

International Rock Gardener

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100th edition





This month IRG reaches its 100th issue – hence the frivolous cover image! We are proud that we produce a free magazine on the internet each month which can reach an enormous audience of plant lovers around the world. The Scottish Rock Garden Club website is a remarkable source of free access information and expertise both on the main site and in the interactive forum. It is very much part of the ethos of the Club to spread and encourage knowledge and interest in alpine and all sorts of rock garden plants as widely as possible and the internet is proving a marvellous tool to do just that. The IRG each month and the weekly Bulb Log are adding all the time to the other information online at the

Club's site which can be enjoyed by anyone with internet access. Of course there are many other ways in which the Club works towards its goals from events like conferences, workshops and plant shows to the Local Groups, twice yearly printed journal *The Rock Garden*, annual Seed Exchange and the provision of Grant Aid to Students and those seeking to “explore” to study plants in habitat and free online membership for students with a particular interest in horticulture. How much of this could have been dreamed of by the Club's Founders back in 1933? Would they ever have imagined the size of resource the Club would engender or the international nature of the community of members it would build? None of this is possible without the goodwill and expertise of our members – as generous a group of people as one could hope for – all dedicated to the “spread and share” tenor of our beliefs.



Where IRG and *The Rock Garden* are concerned, this generosity is most marked by those willing to contribute articles and photographs. To those people, we - both the IRG team and Anton Edwards, the journal editor (left) - are immensely grateful. If you enjoy these publications then bear in mind that articles are always needed to fuel these projects – you are most welcome to send in ideas, notes or fully worked articles to take part and add to the resource for the benefit of all.

If you truly feel there is no way you can become an author, even for a little piece about one of your favourite plants but you enjoy the IRG and all the other facets of the SRGC website then you might like to support the Club

by becoming a member – all details on the website for postal members, receiving journals by post or for electronic membership where you will download everything online. Some folk are very determined “non-joiners” of any Club – but again, if you appreciate what all these volunteers are providing for your entertainment and education, you can make a donation to help with the expenses of the Club to run the website by clicking on the “Donation” button on the website - a simple, secure way to make a gift of any size to the SRGC.

While I am praising the work of the SRGC in outreach to the world, I must make mention of the IRG Team itself. Zdeněk Zvolánek and I (Margaret) are the editors; J.Ian Young is our technical advisor. Nothing could come to your screens without the efforts of Glassford Sprunt, who indexes the IRG and Richard Green who proof reads it. On a higher level - the whole “jing-bang” (as we say in Scotland) of the website would not see the light of day were it not for Fred Carrie our WebMaster. We all hope you will continue to enjoy this magazine and other offerings from the SRGC – we send kind thanks and good wishes to all contributors and readers alike and look forward to hearing from you.



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---Mountains and Gardens---



Eriogonum in John's dry-land rock garden

Taming the Wild Buckwheat: John P. Weiser, Nevada

The genus *Eriogonum*, commonly known as Wild Buckwheats, is one of the most diverse and interesting genera endemic to North America. The majority of *Eriogonum* species are distributed from Alaska through western Canada and south into the United States and Mexico. They are distributed from the continental west coast eastward to the Great Plains, with a few species occurring from the Appalachian Mountains of West Virginia south along the coastal plains of the southeastern United States to Florida.

The ecological range covers a wide elevational gradient from windswept high alpine screes and dry desert basins that pepper North America's western regions. The dynamic mountain ranges of western North America are composed of a jumbled matrix of soil profiles, derived from sedimentary and volcanic activity. It is not uncommon to find at least one species of *Eriogonum* inhabiting these varied ecosystems and soil types. For the most part wild buckwheats are generalists when it comes to soil preferences, as long as the planting medium is neutral to mildly acidic and free draining. As a group of plants the *Eriogonum* species can be widely distributed and have a wide ecological amplitude but the genus also includes many soil specialists (edaphic endemics). These specialists are opportunists; able to make a living on lean inhospitable substrates where competition for resources is minimal. I find that these edaphic endemics can also thrive on a variety of soil profiles when we move them into a garden setting.

This 'Super-Genus', with a history of rapid evolution in the arid regions of North America, is comprised of over 254 species (many of these are further segregated into varietal forms), about half are mundane weedy annuals, the other half however contains many dramatic garden worthy perennials. Plant species that experience rapid speciation have the ability to exchange genetic information with other similar species through introgressive hybridization. Intermountain West genera like *Eriogonum* and *Penstemon*, which fit into this grouping, are found to display highly significant numbers of genetic and morphological variation. Perennial members of this abundant endemic dry-land 'Super-Genus *Eriogonum*' are resilient, tenacious and long lived; offering rock gardeners rich diversity and complex botanical characteristics.

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The remarkable perennials of the genus are small woody shrubs, sub-shrubs, and cushions. The different species may be tall; short; pulvinate; sprawling; bushy or herbaceous. The usually evergreen leaves are green, silvery-gray or gray-green with the surfaces tomentose, or at least underneath. There are a number of species and varieties whose leaves turn to deep burgundy hues as the weather cools. The multitudes of tiny flowers are displayed in a densely packed inflorescence held well above the leaves. These flowering structures can be flat topped corymbs; convex umbels or compound umbels; round capitulate clusters; or elongated racemes. With the incorporation of multiple species in your garden you can have eye-catching clouds of bloom in succession from early spring through late summer and fall. Colors come in startling bright yellows, calming creamy whites, hot pinks and fiery reds. After the main flush of bloom, the long lasting seed-heads ripen to a rusty browns, complementing late summer and fall themes. In winter foliage takes the stage, with gray domes and tufts of intensely colored leaves becoming the center of our attention. The interesting forms and leaf textures combined with masses of showy, long-lasting flowers make them excellent enduring candidates for a variety of garden styles, especially xeriscapes and rock gardens.



As an added bonus *Eriogonum* provide abundant sources of nectar and pollen to insects seeking summer food. Butterflies, moths, wasps, and flies utilize the nectar, while bees and beetles harvest the bonanza of pollen. At times so many pollinators are visiting the blossoms that they appear to have a halo of life in orbit. (Due to geological isolation and co-evolution several *Eriogonum* are host plants for rare butterflies, whose entire life cycle is dependent upon a singular buckwheat species.) I first became enamored with the genus when I moved from the Northern Great Plains of central North America to the High Desert Steppe of the Great Basin. I found I had landed in one of the hot spots of their diversification, north western Nevada. The High Sierra Nevada mountain range looms

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to the west with the vast basin and range complex of the Great Basin spreading out to the east. As I explore these dramatic landscapes I encounter many amazing native plants, each with attractive attributes, in flower, foliage or form. The one genus I can always plan on encountering are the delightful *Eriogonum* plants dotting the high ridges, alluvial fans, and valleys of the region. As an avid rock gardener looking for native plants appropriate to my climate it is impossible for me to ignore the garden potential of this enticing genus. For dramatic color, attractive foliage, enchanting form, and durability the wild buckwheats are among my favorites.



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A small number of species are readily available in the nursery trades and seed exchanges, but this is just the frosting on a very large cake. There are still many first-rate garden-worthy wild buckwheats waiting to be tamed.

Here are a few of the species and varieties I have brought into my dry-land rock garden.

Eriogonum ovalifolium is a widespread complex of 14 described varieties from very diverse ecosystems. These varieties are generally distinct but sometimes intergrading where ranges overlap. Some are native to 13,780' (4200m) granitic alpine screes others can occur as low as 2,296' (700m) on gravel flats and sandy washes. Several are restricted to small isolated ecological regions or soil types. I grow 7 of the 14 and am enthralled with all of them. They are all ideal cushion plants deserving of a first-rate place in a rock garden. The smaller high elevation forms would look right at home in trough communities.



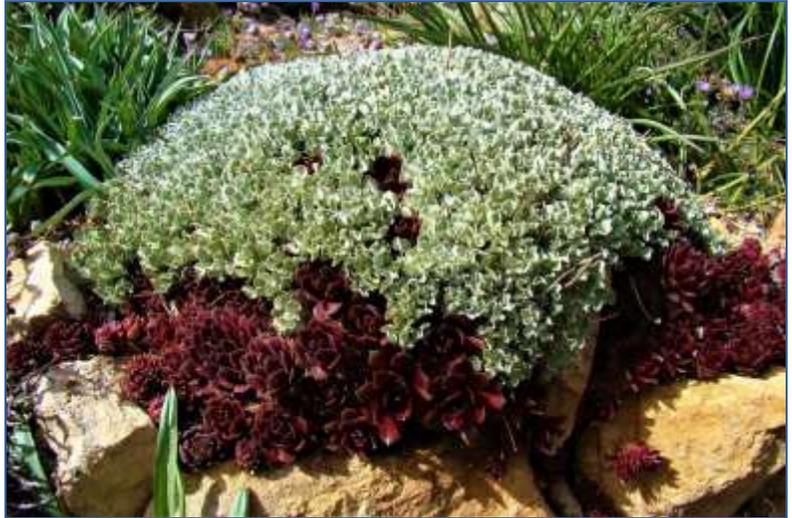
Eriogonum ovalifolium* var. *ovalifolium is a widespread variety occurring in many ecosystems from sub alpine screes to gravel flats all across the region. What distinguishes this variety from others is the color of the flowers. This variety displays larger capitulate flower clusters in bright lemon yellow. It is less widespread than var. *purpureum* and generally tends to flower earlier than that variety. The two sometimes occur together but do not seem to intergrade. Its tomentose evergreen cushions are gray-green, 2" (5 cm) tall with a spread of 10" (25 cm) to 16" (40cm) across. 1,970' (600m) to 8,530' (2600m) e CA, e WA, e OR, ID, NV, w MT, w WY



Eriogonum ovalifolium var. *ovalifolium*

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Eriogonum ovalifolium var. *purpureum*



Eriogonum ovalifolium var. *purpureum* is the most common and widespread expression of the species across the west. This *E. ovalifolium* variety is the most often encountered in the sagebrush and grassland communities of the region. This variety is often confused with the *E. ovalifolium* var. *ovalifolium* however the main difference between the two has to do with flower color. In variety *purpureum* the capitate heads are white-cream-rose-purple and held well above the evergreen leaves; in some cases as much as 8" (20cm). The 2" (5cm) to 3" (7.5cm) tall gray-gray green cushions are floccose to tomentose and can be 10" (25cm) to 16" (40cm) across.

2,296' (700m) to 10,170' (3100m)

n AZ, e CA, w CO, ID, w MT, NV, nw NM, e OR, UT, se WA, w WY



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Eriogonum ovalifolium var. *depressum*



Eriogonum ovalifolium* var. *depressum is a regional variety occurring mostly at higher elevations on widely scattered northern mountain ranges. The flowers of this small evergreen mat-former are gray-green with the white-rose capitulate flower heads splayed out across the foliage. The plants are 1" (2.5cm) tall and 4" (10cm) to 10" (25cm) across. 2,950' (900m) to 11,482' (3500m) sw AB, n ID, w MT, nw WY, nc NV

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Eriogonum ovalifolium var. *focarium*



Eriogonum ovalifolium var.

focarium is a local expression of the species endemic to the pumice fields located in Craters of the Moon National Monument, Butte County, Idaho. This new variety was named and described in 2014. Its loose open mats have adapted to allow the branches to grow up through the loose dark layers of pumice that blanket

gentle slopes and flats in the monument. Few other species inhabit this hot habitat making the competition for resources minimal. There is a dramatic contrast in color and texture when viewing the rough dark pumice fields studded with the soft white cushions of this plant. The mats are bright white and heavily lanate with a somewhat sprawling open habit. The capitulate heads are cream and held above the evergreen mats. These loose mats are 2.5" (6.35cm) tall and 4" (10cm) to 8" (20cm) across.

5,249' (1600m) to 6,234' (1900m) Butte County, ID



Eriogonum ovalifolium var. *focarium* and *E. umbellatum haussknechtii*

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Eriogonum ovalifolium var. *nivale*



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Eriogonum ovalifolium var. *nivale* - photo by Raymond Fletcher



Eriogonum ovalifolium* var. *nivale is the common high elevation expression of the species on the desert ranges of the Great Basin and the escarpment of the Sierra Nevada /Cascade Ranges. Due to its extended range and isolation on the many desert peaks this variety is rather fluid in its description as genetic differentiation is actively taking place. Some populations have tiny plants while other populations can be composed of much larger plants. Being a high elevation variety the evergreen cushions are brilliant white and heavily tomentose to lanate in texture. The capitate flower heads can be white-cream-pink-bright red. The mats can be from .5" (1.27cm) to 2" (5cm) tall with a spread of 2" (5cm) to 12" (30cm) across.

5,577' (1700m) to 13,779' (4200m) BC, CA, NV, OR, UT, WA

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Eriogonum ovalifolium var. *eximium*



Eriogonum ovalifolium var. *eximium* and *E. lobbii* on Slide Mountain, Washoe County, NV

Eriogonum ovalifolium* var. *eximium would make an exceptional rock garden plant. This variety is only found on the Carson Range of northwestern Nevada and the Jobs Peak area in north eastern California. It is found growing on deep screes of decomposed granite at subalpine elevations. Low dense evergreen cushions are bright white and densely lanate, at times the leaf margins can have brown/tan edges. The white capitate flower heads resting upon the mats are so densely packed that the foliage is hidden. These tight flat buns are from .5" (1.27cm) to 1" (2.5cm) tall and 4" (10cm) to 12" (30cm) across.

5,577' (1700m) to 9,600' (2926m) ne CA, nw NV

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Eriogonum ovalifolium var. *williamsiae*



Eriogonum ovalifolium var. *williamsiae* is a rare edaphic endemic found on a single 370 acre (150 ha) site. The site's substrate is composed of mineral precipitates from its active hydrothermal system. The plants are scattered across the weathered step terraces of siliceous sinter laid down by mineral saturated water flows. (This is another example of a soil-adapted specialist (edaphic endemic)

Eriogonum acting in an opportunistic manner by exploiting the lack of competition found growing on these lean unproductive harsh soils.) This variety of *E. ovalifolium* is markedly different from the other varieties in that it forms rather large silvery gray domed mounds. In the field these plants catch a lot of windblown silt in their crowns. This silt compacts over time making a firm mound within the matrix of branches, the new growth just peeking out above the surface. In the garden they keep this mounding habit forming rather dense mounds even without the compacted silt; though not nearly as firm. The flower clusters on this variety tend to be somewhat smaller than is common for the species as a whole; they are white and held well above the foliage on slender scapes of about 8" (20cm). The evergreen foliage is densely lanate with the new leaves forming compact felted rosettes. This growth pattern adds a tidy tailored look to the mounds. The larger mounds are up to 20" across (50cm) and 4" (10cm) to 8" (20cm) tall.

4,500' (1371m) Washoe County, NV

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Eriogonum ovalifolium var. *williamsiae* and *Malacothrix glabrata*



Eriogonum ovalifolium var. *williamsiae* with *Astragalus newberryi*

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Eriogonum strictum var. *anserinum*



Eriogonum strictum var. *anserinum* is closely allied to the *E. ovalifolium* complex and will produce hybrids when planted near *E. ovalifolium* var. *purpureum*. *E. strictum* as a species contains 4 varieties with var. *anserinum* being the yellow phase of the species. One of the most pronounced differences between *E. ovalifolium* and *E. strictum* has to do with the display of flowers. *E. ovalifolium* varieties only carry one capitulate flower head per scape-like stem while *E. strictum* has multi-branched umbellate structures with smaller clusters. This is a striking *Eriogonum* in bloom with fluffy clouds of lemon yellow flower clusters above the gray green mats of foliage. They are quite showy in bloom as they produce copious flowering scapes, and continue to bloom for well over a month. This variety is often found on alluvial fans and foot hills at lower elevations. The loose evergreen mats are from 8" (20cm) to 16" (40cm) across and 2.5" (6.35cm) tall.

1,300' (400m) to 8,550' (2600m) ne CA, sw ID, n NV, e OR, e WA

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Eriogonum umbellatum var. *nevadense* and *Eriogonum strictum* var. *anserinum*



Eriogonum strictum var. *anserinum* and *Phacelia linearis*

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Eriogonum strictum var. *anserinum*



Eriogonum strictum var. *anserinum* in the garden

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Eriogonum douglasii var. *meridionale*



Eriogonum douglasii var. *meridionale* in the garden

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Eriogonum douglasii var. *meridionale*



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Eriogonum douglasii* var. *meridionale is a delightful plant for the rock garden. It forms silvery gray domed evergreen cushions 2" (5cm) tall and up to 12" (30cm) across. The leaves are densely lanate on both surfaces. In early spring it is studded with 1" (2.5cm) yellow pompoms suspended upon slender scape-like stems. These stems display a whorl of leaves mid-way up the stem; this is one of the more obvious diagnostic cues separating it from its near lookalike *E. caespitosum*. The unopened buds are blushed with ochre red. When the flower heads are through blossoming they change color to deep rusty brown hues and continue to

brandish these metallic spheres all summer. In north western Nevada this species can be found growing on a mixed matrix of volcanically derived clays and broken basalt shards.

4,206' -9,339' (1282m - 2847m) s OR, ne CA, nw NV

Eriogonum caespitosum* var. *caespitosum



Eriogonum caespitosum var. *caespitosum* flowerhead

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Eriogonum caespitosum var. *caespitosum*



Eriogonum caespitosum var. *caespitosum* – tiny classic form

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Eriogonum caespitosum* var. *caespitosum is one of the classic dry-land cushion plants from the American West. It is found all across the western states from dry flats up to alpine screes. Do to this large variation in ecosystems it has a very fluid growth habit from isolated population to isolated population. The western forms found along the eastern escarpment of the Sierra Nevada Range can be much larger in all respects than those found further east.

Some populations are miniature mats with .25" (.63cm) capitate flower clusters held on very short slender stems. In general they form silvery gray flat evergreen cushions .5" (1.27cm) to 2.5" (6.3cm) tall and from 4" (10cm) to 8" (20cm) across; up to 20" (50cm) across in larger Sierra Nevada forms.

The leaves are densely tomentose on both surfaces. In early spring the unopened buds are blushed with rose before they open to bright yellow pompoms. The flower stems are also colored in rich burgundy hues in the spring and lack the whorl of leaves found on its close lookalike, *E. douglasii*.



4,900' (1500m) to 12,139' (3700m) n AZ, e CA, e OR, ID, w MT, NV, UT, w WY

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Eriogonum ochrocephalum var. *ochrocephalum*



Eriogonum ochrocephalum* var. *ochrocephalum grows as loose slowly creeping mats on exposed, clay slopes and alluvial fans at moderate elevations. These volcanic mineral clays hold deep reserves of moisture, which lingers into late summer. Many of the slopes it inhabits can be quite acidic; this inhibits the establishment of sagebrush and this lack of competition favors the generalists, such as *Eriogonum* which are tolerant to lower pH levels. This species sends out short rhizomes just below the surface of the soil making it easy to take cuttings and would make it a good candidate for a crevice.

The deciduous leaves are densely tomentose on the upper surface, slightly less so on the lower surface. It carries yellow capitate flower heads held about 4" (10cm) above the open mats. The silvery gray 4" (10cm) tall mats can be sizable, up to 12" (30cm) across but due to its creeping habit are normally smaller asymmetrical shapes. 4,200' (1300m) to 5,600' (1700m) ne CA, nw NV



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Eriogonum rosense* var. *rosense



Eriogonum rosense* var. *rosense is the high alpine version of *E. ochrocephalum* found on the mountain peaks of the Sierra Nevada Mountain Range. These denizens of deep granitic scree form luxuriant gray-green cushions flaunting its bright yellow pompoms on short stems. (The name of this species has nothing to do with its flower color; instead it is named after Mount Rose, NV where it was first discovered.) The tomentose 2" (5cm) tall gray cushions, as with *E. ochrocephalum*, are enlarged by very short rhizomes. Large mats can be up to 20" (50cm) across but due to its creeping habit are normally smaller asymmetrical shapes. 8,200' (2500m) to 13,100' (4000m) CA, w NV



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Eriogonum siskiyouense



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Eriogonum siskiyouense



Eriogonum siskiyouense is yet another of the noteworthy cushion *Eriogonums* found in western North America. It is a serpentine soil-adapted endemic that grows in the southern Klamath Mountains of far northern California, where it is known only from the area between Mount Eddy and the Scott Mountains around the border between Siskiyou and Trinity Counties. The green-olive green compact basal rosettes lay flat on the ground forming dense mats. The floccose, round leaves have a thick pubescent covering on the underside. Atop the scapes are bright yellow or on occasion pale yellow flowers, which are usually arranged in spherical clusters which age to raspberry red hues. The evergreen mats are 2" (5cm) tall and 4" (10cm) to 20" (50cm) across. (This is yet another example of a soil-adapted specialist (edaphic endemic) taking advantage of the low competition for resources, by showing its tolerance to extreme soil conditions. The serpentine soils it inhabits lack essential nutrients, such as nitrogen, potassium and phosphorus. At the same time, they contain high concentrations of heavy metals, such as nickel, iron, cobalt, & chromium.)
5,200' (1600m) to 9,100' (2800m) n CA



Left: from
Mount Eddy

Right: near
Kangaroo Lake



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Eriogonum shockleyi



Eriogonum shockleyi forms choice tight silvery cushions that lie flat to the ground. These fuzzy pancakes are studded with tiny sessile flowers in pale yellow-rose-white capitate clusters (4mm). Cute as a button, these would make wonderful trough plants. The mats are 1" (3cm) tall and 4" (10cm) to 10" (25cm) across. It inhabits the gravelly clay flats, washes and slopes across the Basin and Range region. Many of these habitat sites have calcareous components in the gravel substrates. 3,400' (1200m) to 8,500' (2600m) ec CA, NV, s ID, w UT, nw AZ
It is the host plant of the Bernardino dotted-blue butterfly ([*Euphilotes bernardino*](#)).



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Eriogonum mancum



Eriogonum mancum are low, caespitose cushions from the Northern Rocky Mountains of Idaho and Montana. These spreading herbaceous mats are silvery tomentose, measuring .75" (2cm) to 2" (5cm) tall and 4" (10cm) to 8" (20cm) across. The small capitate clusters of white-cream-pink-rose flowers are flourished above the foliage on very short scapes. Another trough candidate this is a delightful buckwheat that grows on gravelly clay flats, slopes and outcrops of limestone in a variety of ecosystems from montane to subalpine zones.

3,600' (1100m) to 10,170' (3100m)

ne ID, sw MT disjunct populations wc UT, nc WY, sc MT

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Eriogonum robustum



Eriogonum robustum is a robust, mounded or matted perennial herb the crown crowded with large, silvery-gray basal leaves. The leafless 12" (30cm) tall flowering stems support large umbellate heads of pale yellow-straw colored flowers. This soil specialist (edaphic endemic) in the wild is entirely restricted to rocky, highly acidic (3.3-5.5ph) heavy clay soils on hydrothermally altered andesite hills and slopes. This plants range is restricted to west central Nevada on scattered pockets of altered andesite; there are only 129 known sites with a total acreage of 808 acres (327ha). The mounds are 4" (10cm) to 6" (15cm) tall and 4" (10cm) to 8" (20cm) across.

4,200' (1300m) to 7,325' (2232m) wc NV

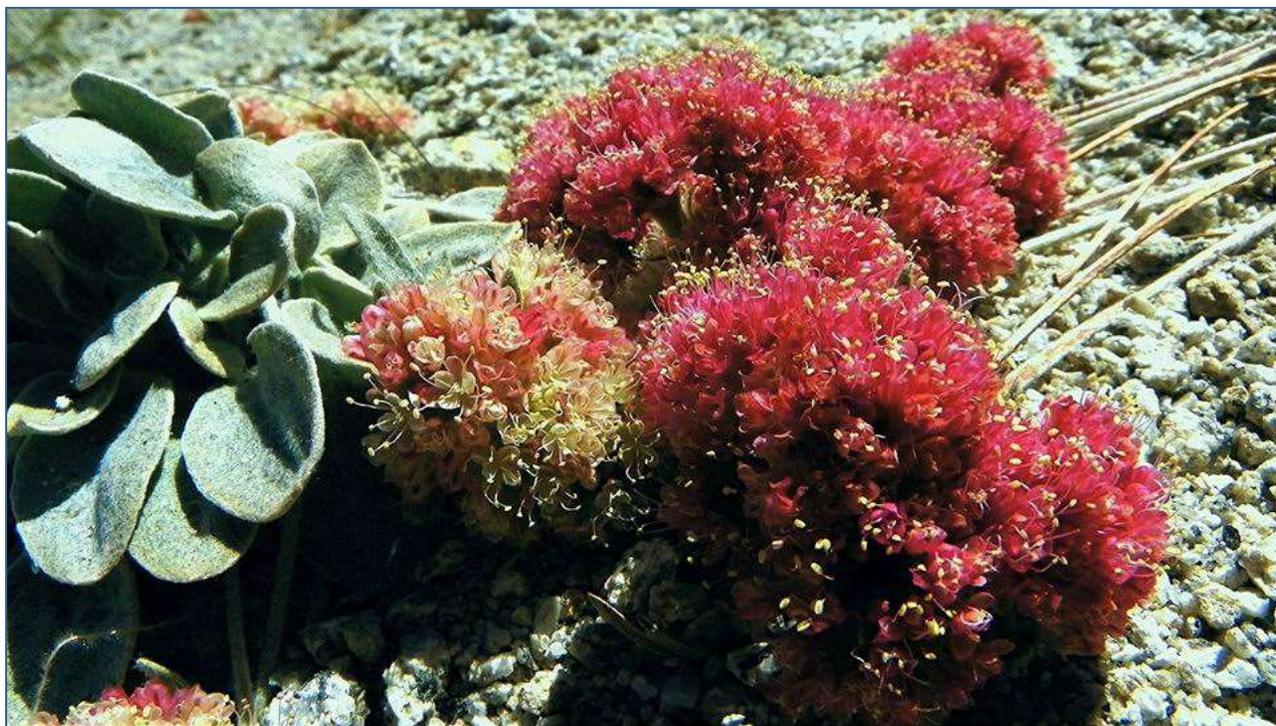
This is the host plant for the intermediate dotted-blue butterfly ([Euphilotes intermedia](#)).



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Eriogonum robustum in the garden



Eriogonum lobbii on Slide Mountain

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Eriogonum lobbii



Eriogonum lobbii on the Baker Pass Road

Eriogonum lobbii is another of the high elevation wild buckwheats found locally in the northern Sierra Nevada Range. It is a low compact mat with rather large grayish green tomentose leaves. *E. lobbii* is closely related to *E. robustum* which is found at lower elevations to the west. What sets this alpine *Eriogonum* off from the rest is the way in which it displays its flowers. They lie prostrate, splayed out

around the flat foliage rosette. The dense umbellate to subcapitate flower clusters can be cream-straw-rose-red. They inhabit the exposed deep granitic screes in a diversity of ecosystems in the montane, subalpine and alpine zones. The rosettes are about 1" (2.5cm) tall and 4" (10cm) to 10" (25cm) across. 4,200' (1600m) to 12,467' (3800m) n CA, nw NV



Eriogonum lobbii at Castle Peak

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Eriogonum sphaerocephalum var. *sphaerocephalum*



Eriogonum sphaerocephalum var. *sphaerocephalum* is a compact upright woody subshrub, a dweller of the dry foothills and steppes to the east of the Sierra Nevada-Cascade cordilleran belt. This *Eriogonum* is commonly known as the rock wild buckwheat and lives up to this name by growing on the many rock strewn slopes around the region. Freely branching, this species forms 16' (40cm) tall arching clumps. The pubescent gray green leaves are slender, oval shaped and in the heat of summer can become quite revolute; nearly linear in appearance. The leaves also tend to be more woolly hairy below than above.



Bright yellow umbellate clusters of flowers are held well above the evergreen mounds. These diminutive shrubs are up to 12" (30cm) tall and 12" (30cm) to 18" (45cm) across. 980' (300m) to 6,500' (2000m) e WA, e OR, sw ID, ne CA, n NV

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Eriogonum thymoides



Eriogonum thymoides is an exquisite tiny gnarled woody shrublet that inhabits the lean parched rocky foothills and plains of the Columbia Plateau. This little gem grows as a low spreading bun 4" (10cm) tall and 4" (10cm) to 12" (30cm) across. The plants are very slow growing adding maybe .25" (6.35mm) a year. They would make ideal candidates for inclusion in a trough. The fuzzy green leaves are tiny linear, gray green above and heavily tomentose below. The flowers are held in small umbellate heads in colors of cream-yellow-pink; in some population even bicolored pink with cream. 1,960' (600m) to 5,570' (1700m) e WA, e OR, s ID

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Eriogonum thymoides



The Weiser dry-land garden

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Eriogonum compositum var. *compositum*



Above - in the wild, below - in the garden



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Eriogonum compositum var. *compositum*



Eriogonum compositum* var. *compositum is a stout clumping loosely branched subshrub with rather large green gray heart shaped leaves that are very white or woolly below. The clumps of foliage are 8" (20cm) tall and about 20" (50cm) across. The fluffy umbellate flower heads float high above the foliage on 20" (50cm) naked scapes. These flat topped blossoming umbels are 8" (20cm) in diameter, bright lemon yellow-pale cream and very attractive to a large variety of insect pollinators. This species inhabits low to mid elevation gravelly slopes and flats across the north western states

and northern coastal ranges of California. 100' (30m) to 8,200' (2500m) nw CA, OR, WA, wc ID This is one of several *Eriogonums* that are host plants for the Pacific dotted blue butterfly ([Euphilotes enoptes](#)).

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Eriogonum heracleoides var. *heracleoides*



Eriogonum heracleoides var. *heracleoides* are matted woody plants that grow as loose open subshrubs. The slender and oblong leaves are clustered in loose rosettes radiating from the caudex. They can be silvery gray to gray green, always heavily tomentose beneath, often with crenulated edges. The umbellate flower heads are supported on slender scapes to about 8" (10cm). There is usually a noticeable whorl of leaves midway up the scape. The inflorescences are about 4" (5cm) across in cream; on some plants with a blush of rose. Mats are 6" tall (15cm) and 8" (20cm) to 20" (50cm) across. This species is widespread across the western United States and into Canada growing on gravelly flats, slopes and ridges. It is a component of grassland, sagebrush, montane and subalpine communities.

2,000' (600m) to 10,170' (3100m) s BC, WA, OR, ne CA, n NV n UT, ID, nw MT, sw WY, nw CO
This is the host plant for the Rocky Mountain dotted blue butterfly ([Euphilotes ancilla](#)).



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Eriogonum heracleoides var. *heracleoides*



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Eriogonum umbellatum is a remarkably variable and wide ranging species with 40 designated varieties scattered across the western United States and southwestern Canada. Varieties come in many growth forms; herbs, subshrubs and shrubs, cespitose, matted, spreading, or erect. The leaf surface is tomentose, floccose, or glabrous. The inflorescences are umbellate, compound umbellate, sub-capitate or capitate, in yellows, or cream. They can be found growing at many elevations from lowland flats, sagebrush steppes, grass-lands, montane, subalpine and alpine ecological zones. Some varieties integrate where their ranges meet, making accurate identification difficult at best. Even with all these minute variations on a theme, definitive identification of the varietal forms can be achieved with study and a good key. They for the most part do not require specialty soil mixes and are satisfied with well drained mildly acidic to neutral soils. With this much variation a gardener should find at least one choice variety to try.

Eriogonum umbellatum* var. *nevadense



Above: in the wild, below - in the garden



Eriogonum umbellatum* var. *nevadense is the common expression of the species at middle and lower elevations along the dry eastern escarpment of the Sierra Nevada Range where this dry adapted variety then fans out across the Basin & Range complex of the Intermountain West. This is a woody subshrub/shrub about 8" (20cm) to 18" (45cm) tall and 8" (20cm) to 24" (60cm) across. The taller plants occur at lower elevations, at high elevations they tend to spread out: I'm sure this is to lesson exposure to the drying winds. These forms keep their habit when brought into cultivation. Var. *nevadense* inhabits gravelly flats, sagebrush communities, exposed ridges and subapline granitic screes across the

region. The small elliptical green leaves have a sparse covering of hair on the upper surface, beneath they are heavily tomentose; as the weather cools in the fall these evergreen leaves are infused with

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red hues. The bright yellow flowers are displayed in open umbellate heads well above the foliage, tempering to rich rusty reds as they ripen. These small golden red globes are an embellishment that persists through late summer into fall.

4,000' (1219m) to 11,150' (3400m) e CA, NV, se OR



Eriogonum umbellatum var. *nevadense*



Eriogonum umbellatum var. *nevadense* and *Castilleja chromosa*

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Eriogonum umbellatum var. *dichrocephalum*



Eriogonum umbellatum var. *dichrocephalum* is a woody herbaceous spreading mat 4" (10cm) to 10" (25cm) tall and 18" (45cm) across. The leaves are elliptic to broadly elliptic with surfaces thinly tomentose. The loose rosettes of dark green, leaves persist through the winter turning to deep burgundy colors. The umbellate inflorescences are pale yellow to cream and may be blushed with pink. This variety is widely distributed from eastern California, east through the Great Basin, north to

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the Snake River plain, and then east crossing the Northern Rocky Mountains and on into the short grass prairies of Wyoming. 4,600' (1400m) to 10,100' (3100m) se-ne CA, nc NV, n UT, se OR, s ID, w MT, w WY



Above: *Eriogonum umbellatum* var. *dichrocephalum* in the garden, below: flower heads



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Eriogonum umbellatum var. *porteri*



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Eriogonum umbellatum var. *porteri* is a high elevation expression of the species. It grows as a prostrate cespitose cushion. The elliptic rosettes of leaves are dark green; the mats are tight and seldom more than 3" (7.62cm) tall and 12" (30cm) across. The flowers are light to medium yellow, aging red, and sit at the top of the foliage in most cases, some plants will hold their flowers on short 2" (5cm) scapes. In bloom, the entire plant is seldom more than 5 inches tall. This variety has a limited distribution in alpine and subalpine zones.

8,858' (2700m) to 12,139' (3700m) e NV, sw-ne UT, sc CO



Eriogonum umbellatum var. *porteri* and *Eriogonum ovalifolium* var. *nivale*



Eriogonum umbellatum var. *hausknechtii* and *E. ovalifolium* var. *focarium* in the garden

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Eriogonum umbellatum var. *haussknechtii*



Eriogonum umbellatum var. *haussknechtii* is a small prostrate mat 2" (5cm) tall and 10" (25cm) across. The tight rosettes of foliage are thinly tomentose and olive green. The umbellate inflorescence displays bright yellow flowers. This variety is a high-elevation expression of limited distribution, found mainly on volcanic peaks of the western Columbia Plateau. It is common on Mount Hood and Mount Adams; both potentially active volcanoes and prominent peaks in the Cascade Range.
3,200' (1000m) to 10,170' (3100m) nc OR, sc WA

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Eriogonum corymbosum var. *corymbosum*



Eriogonum corymbosum* var. *corymbosum is an attractive subshrub-shrub species native to low rainfall areas of the Colorado Plateau. This variety is the common white-flowered expression of the species. It grows as a rounded symmetrical woody shrub with oblong to elliptical green gray felted leaves. The leaf edges are often crenulated or wavy along their length. The shrubs are 12" (30cm) to 40" (100cm) tall and 12" (30cm) to (100cm) across. They inhabit low to mid

elevations in semi-desert environments growing on sandy/gravelly flats, washes, slopes, outcrops and cliff faces. These fall- blooming shrubs display their white inflorescence atop large corymbs held well above the foliage. Their late season flush of bloom is highly appreciated by pollinating insects; no-one seeking nectar or pollen is turned away. I have observed a myriad of six legged visitors grazing on the flat discs, tightly packed with upturned flowers; many don't even bother to hover about but instead, take a stroll munching as they go.

3,900' (1200m) to 8,700' (2650m) n AZ, w CO, s-e UT, sw WY

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Eriogonum corymbosum var. *aureum*



Eriogonum corymbosum var. *aureum* is a rare yellow flowered expression of the species found in an isolated population from the far southwestern corner of Utah. It is only known from Shivwits Hill near the Castle Cliffs in Washington County. This variety forms subshrubs 8" (20cm) to 23" tall and 12" (60cm) to 24" (80cm) across. The bright yellow inflorescences are supported on loosely defined corymbs, taking on the appearance to sprays of flowers rather than flat topped discs. It has been speculated that



this rare expression of *E. corymbosum* is probably the result of past introgression with the no longer sympatric herbaceous perennial *Eriogonum thompsoniae* found growing in the same region. 3,400' (1050m) to 3,600' (1100m) Washington County, UT

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In the dry-land garden



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Here are a few tips on *Eriogonum* cultivation:

1 *Eriogonum*s are adaptable concerning soil ph but it is probably better to lean toward mild acidity-neutral ph levels. I know growers who can grow them in commercial potting mix but when moved to soils with higher basic ph levels just they fade away. (Note: keep in mind there are some species that do inhabit limestone environments so do your homework.) Don't be afraid to try the soil specialists they are very adaptable. I grow four of these specialists in my beds with no additional amendments

2 *Eriogonum*s from frost free coastal or warm desert environments may not be cold hardy.

3 *Eriogonum*s do not propagate well by division instead sow seed or take cuttings, which are surprisingly easy despite the fact that *Eriogonum* have atypical stems without consistent nodes. When taking a cutting, choose a non-flowering stem, mid-spring, before bloom or late-summer, after bloom. Cut below or between nodes, then follow standard rooting protocols by trimming off lowest leaves, and dipping into rooting hormone before inserting them into well-draining medium. *Eriogonum* are not difficult to root but allow at least 3 - 5 weeks. Some of the matting cushions will root along the prostrate stems so these can be removed and potted up.

4 *Eriogonum* require a loose, lean, gritty, well-drained soil and full sun. They will tolerate moderate moisture regimes as long as they are not exposed to saturated soils for substantial lengths of time. They may never require supplemental irrigation; they typically grow in moderately dry to dry environments.



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Where buckwheats grow in the wild:



View from Castle Peak, Nevada County, California



Mount Shasta, California

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Carson Pass - Lake Winnemucca Trail Sierra Nevada Mountains, California



Churchill Narrows, Lyon County, Nevada

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Altered andesite hills just east of Reno, Nevada

Good online *Eriogonum* key: http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=112045

Good source for further information on garden worthy Eriogonums: this site contains basic descriptions with many links to habitat and plant photos:

<http://www.plantsystematics.org/reveal/pbio/eriog/eriogarden.html>

Link to the Eriogonum Society web site: <http://www.eriogonum.org/>

Link to J.P.W. plant family collections: <https://www.flickr.com/photos/sierrarainshadow/collections>

Link to collection titled Polygonaceae-Eriogonum Family:

<https://www.flickr.com/photos/sierrarainshadow/collections/72157603695772979/>

John P.Weiser



Mountain view, Silver Bow County, Montana

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---The Beauty Slope---

It has been some time since we had an update from Zdeněk Zvolánek on his garden, the Beauty Slope, in Karlík. Most of these photos were taken by ZZ's partner, Zdena Kosourová. Winter came to the garden, and the weather was not the best for the Prague Early Spring Show, either but the snow has gone now.



An icy *Acantholimon ulicinum* and *Iris reticulata* in the snow.

When the weather has been kind – or at least kinder - ZZ has been working in the garden. There is always some redevelopment or improvement to be done in any garden- even somewhere as lovely – and steep – as the Beauty Slope.



Easter at the Beauty Slope

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There is always rock work to do....



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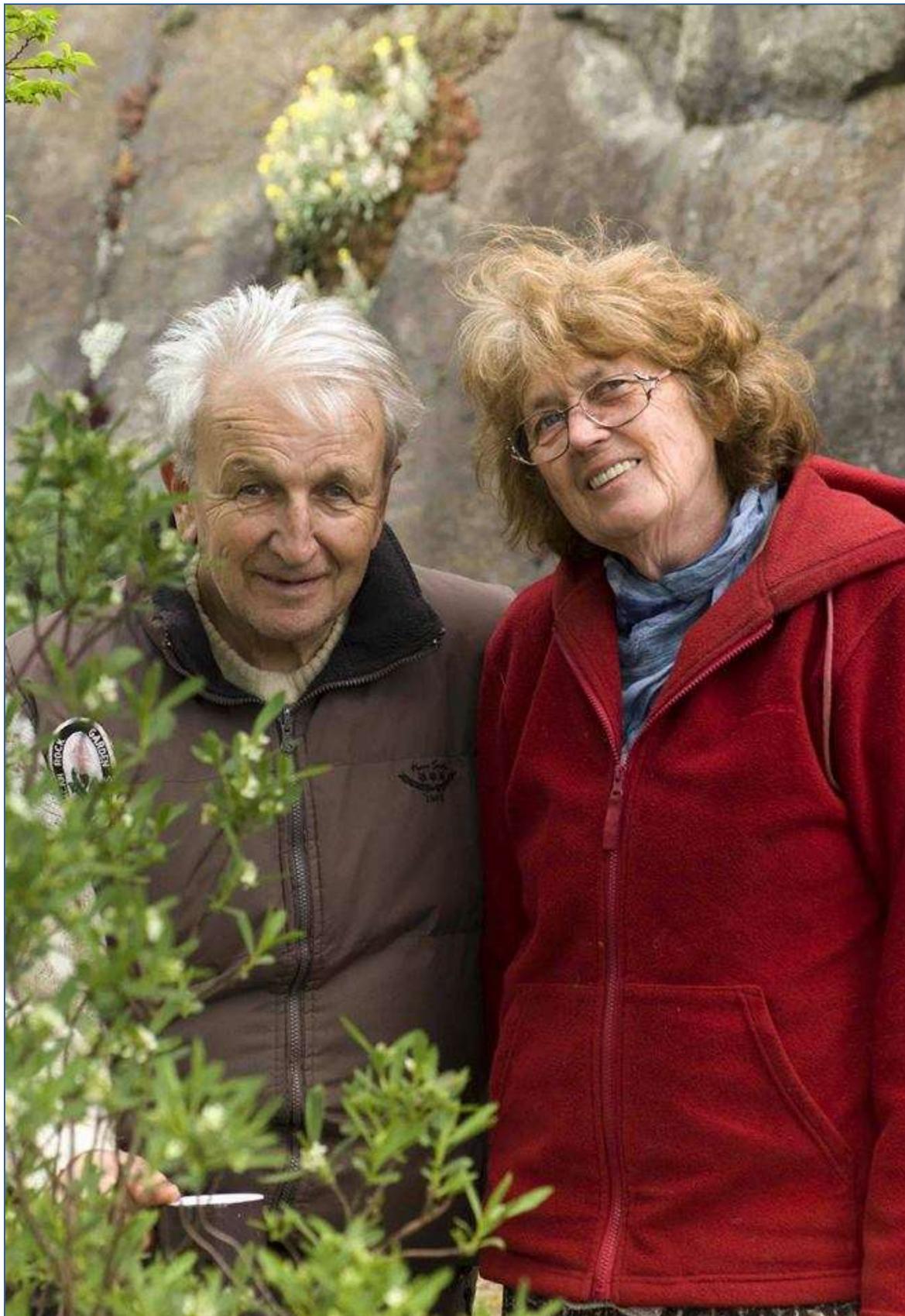
ZZ feels that there is a good microclimate in this part of the garden and so it is worth clearing it for new planting.



ZZ was pleased to have help at Easter from his Grandson, David, to dig out an Ash stump.

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ZZ explains that: Cleaning this new part of our rented cliff was to allow installing a bench for breakfasting, meditation and coffee breaks and for planting the plumcots, pluots apple 'Fuji' and 'Maypole' apricots, modern raspberries and early blackberries plus plenty of patented strawberries. We are preparing for sweet ageing among natural looking garden."



Zdeněk and Zdena in the garden.