

Natural rock garden, Cascade Mountains



A natural mountain garden



Heuchera pulchella

Everything you ever wanted to know about rock gardening—and then some.

High in the mountains are gardens that most people never glimpse. In alpine meadows at the 10,000-foot level, those who will not stoop will only see rocks as far as the eye can see. But hiding among those rocks are plants that must sleep for nine months of each year. When the sun finally works up the strength to melt the snow, there is a mad rush to leaf, flower, and seed. In three short months, these denizens of the mountains must endure unfiltered sun, cold clouds forming around them, and powerful winds that no tree can withstand. Only the short and the quick survive. But small is beautiful. You will find some of these plants so floriferous that they completely cover their leaves with flowers.

Welcome to rock gardening, a pursuit that can be viewed as an attempt to bring the mountains to our homes. In a nutshell, rock gardeners build and maintain miniature landscapes and develop up-close-and-personal relationships with the plants that go into those landscapes.

Rock gardening can also be called “alpine gardening.” In the alpine areas above the tree line, there is very little soil and a lot of rock, hence the less romantic name. Rock gardeners are wont to stretch any constraint of only using alpine plants, if only to make life a little easier for themselves. Besides, what exactly is “alpine?” Near the equator, the height of the tree line is very high, in the arctic it is at sea level. If you stretch the criteria to “small perennials,” then you have a much larger selection to choose from. In this article, when I use the term “alpine gardening,” I’ve done so to highlight the choosier requirements of alpine plants. In contrast, I’ve used “rock gardening” in instances when non-alpine plants can be used.

In broader terms, rock gardeners tend to be specialty plant collectors. Once someone tries the rarer alpine plants, they may find themselves tempted by other specialties as well—wall gardens, bog gardens, cactus gardens, peat beds, or sand

beds. The ultimate connoisseur’s fetish—the alpine house, or green house—is not very practical in Minnesota but it is quite popular in Britain.

Rock Garden Construction

The three legs of rock gardening are location, soil and of course, rocks.

Location: The best location for a rock garden is an east-facing slope to catch the cool morning sun. Afternoon shade is an added plus. The next best place: a south-facing slope with afternoon shade. After that is a north slope. A west slope and no shade is the hardest on alpine plants.

Unfortunately, slope is not native to Minnesota except in a few areas. Flatlanders can build slopes up, dig valleys down, or both. A mounded garden doesn’t have to be very high; a 1-foot height will do, but bigger is better.

Soil: The most important ingredient in alpine garden construction is well-drained soil. Each area of the world will have its own recipe depending on the amount of rain it gets. Where I live (the Minneapolis-St. Paul metro area) around 50 percent grit and sand is good enough.

Grit is the holy grail of many rock gardeners. I think it is great stuff, but not necessary. In small quantities, you can get crushed granite at a farmer’s supply, where it is sold in several grades as “chick grit.” The downside: It tends to be an ugly pink. In the St. Cloud, Minn., area you can buy larger quantities of crushed granite in a nice neutral gray hue from several local quarries. Limestone chips also will work, but they are usually reserved for plants that require it.

The best sand has multisized grains in it. Often called “builder’s sand,” it can be found at your local stone dealer. Never use sandbox sand because it compacts too hard. If you have sand delivered, you can have black dirt added to it by

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the dealer. Doing so will reduce the amount of work you need to do to get the sand mixed into your soil.

You can test the resulting soil mix that you create by taking a damp sample and squeezing it into a wad in your hand. When you open your hand, the wad should fall apart. If it doesn't, then you have too much clay and not enough sand and grit. There are two things you can do with clay: bury it or cart it away. Don't bother to amend it, as doing so takes too much work. Simply cover it with new soil. Alpine plants will like the minerals in clay, but never near the surface where heat and retained moisture will rot their crowns out. When you are weeding, you will know you have the right mixture when you can shove a trowel several inches from a weed, pry the soil up slightly, and pull weeds out—roots and all.

Rocks: Once you have your soil made, you get to the art-work: choosing and placing rocks. Limestone rocks are the top choice, in part because they age with great character and imitate the look of some of the best alpine areas. The best limestone rocks, sometimes called "holey bolders," will have cracks and holes that some tough alpine plants will grow in. At the other end of the spectrum, round field stones and artificial rock will be the least satisfying.

A rule of thumb about rocks: Their size should be proportionate to the size of the garden yet limited to your ability to move them.

Rock Garden Styles

In general, there are three styles of rock gardens: mounded, crevice, and tiered. A mounded rock garden is built on a small hill of soil, as steep mounds require supporting rocks inside. The rocks are placed in irregular groups with orphans between. Crevice gardens are made by placing sheets of stones at an angle in the ground, leaving just enough space in between them to place young plants. While a tier style might make you think of a neat cake-like appearance, that's not the case. The tiers are actually irregular in as many ways as possible. Also, rocks should never look like they are sitting on the soil but rather be deep enough to appear to be in the soil.

When laying out a large rock garden, be sure to incorporate enough paths so you can reach all areas when weeding. Finish off the soil surface with a top dressing such as pea gravel or small limestone chips. Besides the pleasant look, the dressing will reduce the amount of weeds and cut down on the amount of moisture around the crown of your plants.

Rock gardening will be one of the more high-maintenance types of gardening you will do, if only because weeds overtake small plants more quickly than tall ones. To over-winter perennial alpine plants you will need to cover them with something porous like oak leaves or pine boughs. The trick is to get the plants covered before the cold winter sun dries them out and uncovered before the warm spring sun rots them out.

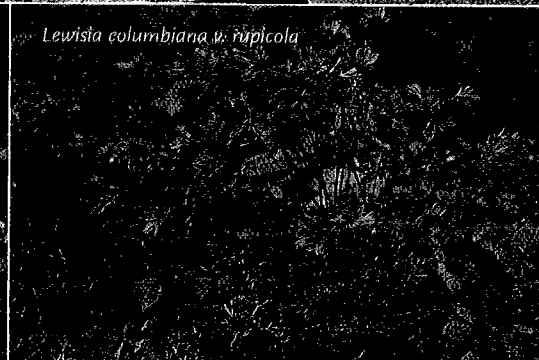
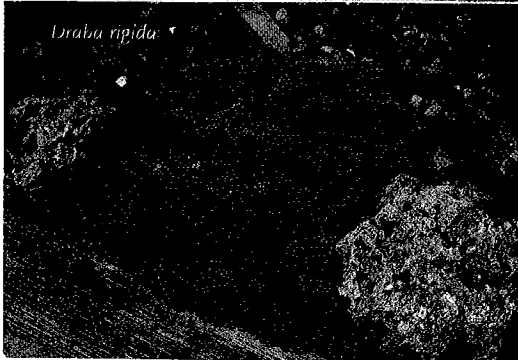


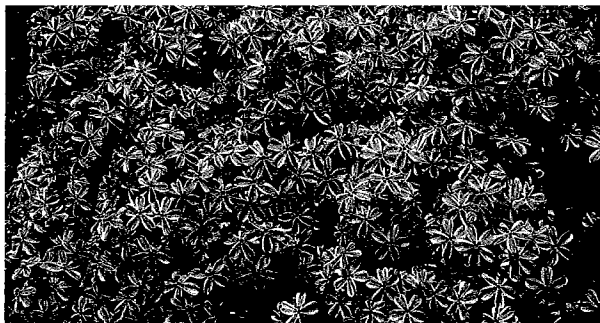
A variety of rock garden plants in a trough garden

Draba ripida

Lewisia columbiana v. *rupicola*

Saxifraga primuloides





Phlox 'Candystripe'

Geranium

These are not the pelargoniums found in window boxes that people call geraniums. Rather, they are the real ones that mound with bright flowers atop:

G. cinerium, *G. sanguineum*, and *G. dalmaticum*.

Phlox

There are many small phlox and their cultivars to choose from: *P. bifida*, with deeply cleft flowers; *P. subulata*, the most common cultivar; and *P. X douglasia*.

Sedums, Sempervivums

The stepchildren of the picky gardener, these dependable succulents can please the eye when several of the many variations are combined into a small area.

Sisyrinchium angustifolium

A blue-eyed grass that features small blue flowers on iris-like grass.

Thymus

While you may not want to eat the creeping thymes, being the lowest of the low is a plus, especially when the carpet blooms. Keep an eye out for *T. lanuginosus* and *T. serpyllum*, especially the cultivar 'Minus', which looks like spilled green paint.

Veronica

A few veronicas are easy to control:

V. repens, *V. spicata* 'Nana', and *V. thymifolia*.

Viola pedata 'Bicolor'

This bird's-foot violet is one of few violets that won't become weedy.

Selected Plants: Here are some good rock garden plants that will require the attention of well-drained soil.

Aubrieta

A high carpet, *A. canescens*, to a low carpet, *A. gracilis*, smothered in lavender blue flowers.

Aethionema

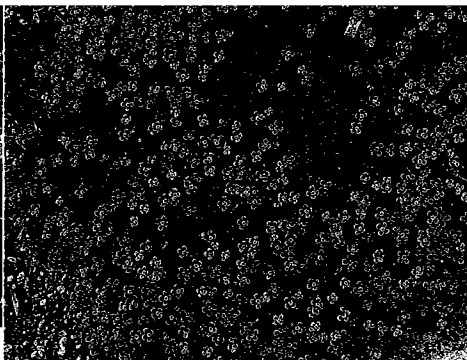
A. 'Warley Rose' is a tough, shrubby little plant with grayish foliage; *A. oppositifolium*, is carpet-like with nutmeg-scented flowers. Both like it hot and dry.

Bolax gummifera

Features stiff, deeply lobed leaves that hug the ground.

Cyclamen

There are a few hardly cyclamen, if you can keep them from the squirrels: *C. hed-erifolium*, *C. coum*, *C. purpurascens*. Fun to raise from seed.



Aubrieta gracilis

Douglasia vitaliana

A short stiff carpet with yellow flowers.

Vitaliana primuliflora.

Draba

From tiny fountain-like cushions, (*D. olympica*) to green carpets (*D. mollissima*, *D. rigida*) to hard green buns (*D. rigida* v. *bryoides*), all covered with tiny yellow flowers.

Dryas octopetala

Scalloped leaves in short carpet with cream flowers. The variety *minima* stays a smaller size.

Erinus alpinus

Monocarpic but reseeds itself readily especially into rock cracks.

Haberlea rhodopensis

Try this relative of the Afrian violet in a spot shaded by a large rock.

Helianthemum nummularium

Features glossy evergreen leaves with bright-petalled flowers.

Heuchera

Coral bells come in several small sizes perfect for the rock garden. Look for *H. puchella* and many small cultivars.

Leontopodium alpinum

Most people recognize the name edelweiss but few would know what it looks like.

Papaver alpinum

Another monocarpic, this alpine poppy provides bright variable colors but does reseed itself.

Oxalis

It's fun to see versions of our house plants in the rock garden: *Oxalis violacea*.

Penstemon

Almost all beardtongues come from North America: *P. hirsutus* 'Pygmaeus'; *P. pini-folius*, 'Lipstick Orange'; *P. rupicola*; *P. caespitosus* 'Claude Barr'.

Potentilla

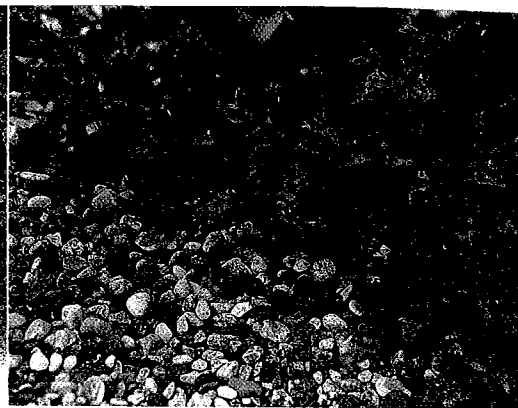
Look for *P. verna* 'Orange Flame' and *P. nitida*.

Primula

Many primula are small enough to fit in a rock garden, particularly *P. modesta*, *P. X juliana* hybrids, and *P. juliae*.

Saponaria

Features small round mats covered with blossoms. Look for *S. X olivana*, *S. 'Bessingham Hybrid'*, and *S. ocymoides*.



Penstemon fruticosus v. *serratus*

Saxifraga

Saxifraga are unfamiliar to many U.S. gardeners, but the Brits go ape over them (and they do grow better in the United Kingdom). There are three types for the rock garden: encrusted (with dots of lime), mossy, and porphyryon (like dense miniature pine branches) in increasing difficulty. For every species there are hundreds of cultivars to choose from.

Silene acaulis 'Pedunculata'

A small carpet with tiny pink flowers.

Summer bloomers: Out of necessity, alpine plants are usually done blooming by the second week in June so one needs to work a little harder to get a year-round flowering. Here are a few to help bridge the summer.

Campanula

The bellflower: *C. carpatica*, *C. cochlearifolia*, *C. punctata*, *C. poscharskyana*.

Composites

Small composites that bloom later: *Aster alpinus*, *Aster 'Tiny Tot'*, *Coreopsis alpina*, *Erigeron compositus*.

Gentiana

The bluest of flowers: *G. septemfida*, *G. paradoxa*, *G. verna*.

Accent plants: Accent plants that add height, colored foliage and variety can round out a garden that might otherwise look like it had been steamrolled. Consider small variegated grasses, dwarf conifers, species bulbs, small ferns, dwarf rhododendrons and small daphnes. There are some non-hardy plants that qualify size-wise but need to be wintered inside: *Erodium chamaedryoides* will keep as a house plant and *Rhodohypoxis baurii* can be stored as a bulb. [\[pg\]](#)

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