

ROCK GARDENING IN NEWFOUNDLAND

By Todd Boland, Research Horticulturist
Memorial University of Newfoundland Botanical Garden

What is a Rock Garden?

Basically, it is an attempt to recreate an alpine environment and to grow plants which are associated with an alpine (mountain) or similar area. While alpine plants usually grow in mountainous areas above the tree line, they can also grow in very exposed locations such as our Great Northern Peninsula. Not all rock garden plants are actually true alpinines, but due to their small structure they are very suitable for a rock garden.

It should be noted that all low stature plants are not necessarily good choices for a rock garden. Some plants are simply too robust or invasive as is the case with the popular snow-in-summer, *Cerastium tomentosum*. Typical alpine plants are generally slow growing and non-invasive. When deciding which plants to grow, it pays to get some information about the plant. Such knowledge will prevent future disappointments.

Choice of Rock Garden Plants

The choice of rock garden plant is endless. Many are easy to grow while others are very challenging. Here at the Botanical Garden we are always experimenting with new plants and through our research we are discovering an increasing number that are suitable for Newfoundland gardens. However, unless you are an avid gardener, we do not recommend that you try growing an alpine simply because it is in one of our gardens. Not all of our alpinines are easy to grow. Some do not survive our winters very well unless we take certain precautions. Others are not readily available from local nurseries and have come from specialty alpine nurseries or were grown from seed. The following list notes those which are relatively care-free and available locally.



Part of the MUNBG rock garden in early July.

Recommended Rock Garden Plants for Newfoundland and Labrador

Rock Garden Plant	Blooming Season	Flower Colour
<i>Alyssum saxatile</i> 'Basket of Gold'	spring	yellow
<i>Antennaria</i> spp. - Pussytoes	early summer	whitish or pinkish
<i>Arabis</i> spp. - Rockcress	spring	white or pink
<i>Armeria maritima</i> - Thrift	early summer	pink or white
<i>Artemisia schmidtiana</i> 'Silver Mound'	all season (foliage)	silver foliage
<i>Aquilegia flabellata</i> . - Dwarf Columbine	late spring	mostly blue
<i>Aster alpinus</i> - Alpine Aster	early summer	blue, purple, pink or white
<i>Aster dumosus</i> - Dwarf Michaelmas Daisy	early fall	pink, red, purple or lavender-blue
<i>Aubretia deltoidea</i> - Rockcress	spring/early summer	purple, magenta or lavender-blue
<i>Campanula</i> spp. - Dwarf Harebells	mid-summer	blue or white
<i>Daphne cneorum</i> – Rose Daphne	late spring	pink
<i>Dianthus</i> spp.- Pinks	mid-summer	combinations of pink and white
<i>Euphorbia myrsinites</i> - Spurge	late spring- early summer	yellow
<i>Genista pilosa</i> "Vancouver Gold"	late spring/early summer	yellow
<i>Gentiana acaulis</i> – Trumpet Gentian	late spring	deep blue
<i>Gentiana septemfida</i> – Fall Gentian	late summer-early fall	deep blue
<i>Geranium</i> spp. - Dwarf Hardy Geranium	all summer	purple, pink or blue
<i>Iris pumila</i> - Dwarf Bearded Iris	late spring	variety of colours
<i>Iberis sempervirens</i> - Evergreen Candytuft	late spring	white
<i>Leontopodium alpinum</i> - Edelweiss	early summer	white

<i>Papaver alpinum</i> - Alpine Poppy	late spring through summer	white, yellow, orange or pink
<i>Penstemon</i> spp. – Dwarf Beardtongue	early summer	pink, purple, blue or white
<i>Phlox subulata</i> - Moss or Creeping Phlox	late spring/early summer	pink, blue, red or white
<i>Potentilla</i> spp. - Dwarf Cinquefoil	late spring/early summer	yellow
<i>Primula</i> spp. - Dwarf Primrose	spring	pink, purple or white
<i>Pulsatilla vulgaris</i> - Pasque-flower	spring	purple, pink, red or white
<i>Saponaria ocymoides</i> - Soapwort	early summer	pink
<i>Saxifraga paniculata</i> - Encrusted Saxifrage	early summer	mostly white
<i>Saxifraga X arendsii</i> - Mossy Saxifrage	spring	white, pink or red
<i>Sedum</i> spp. - Stonecrop	summer	yellow, pink, red or white
<i>Sempervivum</i> spp. - Hens and Chicks	all season (foliage)	white, pink or red
<i>Thymus</i> spp. - Creeping Thyme	summer	purple, pink or white
<i>Veronica</i> spp. - Speedwell	late spring/summer	blue
<i>Viola</i> spp. - Violets	spring/early summer	blue, purple or white



Late spring scenes from the MUNBG rock garden.

Rock Garden Construction

A rock garden should be a fair representation of an alpine environment. Bearing this in mind, there are a few criteria which should be followed.

An open area is the best site for a rock garden; an alpine area is rarely sheltered. It is often suggested that a rock garden should not slope to the south, due to the possibility of “baking” during afternoon sun. However, in Newfoundland our sun is not particularly hot, therefore a southern exposure is perhaps the best.

The type of rock you choose for your rock garden is up to you. However, one of the most common mistakes made by rock garden beginners is choosing a wide variety of rocks. It is far better to stick to just one type of rock, such as sandstone, limestone or granite.

Also try to use weathered rock. Rocks newly dug from below ground level often look “new” and thus are not very natural when you consider a rock garden is supposed to duplicate an exposed, eroded mountainside or rocky outcrop.

Another common mistake when making a rock garden is placing similarly-sized rocks at even intervals on the surface of the ground. To quote Bernard S. Jackson, our past director, “a rock garden is a garden on rock, not rocks on a garden”. To maintain a natural look, rocks should be irregularly placed and be of irregular size. Be sure not to place all large rocks at the back and small in the front, but to mix and match. If terraces are made, don’t make them all even in slope or size. Make some slopes steep, others gentle and vary the sizes of each terrace.

Rocks should be buried to a sufficient depth to keep them stable. If only laid on the surface, they shift during the frosts of winter.

Soil

This is very important, as most rock garden plants prefer well-drained soil. At the Botanical Garden we use the following mix:

- 1 part topsoil
- 1 part organic material (peat, compost and/or leaf mould)
- 1 part 3/8” chip stone or coarse sand

Alpine plants naturally grow in nutrient-poor soils. Therefore, it is very important not to over-fertilize your plants. Too much fertilizer will result in weak, spindly growths which are often prone to excess winter damage or at the other extreme, plants that flower themselves to death. It is better to use slow-release, organic fertilizers, such as old manure, old compost or bonemeal, rather than just chemical fertilizers. You can also lightly dust the entire surface of the rock garden with lime in mid to late September.

Mulch

A 2 - 4 cm mulch of 3/8 to 1/2 inch chip stone is highly recommended. It can serve several purposes:

- it slows moisture evaporation from the soil
- it keeps soil temperatures even
- it slows the growth of weeds
- the problem of frost heaving in spring is lessened
- muddy soil will not spoil the ground-hugging flowers

Watering

Rock gardens, like all gardens, require regular watering especially during dry weather. Do not give the plants a light sprinkling every day as this will only encourage plants to produce roots close to the surface rather than deep down. Shallow-rooted plants are more prone to frost heaving. A thorough watering once a week is the best method to use.

Winter Protection

Many alpine plants are evergreen or semi-evergreen in nature. For these plants, winter protection is advisable. If you live in an area of continual deep snow-cover, no additional protection is required. However, on the Avalon Peninsula a permanent snow-cover is not guaranteed.

Evergreen boughs are ideal since they trap blowing snow and do not compact into a sodden-mass. Never use leaves, straw or hay as winter protection since they will compost and smother the plants. Winter wetness is the #1 killer of rock garden plants!

Boughs should be placed on the plants after the ground freezes. Once the snow melts the boughs can be lifted and the plants allowed to air for a few hours. Matted foliage can be carefully separated to increase air-circulation. A light layer of boughs can be replaced until warmer, settled weather arrives. Once the ground is thoroughly thawed, any heaved plants can be gently pressed back into the soil.

Small evergreen shrubs in the rock garden can be protected with a wrapping of burlap or a teepee of boughs. Deciduous shrubs can have their branches gently tied together with a soft string or old pantyhose.

If interested, you can join the Newfoundland Rock Garden Society. For more information contact Todd Boland at 737-8590.