. Yes it is hardy for us, too. Other delospermas, South African natives, are not hardy here but are worth trying a little further south. Try for instance *D. cooperi*. "Hardy in Denver but not in Vail." CA.

Dianthus: Grow several of the alpine species, for instance *D. freynii* ("stiff, gray-green leaves." CA.) *D. gratianopolitanus* ("Tight cushions, fragrant" CA.), *D. microlepis* ("tight carpet, nearly stemless." R. "Green, curved, needle-like leaves." CA.) *D. nitidus* ("Bright green rosettes..shiny pink flowers..dark calyx" CA). *D. petraeus* ssp. *noeanus* ("spiny buns...reminiscent of shimmering fireworks." WR. "white fringed flowers." R.), *D. simulans* ("tufts like pincushions". R.). *D. subcaulis* ("gray-green..nice pink" CA) If you don't mind losing a plant soon after it blooms with only a sporting chance of having it a second year, grow *D. alpinus*. Also grow a few of the many dwarf hybrids such as 'Little Joe', 'Mars', 'Tiny Rubies' ("tiny double rosy carnations" R), but not the larger hybrids, unless you can find a place in the border for them. Anything that looks like a carnation looks wrong near rock plants. *D. deltoides* has some

good color forms but can become a nuisance when it produces endless seedlings of indifferent colors.

Dicentra cucullaria: "Dutchman's Breeches. Snowy flowers like little pantaloons hung out to dry in the April woods." R. "Racemes of nodding, 2-spurred white flowers." W. What you get are tiny rhizomes. Plant these, watch the leaves disappear and understand that you will have to wait until next April to see them. Meanwhile, they sit for most of the year just underground, so mark the spot and don't disturb or slice them inadvertently.

Dodecatheon meadia: "Delightful cyclamen-like white or pale pink flowers on a tall spike in May; basal rosette of narrow leaves." W. "Robust eastern species that retains the firm green leaves well into summer." S. You will need a location that retains some moisture for this. Everybody should grow some representative of the emblematic genus of NARGS, and this is one of the easier species in the East. *D. pulchellum* is OK, too.

Draba dedeana: "Pure white flowers on 2" stems. Small, wide bristle-tipped leaves. Spain and the Pyrenees. One of the best species. Zone 4." S. Most of the white drabas are rather dull plants, and the good drabas are nearly all yellow, so this has two advantages.

Draba lasiocarpa: "Forms a small hummock of most unique foliage. Stiff, green, pine needle leaves. Racemes of pale yellow. Eastern Europe mountains. Zone 5." S. Zone 4 is OK too. *Draba oligosperma*: "Small, rigid, gray-green leaves form tight rosettes which huddle together in a hard cushion." CA. These are just two of many species of draba blooming before the

crocus and into May. Get several species to compare the tight foliage of the buns and mats. If you succumb to Drabamania you will graduate to growing them from seed. Some need protection from winter wet, but most are hardy through the worst weather.

Draba sibirica: "is one of the easiest species to grow in a mostly sunny site." WR. And therefore needs a special mention, because it makes quite extensive mats and not just tiny buns.

Dryas octopetala: "Easy and beautiful. Large white flowers and silky seed heads. Most attractive dark, mottled foliage makes a neat ground cover." S. "Evergreen creeper with large white flowers like single roses. Leaves like miniature oak leaves." R. Probably best in a sandy scree in our climate. Some gardeners grow enormous mats of *Dryas*, but mine gets damaged each winter and takes time to revive in spring.

Edraianthus graminifolius: "A stunning crevice plant featuring especially thin grassy green foliage. The violet-blue flowers are abundant on prostrate stems." S. There are many subspecies of *E. graminifolius* from different geographic locations with small differences. All the kinds I have grown have been excellent, and the abundant self-sowing they do is welcome. *E. pumilio* is even prettier but not so amenable. "Beautiful violet-purple trumpets in late spring." CA.

Erica carnea: There are so many varieties of heathers that some nurseries specialize in *Calluna* and *Erica*, and devotees form societies to exchange cultivars and cultural information. Plant a few specimen plants at first to test your site for soil (it should be peaty and never dry out totally) and

climate (some member of the family will grow in most parts of the US and Canada). Collecting forms can be addictive.

Erigeron compositus: "Bright lavender flowers on dwarf downy foliaged plant an inch high." R. You can expect to get a plant of *E. compositus* at most plant sales. Since it is variable, a plant from a mail-order nursery is probably going to be a good form. In any case you should plant several forms of this western daisy.

Erigeron scopulinum: 'Rock crevices. Small white daisies. Excellent for troughs'. S. The small leaves make a tight mat, and the daisies are not very numerous but look just right.

Erinus alpinus: "Rose purple flowers". Rk. Will self sow into cracks and cran- nies, but it is small enough to be harm- less to most of its neighbors. There are white and pink forms.

Eriogonum umbellatum: "An attractive mat of green, silver-backed leaves and tall stems of cream flowers in July." S. "Can form mats or sub-shrubs." CA. It is very variable with forms of differing size, color and habit. But it one of the easier buckwheats.

Erysimum kotschyannum: "This excellent plant soon forms carpets of yellow over tight foliage. An easy and valu- able plant for any sunny position." S. Most *erysimums* are short lived, even biennial. This one is "permanent" and divides easily to spread around. I have never found seedlings though. Its dis- advantage is that it resembles a *draba*, and one would like different genera to look different.

Genista delphinensis: "Short flattened stems make an interesting effect.

Yellow broom flowers. Zone 4." S. This plant makes a mat that is impossi- ble to weed. If weeds get out of hand you will have to dig up pieces and replant them. But it is well worth hav- ing for its winged stems and cheerful color. Another good easy broom is *G. dalmatica*. The leaves are spiny, but not ferocious, complicating weeding.

Gentiana acaulis: "Gorgeous deep blue trumpets in late spring. Creeping ever- green mats of rosette foliage." S. "Royal blue trumpet flowers in early spring." CA. Several subspecies of *G. acaulis* exist with different sized leaves, usually from different locations in the Alps. Some people have had difficulty in finding the right place in the garden to produce the trumpets.

Gentiana scabra: "Usually producing procumbent stems with many large brilliant blue flowers in September and October. Wonderful draped over a rock." W. "An exquisite fall blooming gentian from Japan. Very late season, deep-blue flowers clustered at the stem tips making a striking scene set against fallen autumn leaves." S. "A fine October-blooming gentian with a somewhat candelabra-like pattern of growth. It should be allowed more than one season's growth to produce its lovely upturned flowers of blue." WR. All true, but in the Berkshires three factors must be reckoned with: leaves may cover the flowers; early frosts may damage them; deer are poised at the edge of the garden in search of *G. scabra*.

Gentiana septemfida: "Dark blue, late summer flowers in big clusters." S. "Narrow, bell-shaped, dark blue flow- ers form in terminal clusters." CA. There are gentians for all seasons, and this is about the best of the summer bloomers.

Geranium dalmaticum: "Mounds of shining green, aromatic leaves, tinted crimson in autumn, are smothered in clear-pink flowers in summer." S. "Plant this in a mostly sunny area with other mid-sized possessions." WR. There is also a white form. Give it plenty of space to make a carpet a yard across. Geraniums on the whole are overbearing in a rock garden, but this one is well behaved and lovely.

Geranium sanguineum is not to be let loose in a small garden, but there is a form 'Lancastriense' which is nearly allowable. "Pale pink flowers, 6" mat." C. "Light pink with darker veins." WR

Gypsophila cerastioides: "Low mounds of rounded velvety leaves. In summer large white cup-shaped flowers striped pink. Best in rich scree or trough." S.

Gypsophila repens: 'Creeping Baby's breath has multitudes of quarter-inch flowers and blooms for weeks in late spring" R. "Dainty pink flowers." Rk. Normally white, good forms are pink, but not often a very strong color. "Low haze of pink...effective in a cascading position." WR.

Helianthemum nummularium: "Delightful flowers display in sunny colors." S. Most of the species helianthemums are yellow. This species is very variable and scores of color forms are available. The leaves, too, can vary from green to gray. They also vary in hardiness, and you may want to take cuttings of the ones you are fond of. In any case a given plant is unlikely to last more than two seasons, but they are so colorful that it is worth trying to keep them. Allow at least one to two feet across for final size.

Hepatica: "Some of the most beautiful

and earliest of spring flowering plants for rich leaf mold soil in the woodland garden. Good drainage is a must." S. "Very early in spring the blue or white blossoms emerge and open in the sun." R. There are two North American species *H. americana* ("Leaves with rounded lobes often mottled." W.) and *H. acutiloba* ("Evergreen leaves with three sharply pointed lobes." W.) which seem to differ only in leaf shape. There are many variations in form. *H. nobilis* is the European species; it has bigger flowers and more varieties. Rarer is *H. transylvanica* and its hybrid *H. x ballardii*. Any one of them could be tried in a shady rock garden, even though a woodland setting is more like home.

Heuchera hallii: "A petite alpine from Pikes Peak in Colorado. Slender stems of tiny white bells above little 1" leaves." S. The border coral bells look wrong in a rock garden, and the larger species are better at the edge of a woodland garden, but there are a few suitable alpine species. It doesn't mind sun.

Hippocrepis comosa: "Heads of yellow pea-like blooms are generously produced on a flat mat of green pinnate foliage." WR.

Houstonia caerulea: "Sun or part shade; good soil. Tiny tufts of evergreen leaves; solitary rather large pale to medium blue flowers on long stalks; blooms primarily in April or May, but at least in the South, sporadically all year." W. For us it grows wild in full sun, grass meadow, poor soil. Bluets, or Quaker Ladies, is delightful. If you move a good color form into the garden it fades away, seeming to prefer the crowded meadow.

Hylomecon japonicum: "Early spring

yellow poppies. Elegant pinnate leaves. A beautiful herbaceous perennial native to Japanese woodlands." S. It resembles *Chelidonium majus*, the weedy celandine poppy, but is shorter, prettier, fewer flowers and not weedy.

Hymenoxys acaulis: "Rocky mountain native with dense tufts of silky, woolly leaves." CA. This lovely yellow composite is not always a "beginner's plant," there are so many forms from high alpine to tubby Great Plains kinds. If it lives and blooms through its first summer, collect seed and sow it next winter.

Hypoxis hirsuta: "Yellow Star Grass. Sun or part shade; ordinary loam." W. An iris relative like a small yellow *Sisyrinchium*.

Iberis saxatilis: "Dense mat 2-3" tall." CA. I like all the iberis I have ever grown.

Iberis sempervirens: "Mounds of white in spring and deep green masses the rest of the year are indispensable in the rock garden." R. Candytuft white is bright and clean, making this a very useful foil for too busy or too drab color schemes.

Iris cristata: "A woodland dwarf from eastern America. Running habit in loose humusy soil. Deciduous." S. "Sky-blue flowers on 4" stems." R. "Give it a little sun and well drained soil." M. "Should form nice little drifts in a hurry." WR Usually blue. Many color forms have been selected including a vigorous white. It will tolerate a rock garden but wants to run around and prefers the edge of the woodland. If it has good roots, plant it with the rhizome top showing above ground. If the root system is weak, plant it slightly covered to keep it stable. The rhi-

zome has to be horizontal.

Lavandula angustifolia: Lavenders are good shrub substitutes in a small rock garden, especially in their miniature forms. In time they grow too bulky, so keep them trimmed back and neat-looking during the spring clean-up.

Leontopodium alpinum: "Gray-green foliage covered with woolly hair bears thick, white woolly bracts on 10" stems. European classic." CA. Everybody has to grow edelweiss at least once to impress one's non-gardening friends. If you like it, go on to the more refined *L. nivale* and many other species.

Lewisia cotyledon: "Our glorious native is considered one of the best. Striking fleshy leaves often crinkled or notched. Numerous spring flowers in a rainbow of possible seedling colors (pink, white, orange, salmon) often candy-striped. Needs perfect drainage, grit around the crown. Afternoon shade of rocks." S. "Grow in humus and grit. Likes part shade and acid soil." R. "Likes well-drained soil or scree. Avoid winter wet." CA. You must try out many places in your garden if at first you are unsuccessful. When you find the right spot, expect an unimagined burst of pride and pleasure.

Lilium pumilum: "The coral lily is a delightful, small plant suitable for a rock garden. It blooms in late spring with small, scarlet Turk's cap flowers and does well in sun or part shade. One-and-a-half-feet tall." M. This is one of the few lilies that look well in a rock garden, but you have to remember that even a small lily is a large plant compared with the mats and buns that predominate. Place it with this in mind.

Linum flavum: "Sunny yellow flowers

and lush broad-leaved foliage make this a notable plant in late spring." R. Another good yellow is *L. capitatum*.

Linum capitatum: "A robust and free-flowering species from the mountains of Bulgaria. Dense heads of sizable rich yellow flowers." S.

Lithodora oleifolia: "A splendid wanderer from the Pyrenees with tufts of hairy gray-green leaves spreading by underground stolons. Pink buds open to large opalescent blue flowers. Quite hardy in loose, rich, neutral to lime soil. Zone 5". S. When you first see *L. diffusa* 'Grace Ward' you will certainly want to grow it for its rich blue flowers. It is tender in my climate but occasionally worth a one-year stand. *L. oleifolia* is a more faithful companion.

Mentha requieni: "Purple, moss-like, aromatic. Moist soil or part-shade, half-hardy." NG. This is a tiny mint from Corsica with the most delicious smell when you crush the leaves or walk on it. It nearly always comes back each spring, even though not really hardy, either by self sowing or by stoloniferous roots which survive.

Mitchella repens: "This beautiful native plant is a wonderful ground cover in shaded rock gardens or woodland areas. It blooms in spring with pairs of small, white flowers followed by red berries. The dark green leaves are a delight throughout the year. Zones 3-8." M. "Small leather-like dark green leaves with a paler mid-vein; charming paired white flowers densely pubescent inside." W. "Partridge-berry is a wee creeper that slowly forms a flat-as-a-pancake patch in a woody, shady, slightly acid site." WR Wild in our woods.

Orostachys iwarenge: "Bouquet of gray

roses sitting flat on the ground." Rk
Orostachys aggregatum: "Succulent rosettes somewhere between pea and jade green." WR.

Orostachys furusei: "Spreading blue rosettes that send up smokestacks of dusty rose flowers in October. It doesn't look hardy but it is. From Japan." R. Ohwi (*Flora of Japan*) says these plants are different and should be called sedums. Perhaps they look more like sempervivums. They get a lot of attention in flower, though you could hardly call them flamboyant.

Orostachys spinosum: "Intricately scaled, heavily spined globes, up to 2" across" R. The spines are not very frightening and the flower stem is phallic. Unlike *O. furusei*, this doesn't spread by stolons. The rosette that flowers will die, but usually there are offsets that grow to make a larger plant next season.

Papaver miyabeianum: "Japanese. Related to the Iceland poppy but more heat tolerant. Gray-green basal leaves; beautiful delicate white flowers." W. "Lemon yellow flowers over interesting compact foliage." CA This poppy is in the *nudicaule* group, usually a low growing plant.

Penstemon davidsonii: "Creeping evergreen mats. Small round leaves. Lavender to purple from the California sierras." S. The most permanent of the penstemons are the 'shrubby' group. The stems are woody and the leaves try to stay green all winter but often lose the battle to cold winds. Don't cut off the damaged stems until after flowering. The plants usually recover their good looks exactly at flowering time. A handkerchief of spun polyester spread over a plant and held down with stones helps with

the winter-kill problem.

Penstemon fruticosus: "Miniature evergreen shrublet". R. "6-12" tall with blue to lavender flowers." CA. Another shrubby penstemon with many forms. Some of them can be bushes two feet across. On the whole easier than most members of this group.

Penstemon hirsutus 'Pygmaeus': "Rosettes of summer green and winter bronze foliage as well as violet flowers in spring." M. "A little guy with smokey-mauve blossoms on compact 5-6" stems." WR. This is one of the eastern penstemons (non-woody). Seedlings are likely to appear and may yield plants which look like the tall form of *P. hirsutus*.

Phlox amoena: "This native phlox produces vivid, deep pink flowers in mid-spring. The decumbent stems are lined with somewhat hairy, slender leaves which turn a lovely purple red in winter. Sun or part shade. 6"." M.

Phlox bifida: "Dainty, starry flowers of palest blue. Native midwestern species is enchanting." R. "A dome covered in early summer by large lavender-blue flowers with deep-cut petals like perfect snowflakes. Zone 4." S. "8-10" mound of spiny foliage." CA. "A fantastic species." WR. This makes a mound or mat as big as *P. subulata* and can be treated in much the same way.

Phlox divaricata: "The eastern American woodland phlox. Branchlets spread and root to form colonies." S. "Woodland phlox makes running clumps of blue in streamside woods. Sweetly fragrant flowers in clusters for weeks in spring. Grow in rich soil in shade or sun." R. "Indispensable in the spring garden." M. You could have this in a rock garden but only for a

short time. It needs the full run of a woodland to seed and spread. Many color forms, but the ordinary blue is probably the best.

Phlox stolonifera: "The creeping woodland phlox from the US east coast." S. "Abundant clusters of long-tubed blossoms adorning 6-8" stems." WR. Again best where it can spread in a woodland clearing. Choose one of the good color selections, the species has a duller color.

Phlox subulata: "Prostrate mats smothered in late April to May with showy flowers." Rk. My favorite species amongst the "common" phloxes. Go to town selecting good colors and leaf forms. The word *subulata* means prickly (actually awl-shaped), but some of the forms and crosses have gentler foliage. Some people allow seedlings to flourish in the lawn and gain a convincing wild look to that stretch of garden; this stands a certain amount of mowing and foot traffic. If you have a very tidy mind you may not want the garden to spill over in this way. We have this phlox with thymes, too, much nicer than weedy grass, and by now beyond control. Several hybrids of unknown parentage, but probably including *P. subulata*, go under the name *P. douglasii*.

Potentilla verna 'Nana': "Sun; rockery. Tight buns of lustrous bright green evergreen foliage. Bright yellow flowers in early spring." W. (= *P. tabernaemontani*)

Primula acaulis: "Flowers borne singly on 3" stems, keep succeeding one another for weeks." R. This is the primrose. Not as easy to keep as the showy polyanthas but much more elegant. Its correct name is now *P. vulgaris*. *Primula vulgaris*: "The English primrose. Pale

yellow, fragrant, early." C.

Primula denticulata: "The drumstick primrose. The early appearance of flower buds means that occasionally the very first ones are caught by late frosts. Put it in a protected position in shade in either a very wet or average garden soil." M. "Spherical heads of crowded purple flowers on stout 12" stems." CA. There are some strong violet-reds and pale lilac-blues and a good white. The first buds nestle low down amongst the leaves and gradually grow to as much as a foot high as the flowers open.

Primula japonica: "This is a beautiful, late spring-flowering species which has flower stalks to two and a half feet. It requires considerable moisture to bloom well with 1-6 superimposed, many-flowered umbels." M. You can use it in the woodland, but it likes to be near water. It is the easiest of the candelabra primroses. If your plants self-sow, they will produce all colors from red-on-the-blue-side to white. If they don't, they are probably not happy enough to stay very long at all.

Primula xpruhoniciana (former name is *xjuliana*): The julianas are hybrids of *P. juliae* and should display its stoloniferous habit. ("Relatively small plants with dark green crinkly foliage and good sized flowers." CA). The crosses can be with *P. vulgaris*, in which case there would be only one flower on a stem, or with *P. elatior* or *P. veris* (or *P. polyantha*), in which case there would be multiple heads. Give them a shady place rather than the rough and tumble of a woodland to get them established. Later you can move chunks to the woods. In any case, division after two or three years is needed to keep the plants flowering well. Primulas respond to fresh ground and feeding.

Ptilotrichum spinosum: "A shrubby alyssum relative. Densely branched and spiny shrub covered in a haze of rosy flowers in early summer." S. "Shrubby domes of wiry silver stems, just two or three inches high. Rosy pink flowers in summer." R. The word shrub needn't scare you—this is just a low mound only a foot across. The color you get from seed is off-white, and it pays to get a 'Roseum' form if you want a brighter color.

Pulsatilla vulgaris: "Pasque flowers usher in spring. Their huge purple goblets are furry on the outside and close at night. On bright April days, before the leaves are on the trees, their blossoms will amaze you with their determined insistence that spring is here!" R. "These anemone relatives emerge in late winter as furry buds that open to big satiny goblets with golden stamens. Then the leaves unfold and the flowers become long-lasting fluffy seed heads which are quite showy." S. "Exquisite, chalice-shaped purple flowers. Decorative fluffy seed heads." W. All the rhapsodies about pulsatillas are warranted.

Sanguinaria canadensis: "Pure white single flowers in the spring. Woodland." C. "Ethereal 2-4" flowers, white with yellow centers; attractive broad-lobed leaves last all summer." W. "An early spring delight as the striking white blossoms appear on stems that are clasped in the unfurled leaf." WR. The lovely bloodroot only lasts a few days, but it is so exquisite that it should be in every garden. Besides, the leaves are elegant masterpieces.

Saponaria ocymoides: "Pink spreading flowers late May-June. Easy. Bright." Rk. Good mat-forming and easy going.

Saponaria x olivana: "A crisp clump of bright green leaves, about 2-3" high, with showy bright pink flowers that lay out flat on the ground, tightly around the exterior of the plant." WR. Another reliable soapwort.

Saxifraga x apiculata: "Closely packed cushion made up of half inch rosettes. Yellow clustered flowers on three-inch stems. The easiest Kabschia saxifrage to grow in the garden." R. "Crisp foliage and an inflorescence of primrose yellow flowers on compact 2" stems." WR. Most of the porophylla section of *Saxifraga* (kabschias) flower too early, grow too slowly or display too much temperament to grow in the open garden. Give them container conditions with cold-frame protection. This one is quite reliable outside.

Saxifraga: Mossy section. These plants are common enough in England, but many gardeners in the Northeast find them troublesome. I feel they are worth trying, and if and when they produce the brown patches that disfigure the mats after blooming and after winter, you can root cuttings in a sandy mix quite easily. Some people step on them to get the stems in contact with the soil and claim they will root in place, but I have had no such experience. 'Peter Pan' is a good one: "Vivid crimson flowers in spring." S.

Saxifraga paniculata: The silver saxifrages are the easiest and most satisfying for permanence. This species covers many forms and subspecies. All are suitable for any rock garden but better if you can avoid full sun all day. "Clumping mounds of silvery green foliage with white to pale cream flowers." CA.

Sedum cauticola: "It has rounded succulent leaves, wants part shade and pro-

duces rosy-pink flowers several weeks before those of its cousin, *S. sieboldii*." M. "Ascending stems with broad gray-green leaves; erect inflorescences of rose-purple flowers in early autumn." W. "Picturesque rock plants with deep grayish-blue leaves and near-ruby red flowers." WR.

Sedum pluricaule: A well-behaved and handsome sedum.

Sedum kamschaticum: Semi-evergreen mat-forming species from Northeast Asia; lax stems with rather thin, spatulate, bright green leaves; large, yellow flowers in midsummer." W.

Sedum spathulifolium: Some forms of this West Coast native are a bit tender for me, and they all get damaged by very cold, exposed conditions. It is probably OK in S. Connecticut though, and all forms are very beautiful.

Sempervivum arachnoideum: "Heavily webbed white in spring." Rk. "Compact button-like rosettes with a white web. The more sun you give them the stronger the webbing will be." WR.

Silene schafta: "Long blooming from May to September." Rk. This plant has the same "value" as *Saponaria ocyroides* and is a standard in everybody's garden. It may self-sow and need a little discipline.

Silene virginica: "Sun or light shade; good drainage. Spectacular plant; rosettes of evergreen leaves; branched stems bearing 1 1/2" to 2" flowers with brilliant scarlet, bi-lobed petals; blooms for long period in spring." W.

Thymus lanuginosus: Introduce thymes into your rock garden with great circumspection. This one is woolly and slower than most. If you love them, try

to clear a sunny bank just for their benefit and find companion plants that can compete.

Tiarella wherryi: "Pink flowered foam-flower that stays in a clump. Has more pointed, palmate leaves than *T. cordifolia*." R. Whether or not you lump these two species you may still want this form. Grow it in woodland or a very shady place.

Trillium grandiflorum: "Queen of the spring woodland all over the east. Large snowy flowers produced in abundance on a mature plant are breathtaking." R.

Veronica armena: "Small charming plant only 2" tall, with radiating stems. Produces small loose sprays of gentian-blue flowers in mid-summer." CA. "Deeply divided leaves and bright blue blooms." WR. Some veronicas are a bit weedy, but this is quite well-behaved

Veronica prostrata: "Makes a deep green carpet that bursts forth with cobalt blue flowers in early summer." S. "Beautiful patch of long lasting color in June." R. There are white, pink, and blue forms of this mat-forming plant.

Viola labradorica: "This native violet has beautiful dark purple leaves throughout most of the year and small violet flowers for much of the summer. It is compact and not invasive." M. It is difficult to recommend any easy violets, because they are all more or less invasive. This one produces such small plants that they are not too destructive, and you can pull them out if they are in the way. The only violets not to fear are the impossible-to-grow ones from the Rockies and the Alps.

Viola pedata: "About the showiest violet and one of the showiest wildflowers; flattish inch-wide (or larger) blue purple flowers; dissected leaves." W. Some people find this spreads around. We have found it a good violet.

Vitaliana primuliflora (syn. *Douglasia vitaliana*): Lovely mat of hard silver-green foliage with yellow flowers just after the drabas have gone over. "Clear yellow flowers on a carpet of gray-green leaves." R.

The nurseries mentioned are not the only sources for these plants. I want to thank them for allowing me to quote from their catalogs. Here is a list of nurseries quoted, in operation in 1994: Siskiyou Rare Plant Nursery, Dept 1,2825 Cummings Rd, Medford, OR 97501

Rice Creek Nursery no longer sells mail-order

Montrose Nursery has closed.

Cricklewood Nursery, 11907 Nevers Road, Snohomish, WA 98290

We-Du Nurseries, Rte.5, Box 724, Marion, NC 28752-9338.

Rocknoll Nursery in operation under new management.

Woodland Rockery, 6210 Klam Rd, Otter Lake, MI 48464.

Colorado Alpines, Inc., P.O.Box 2708, Avon, CO 81620; no longer sells mail-order.

Nature's Garden, 40611 HWY 226, Scio, Oregon 97374.

POSTSCRIPT: AFTERCARE

What do you do when the plants you have ordered by mail arrive? Here are a few suggestions. There are no fixed rules to follow because there are too many variables: the nursery of origin, the size of the plant, its state of health, and most of all your own facilities. However, you must assume that the plant that has travelled by air has

all the potential ills that you might have on your first flight; it could be dehydrated, hungry, travel-sick, jet-lagged, and just plain tired. It also could be very young and possibly ill.

If you have nowhere to put it except in the garden then do something like the following. Bare root plants: for shrubs and trees half fill a bucket with water, and set the roots in water for several hours. For a small plant use a vase or a cup. Put the container outside in a shady spot if the weather is warm; if it is really cold try a porch or somewhere cool indoors. Plants must not freeze or boil or bake—common sense obviously—but you would be surprised how easy it is to forget that the sun moves, nights get cold, furnaces kick on, etc., etc. Overnight is not too long for a shrub or a wilted plant to sit in water, and since UPS arrives in the afternoon, overnight is a good idea for most plants.

Treat alpine and small perennials as you would a transplant of your own seedlings. Have prepared a container of compost and several clean pots of different sizes. The compost should be a mix of "what works best for you": I would use fifty percent soilless peat-based compost and fifty percent coarse sand, with a good helping of slow release fertilizer. There would be nothing wrong with adding soil or leaf mold and varying the proportions. You must remember that the aim is to get the plant actively growing again, so the mix should be airy, moist but not soggy, and contain nutrients. Also, the plant will be planted out in the garden before long. This means the compost must be compatible with your soil. There is no point in coaxing a plant to start regrowth in a mixture heavily laced with perlite if you are then going to plant it out in a garden of heavy clay. Nor should you overdo the sand if the ultimate planting out

place is a leafy woodland.

Plants already in compost: Many plants arrive with something clinging to their roots which will be wrapped in foil, plastic, newspaper, or some other material that holds the whole together. You should shake off the loose material and find out whether the roots are actually growing in it, or whether the material is merely for protection. Protective material, usually peat, may hide the fact that the roots are folded over or bunched up in an unnatural way and need to be spread out before planting. Don't incorporate the dry peat with your own compost, as it may throw the texture out of balance and decrease wetability. If the roots are in fact growing in the medium, it is more than likely they were taken from a rootbound pot and are bunched up. Straiten out the root ends, trim off the broken pieces, use judgment about how much growing medium to retain, and plant on in an adequately large pot—one big enough to hold the roots comfortably spread out—but not so large that the plant "drowns" in soil. "Almost pot-bound" is about right. You may have to trim off an unusually long root, but this requires great discretion and even greater courage.

If the plant is still in its container: you could knock it out and discard loose compost from the rootball and replant it in a slightly larger pot if needed. If the plant looks perfectly happy (I mean not hopelessly pot-bound or loosely planted) in its pot, leave it there.

When the plants have been repotted, stand them in an inch of water and leave them overnight. Next day take them outside into a shady place and leave them there for a week or so before you plant them in the garden. Even if you have to delay planting out they should be fine for weeks, but they

may need more sun and water. I think it is a waste of time to plant out real invalids or plants that are too small, so find a protected home for these orphans. What is "big enough" and "healthy enough" to plant out is a matter of judgment accumulated over years of failures and successes. Don't expect a hundred percent success rate with any shipment.

If you have nowhere to put plants except in the garden (you may not have a holding place or even a work place; or the roots of a bare-root plant may be larger than you can accommodate in any of your store of used pots), it is imperative to cover them with an upturned pot or bucket to protect them from sun and harsh weather. Since these will be left in place until the plant shows signs of new life or dies, the pots will need a stone to hold them in place. By the end of the shipping season you will be thoroughly tired of looking at a garden full of upturned plant pots.

In general, discard as much imported soil or compost as is compatible with the health of the plant. It will be a different compost from the one you use and may carry pests, slug eggs, diseases (not likely but it has happened), and weed seeds, moss, liverwort, or other weeds (this very often happens). This advice is even more important if you are going to keep the plant in an alpine house, as the whole house could become infected. Be ruthless in destroying liverwort. Many gardens have been disfigured by this pest being inadvertently or carelessly introduced from a nursery. Remember that during their busiest season a nursery may not be able to weed every plant before shipping, so you have to be prepared for Good and Evil to arrive together by UPS and take necessary precautions.

STARTING A NURSERY

If you are thinking of going into the nursery business and have a strong interest in growing rock garden plants to sell, there are a few points to bear in mind. This is not a list of "basic plants" in the sense that every rock gardener should grow them. It is a selection of plants available through mail-order catalogs in 1994. Some of these plants will always be favorites, but most of them are available for only two or three years and then side-lined for a few years before being revived at a later date. A good list should have a strong element of change in order to keep customers happy. Gardeners want novelty, which sometimes implies rarity, and a list with unique offerings is very attractive.

The other danger in having a list that is too static is that gardeners, being generous people, share their plants with others, so a plant that is easy to propagate for you is going to saturate the market at a great rate. This happened with plants like *Anemone* 'Shoaf's Double' and will probably happen with *Corydalis flexuosa* 'Blue Panther'. But the plants that "everybody seems to have" will be lost by the majority of gardeners, who are normal, busy, careless, unprofessionals, and they will eventually become collector's items again in the future. Now the *Anemone* has become a rarity again. Difficult but growable plants like *Porophyllum saxifrage* or asiatic gentians will always be in demand. Especially popular are good clones or special forms, and rock gardeners are as susceptible to names like 'Beauty of Denver' or 'Panayoti's Pleasure' as any other gardener.

Modified with permission from "A Gardener Obsessed", David R. Godine: Boston, 1994.

SEED EXCHANGE 1996

1. **Seed listings will be accepted only until November 1, 1995. Mail before that date please.** Later ripening seed will be accepted *only* if an alphabetical listing or disk has been received before that date. **Overseas members—**please air-mail before October 15th.
2. **Any amount of seed is appreciated.** Less than 5 seeds will **not** be listed. To receive donor privileges (10 bonus packets) send a minimum of 5 different kinds of seed suitable for the rock garden.
3. **Send clean dry seed as early as possible.** We appreciate several mailings as the seed ripens. You will be issued a 1996 donor number with your first submission. Please include this number with subsequent mailings.
4. **Use paper envelopes no larger than 2" x 4".** Use separate envelopes for each kind of seed. One small envelope is usually sufficient, except for such large and frequently requested items as *Arisaema sikokianum*, *A. backii*, *A. candidissimum*, *A. purpureogaleatum*, *Glaucidium palmatum* or *Trillium simile*. Besides the preceding, the following smaller items are always in short supply: *Campanula zoysii*, *Aquilegia jonesii*, *Eritrichium nanum*, *Dicentra peregrina*, *Lewisia tweedyi*, *Campanula piperi*, *Shortia soldanelloides*, *Shortia galacifolia*, *Paraquilegia* sp., *Jeffersonia dubia*, *Phlox hoodii*, and *Dionysia involuclrata*.
5. **Mark, legibly, each envelope with the botanical name printed in block letters.** If collected in the wild, state the location. **Please include your name on each envelope.**
6. **On the Seed Donation Form provided** (as an insert) **list the botanical name in alphabetical order**, followed by: the **class**, Annual, Biennial, Perennial, Bulb, Fern, Shrub, Tree; the approximate **height**, including flower, in metric; the flower **color**, red, blue, bi-color, mixed, etc.; the **location** if collected in the wild; the reference book or **Flora** if this is a new listing for the Seed Exchange. Be sure to fill out the donor name and address. If you are listing very many, you may send this information on a computer disk (3.5") instead.
7. **Group envelopes alphabetically. Check that seed envelopes sent match the list.** Secure the envelopes with a rubber band and enclose in a padded mailing envelope with the Seed Donation Form. Be sure your name and

address are clearly written on the outside of the mailing envelope. Ask the postmaster to *hand cancel* the envelope.

8. **All members of NARGS will receive a seed list.** After you receive the list, please return your order promptly. Remember, this is not a commercial operation.

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GARDENING TIPS

The Tuck

Most of us come to rock gardening after vegetables, annuals, perennials, and possibly house plants. In all these practices, new plants are planted in the center of the available space. This gives the plant the maximum root run on all sides and looks neat. In rock gardens, consider altering this method, however. I like to tuck the root ball of the plant right up against a rock. My reasoning? These plants *like* to grow with rocks...but what does that mean? Rocks change temperature more slowly than soil, rock surfaces carry water in a different way than soil. Who knows exactly why, but rock plants seem to grow better next to rocks.

Also, rock plants look more like they do in Nature when they grow up against the rock. This is because in Nature seeds blow into the soil next to the rock and germinate there. Your rock garden will look more natural with this placement than if you center each plant in the middle of the soil pockets.

The Scratch

In a new rock garden there will usually be quite a bit of weed seed in the soil used to build the garden. What with extra water given to establish newly planted treasures, weeds will have an exceptional opportunity to germinate. Combat these little invaders with a three-pronged cultivator, either one with a short handle for close-up work or a long handle, if you like to work from a standing position. If you put down a gravel mulch a quarter to three-quarters of an inch deep, scratch it every seven to ten days for the first year after planting. If you ruffle the mulch just enough to stir it up—not so much that the soil below is brought to the surface—you will kill newly germinated weeds, often before you even see them. We “cultivators” like to go on stirring up the gravel for years, as it is a very fast way to keep the rock garden weed-free. Others find cultivation repulsive, as it kills self-sown seedlings of choice plants right along with weed seedlings. The first year this self-sowing isn't likely to be an issue.

Do note that the larger you allow weeds to become before you dispatch them, the more odious, onerous, and obnoxious a task it becomes. Get rid of 'em while they are small!

Pot-Dropping, Rapid Burial, and Maintenance

Most rock gardeners kill many plants. It is almost unavoidable when you try to grow plants with special requirements and plants that are difficult to grow—and most rock gardeners do. To keep the garden looking nice, be sure to bring new plants home on a regular basis. And remove the dead! Don't just leave them lying there; it is only respectful to recycle these plants promptly.

When you add or remove a plant, be sure to repair the mulch. Add soil or gravel as necessary. Add mulch to the whole rock garden whenever the soil starts to show, and use the scratcher to harmonize the mulch.

—Gwen Kelaidis



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