

BULLETIN

of the

AMERICAN ROCK GARDEN SOCIETY

including

SAXIFLORA

Vol. 3

November-December, 1945

No. 6

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Published by the American Rock Garden Society and entered in the United States Post Office at Plainfield, New Jersey, as third class matter; sent free of charge to members of the American Rock Garden Society.

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ROCK GARDENING IN VIRGINIA

ORLAND E. WHITE, Boyce and Charlottesville, Va.

SO MANY natural rock gardens occur in Virginia that I hesitate to write about the made-made possibilities, especially since many of the latter are apt to be inexcusable landscape desecrations. A rock garden should so fit the world in which it exists that any grocer's boy will tear through it without thinking it is other than a natural stony hillside. To effect this condition requires plants that grow exuberantly as though life were exciting, as well as those that lead a fitful and precarious existence in a world that often reminds me of the pet chickens we used to raise behind the kitchen stove in my boyhood days on a farm. Too many people in the gardening world are afraid of the work and thought involved in having aggressive rock plants associated with their timid cousins, yet work and enthusiastic response are what make gardening of any kind a worthwhile joy. *Sedum acre*, with its matted masses of golden star-like flowers, gives me just as much pleasure of all kinds as the bits of blue-leaved, pink-flowered *Sedum dasyphyllum*, clinging timorously in a rock crevice. Likewise, the trailing grey ladders of *Sedum sarmentosum* and the colorful red and brown *Sedum album* never scare me into tigerish destructions, since I know they are as easy to erase as a blackboard.

A hillside background mass-rimmed with forsythia, crepe myrtle, abelia, holly of various kinds, field pines (*Pinus virginiana*), deodar (*Cedrus deodara*), the grey Arizona cypress (*Cupressus arizonica*), a dogwood or two, a funereal *Viburnum rhytidophyllum*, a white or cat spruce (*Picea canadensis*) for outdoor Christmas effects, a holly-leaved *Photinia serrulata*, and a salmon-pink flowered Japanese quince provide my setting. Up the pine trunks climb English ivy, and over these and some of the other bushes and trees, Japanese clematis (*Clematis paniculata*) sprays its vanilla-scented panicles of white flowers in late summer.

The soil is so poor and so acid in many spots that little pines and other plants stay little for many years. When I want a plant to grow big and fast, I baby it by special attention. There are many rocks, some naturally and some artificially placed. Two little ponds were made of old metal wash-tubs, sunk to ground level and roughly waterproofed with cement. A rough stone walk winds up this hillside, with steps in some areas. Although less than an eighth of an acre is devoted to this garden, it is amazing how many kinds of plants can be fitted into such a composition without "messing it up." Further, it has required comparatively little effort to keep it balanced and looking fit since the original effort.

Among the rocks grow successfully such evergreen azaleas (*Rhododendron* sp.) as Pink Pearl, Coral Bells, Hinodegiri, Hinamayo, Flame, Macranthum, and others of the Kurume section, *R. mucronatum* (*ledifolium album*), *R. indicum* var. *balsaminaeflorum* (a gem with exquisitely dainty flowers like little salmon-pink double roses), gorgeous orange-red flowered torch azalea (*R. obtusum* var. *kaempferi*), together with its hybrids, such as Othello, Fedora and Mary, various species of deciduous-leaved wild azaleas, and lastly, the honest-to-goodness rhododendrons or Great Laurels and Rose Bays, such as *R. maximum* and *R. catawbiense*, the glory of the southern Appalachians.

Aside from these are many wild types of *Phlox nivalis*, *P. subulata*, *P. divaricata*, *P. amoena*, *P. ovata*, as well as the cultivated forms. Rock-plumbago, *Ceratostigma plumbaginoides*, provides a mass of late summer flowers of intensely blue color; it is easy to grow and stands some shade. *Jasminum parkeri* is a dainty blue-green leaved easily grown jasmine with bright yellow flowers in late May. It has small leaves, more or less evergreen, depending on differences in winter climate, grows reasonably fast, making neat little mounds a foot or less high. *Lonicera nitida* is another



BY ORLAND E. WHITE

Rock garden on limestone outcrop, Boyce, Va.

tiny-leaved evergreen, with arching branches, inconspicuous flowers and sparse fruits, which is easy to grow and very ornamental. People often mistake it for some rare form of box. It stands shade, is not particularly rampant, but partly winterkills when the thermometer goes below zero.

Shortia and *Galax* thrive provided an August drought doesn't kill them. Among the silenes, *Silene pennsylvanica* provides flowers ranging in color through various shades of pink to almost white. There is also much variation in size, shape and floriferousness, and I suspect an occasional hybrid with its fire-red cousin, *Silene virginica*. The latter does well in partial shade and occurs in two color forms, a velvety blood red and a dull red. *Silene pendula* is an easily grown dwarf winter annual, existing in numerous shades of bright pink. Mats of partridge berry (*Mitchella repens*) interspersed with wintergreen (*Gaultheria procumbens*) and the two chimaphilas (*Chimaphila umbellata* and *C. maculata*) form intriguing as well as beautiful ground covers under the azaleas. Trailing arbutus also does well in this situation.

On the lichen-covered ledges, several evergreen ferns and selaginellas grow luxuriantly and make picturesque compositions. The Christmas fern (*Polystichum acrostichoides*), the two evergreen polypodys (*Polypodium virginianum* and *P. polypodioides*), the common spleenworts (*Asplenium* sp.), *Selaginella braunii* from western China, and the blue-green iridescent *S. uncinata* are valuable "paints" for such pictures. The two selaginellas are both tropical and striking enough to produce the "oh's" and "ah's" of intense envy. These stand temperatures as low as -10°F , but die down in winter. The true *S. braunii* is not to be confused with *S. Kraussiana* var. *brownii*, commonly sold by florists. With its luxuriant six-inch stems much branched in one plane, it is reminiscent of the equatorial highlands. Likewise is this true of *S. uncinata*, which amazed me by budding forth from slightly covered underground stems after undergoing temperatures as low or lower than -10°F . at the Blandy Experimental Farm in the Shenandoah Valley in northern Virginia. This is a beautiful clambering vine-like species, often used as a ground cover in tropical conservatories. It loves moisture and shade, while *S. braunii* will do well in both sun and shadow and in either dry or wet situations.



BY ORLAND E. WHITE

Rock garden built with rock slabs, Charlottesville, Va.

There are scores of plants suitable for Virginia rock gardens that are relatively easily grown which I would like to express myself about, but there is one more "must" that I cannot overlook, since it has been one of my rock garden companions for many years. It, too, makes me think of long past adventures in tropical mountains. This is *Begonia evansiana*, the only hardy begonia so far discovered in our experiments for this region. It loves a shady bank, moderately damp with good drainage. With us, it reaches a foot or so in height, with masses of pink flowers in early September, and lives over winter through small tubers. It readily propagates itself through seed or tuberous bulbils which develop in the axils of the leaves.

Begonia evansiana is hardy further north than Virginia, and we would like to hear from our members who may have tried it in colder regions.

BREEDING DWARF RHODODENDRONS

G. G. NEARING, Ridgewood, N. J.

THE diminutive *Rhododendron lapponicum* follows the Arctic Circle around the world, venturing southward in this continent as far as the summit of Mt. Washington, New Hampshire. It rises only a few inches above its native mosses to display the bright purple flowers, which it seems unwilling to produce in cultivation farther south. A temperamental alpine, it puts out half-sized leaves on half-sized twigs for us, succumbs to the fly or to fungous leaf-diseases, or is at best somewhat unsatisfactory. Since it will not flower freely, there is little chance to breed better forms or to hybridize it. However, its fifty relatives from the mountains of Asia include some with much more accommodating dispositions.

These can be nursed into fat plants by skillful growers, but in my experience, such plants nearly always die when set in the rock garden. I have made a special stony bank for the Lapponicums, the steep south side of a ditch, facing therefore north, where some of the pockets are in permanent shadow but open to the north sky. Here I place lean, two-year-old wisps with a single tuft of leaves, for such starved plants, it seems to me, have the best chance of survival. Some have thriven there six or seven years, developing into shapely specimens which flower whenever late frosts permit. Their roots run in a mixture of peaty soil and gravel, backed by a layer of peat mixed with sand. This arrangement serves to draw up moisture from the bottom of the ditch and at the same time shields the roots from an alkaline clay in the bank. The spot is unfortunately subject to floods which have destroyed most of the plants set in the lower pockets.

In this Lapponicum Series, too many species have been named, some of them separated by trivial differences, or connected by intermediate forms or natural hybrids. Yet certain groups contrast sharply in the main with certain other groups. Deep blue-purple occur in *R. impeditum*, *R. fastigiatum* and forms of *R. drumonium*, all much alike, with the first named the best color and the last the hardiest. Seedlings from plants of this shade however tend toward purplish rose and mauve, the dominant tints of the series, shared by a couple of dozen other so-called species, most of which are less hardy. Pale lavender is also prevalent among them. These colors do not link with other botanical characters. Under the circumstances it seems advisable to collect seeds from the hardiest, and when a specially desirable hue appears, to increase that plant by cuttings, which root easily. Planned hybridizing does not give much better results than the humble bees.

All these plants look like *Daphne cneorum* until in May, their tiny, azalea-like flowers cover them with color, mostly clear and bright, attractive even to the prejudiced eye. All remain low and twiggy if exposed to the north light, but when much shaded put up tall, straggling stalks and lose their charm.

R. impeditum was crossed with blue *R. augustinii* in England to produce the celebrated Blue Tit, a perpetual prize-winning blue in that land. But beware of plants sold here under that name, for they are seedlings, mostly not hardy and varying considerably in color and form. I have not yet found one satisfactory plant among hundreds of them. Crosses between *augustinii* and other similar species have been less outstanding.

One great drawback to the Lapponicum Rhododendrons is that, although the leaves persist all winter, they turn brown and droop so close to the stem that the plants look utterly dead, not greening again until spring is well advanced. In the hybrid *fastigiatum* X *carolinianum*, which I suspect was made by Gable, though I may have made it, the leaves remain green and expanded at all seasons. One individual of this breeding is so fine that I am trying to cross other Lapponicum species with *carolinianum* and *Conestoga*. They seem to refuse *racemosum* pollen, and in fact, because they open early in May, are so often cut by the frost that seed of any sort is produced sparingly. A lucky season (perhaps this one) may give unexpectedly good results, but the bumble bees are as likely to succeed as I am.

Earliest flowering and hence least satisfactory are the yellow Lapponicums *R. muliense* and *R. chryseum* both from the high ranges of western China, and neither altogether hardy in northern New Jersey, though plants of *R. muliense* have lingered along for years without attempting to flower. One specimen of *R. flavidum*, however, has done somewhat better, flowering once a pale ocher yellow with red stamens, wholly captivating, then living on through some healthy and some sickly seasons without budding again. I have no hybrids of these yellows, but covet a cross between any of them and *R. keiskei*. A cross made in England between *R. flavidum* and the difficult *R. sulfureum* would be of little use here except as a possible parent. It is called Yellow Hammer.

The Lapponicum species mentioned above put out only a single flower or perhaps two or three from each bud, but when happily placed, make a splendid display by budding on practically every tip. The bright violet *R. russatum* produces its bloom in dense, several-flowered heads, which, on one specimen here, open in May regardless of what chills or floods the winter may have visited upon it. But it remains a gawky 8-inch plant with only a couple of branches, and is thus far chary of seeds. Nearby my first *R. cantabile* to blossom is a good imitation, with fewer florets in the head, opening a month later, in mid-June. Both species are highly rated. Somewhat similar, though of larger habit and with pale pink or lavender hues, *R. hippophaeoides*, called hardy, has neglected repeated opportunities to flower. It is supposed to revel in moisture, of which the supply here is surely ample, yet something seems not to suit it. Since it comes easily from seed, I distribute dozens of plants in likely nooks where most of them refuse to stay. In any case it is large for the rock garden, attaining 3 feet.

The pale lavender *R. orthocladum* grows with the hardiest, never suffering much injury from any cause, but after a dozen years never once producing enough flowers to make a show. Instead of the typical habit of the Lapponicums, which fork into numerous, short twigs, it tends to make a broom-like growth of slender, parallel stems, which in time may reach a height of two feet. Another of the same pale shade of lavender or blue with a better habit and more generous bloom is *R. intricatum*, which, though many praise its hardiness, is short-lived with me.

R. scintillans, a good mauve, though small-flowered, likes to dwindle and die, except one old, bushy, faithful specimen which tries to give up the ghost after every hard winter, then, thinking better of it, revives enough to expand a few blossoms, apparently from buds formed in May. Most of the Lapponicums set flower-buds in midsummer, drop them after a few weeks, resuming growth, then form a new set in September or October to open in April or May; a few prefer to show their color after the first frosts of autumn. This plant of *R. scintillans* either has flower buds indistinguishable from those intended for foliage, or else waits until spring to initiate them.

Many other Lapponicum species have been tried here, among them *R. achroanthum*, *websterianum*, *tapetiforme*, *setosum*, *telmateium*, *blepharo-*



BY J. G. BACHER

Rhododendron scintillans, a good mauve though small-flowered.
It evidently thrives better in Oregon than in New Jersey.

calyx, *dasypetalum*, *diacritum*, *nigropunctatum*, *ramosissimum*, *ravum*, and some nameless under explorer's number only. Most of the seed came direct from China, except of the Himalayan *R. setosum*, some however from England, where every opportunity is given the plants to intercross. After much experience, my feeling is that the names do not mean much. A hundred plants should be raised for every one wanted. Set them out in droves, replacing with new ones those which languish. In this way a bank of mixed Lapponicums can eventually become established. Many are beautiful. Any which displease may be weeded out, and rooted cuttings from the best forms substituted.

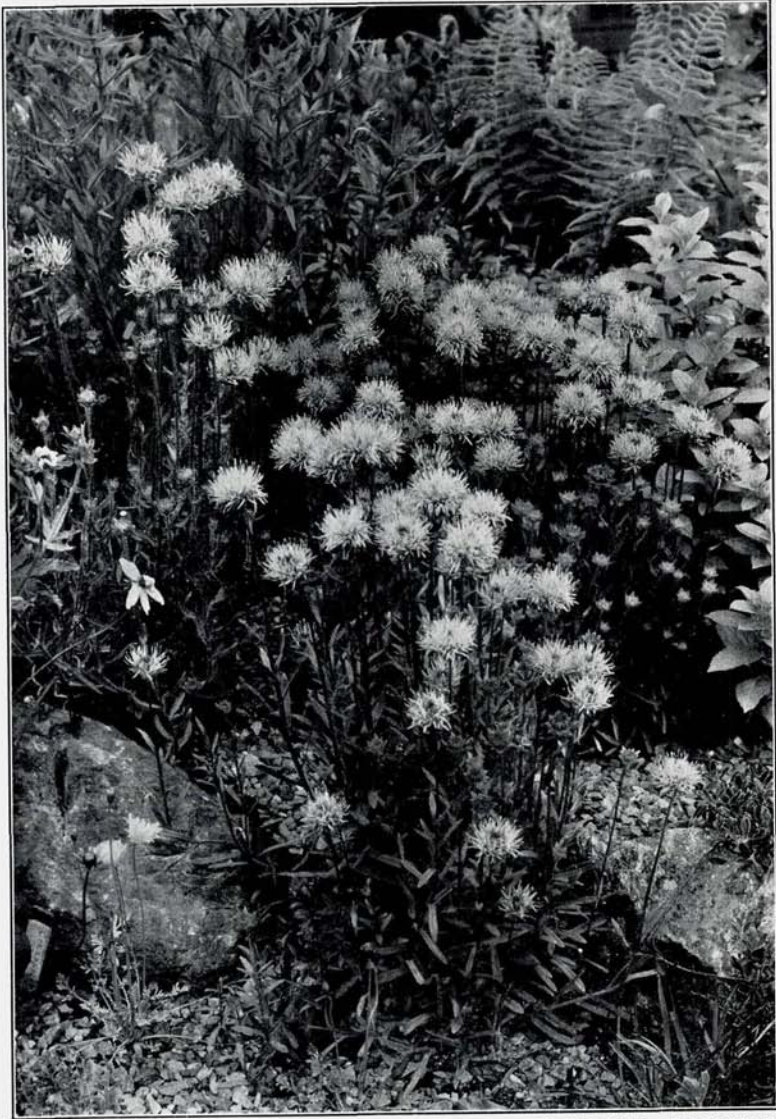
Rhododendron carolinianum, attractive species from our southern mountains, can hardly be called a dwarf, though often recommended for the rock garden. Look for it in the Carolinas, and you are likely to find a loose shrub much higher than your head, with *R. minus* still taller. There is however a form of the var. *album* which remains comparatively low and dense, and which, as its buds open sulphur yellow, has received the name var. *aureum*. The yellow shade vanishes with expansion of the flower, which is pure white, with a tendency to turn dull pinkish in age. The deepening of color in older flowers is a character of pink *carolinianum*, persisting in many of its hybrids. While nothing could be more pleasing than the apple-blossom tint of the normal form at first blossoming, the darkening which sets in about the second or third day soon gives a stale purplish rose not nearly so attractive. There are fortunately strains of *album* and *aureum* which remain white, or even slightly yellowish, and these should be cherished.

Although mostly too large for the rock garden of ordinary scale, *R. carolinianum* is proving valuable as a parent of smaller hybrids. For this there is a special reason. Rhododendrons divide into three principal groups which intercross only with difficulty: those having the leaves smooth or clothed with fine, soft hairs, various kinds of wooly and felt-like tomentum, and sticky glands; those with scales; and the azaleas, which have rigid hairs. Smaller groups within or intermediate between these chief ones also present special problems to the breeder.

The scaly Rhododendrons have flat, more or less circular scales, often about one-hundredth of an inch in diameter, distributed, in some species densely, over the surface of the leaf and other parts. Few of these plants are sufficiently hardy, free-flowering and free-seeding to give promising hybrids, but such parents are necessary if the choice sorts with alpine reluctance to endure cultivation, are to be made available for our rock gardens. The Carolina Rhododendron has the necessary qualifications to a greater degree than any other scaly species except *R. racemosum*, and in some cases will cross with species which *R. racemosum* refuses. For certain purposes I prefer to use Conestoga, the hybrid between these two, since the seedlings of a hybrid usually show more variation than those of a species.

Long ago *R. carolinianum* was crossed with *R. ferrugineum* from the Alps to give "wilsoni," more properly *laetevirens*, a low shrub almost as dense as boxwood, with leaves much like mountain laurel, deep, rich green, for which, because it flowers but little, this hybrid is chiefly prized. Recent crosses with *R. keiskei*, *R. mucronulatum* and *R. cuneatum* are mostly taller in habit, but these in turn are beginning to yield dwarf seedlings of promise. The hybrid Conestoga was discussed under *R. racemosum*, *fastigiatum* X *carolinianum* under *R. fastigiatum*. I may add concerning Conestoga, that since writing about it, I have isolated one of its seedlings having virtually all its good qualities plus superior hardiness.

R. minus, once lumped with *R. carolinianum* under the name *R. punctatum*, flowers a month later, in June, dull pink, with less showy blossoms. It is not likely to produce many dwarf offspring, though Codorus, Gable's cross of it with *R. racemosum*, is good and not too large.



BY FLORENS DE BEVOISE

Jasion perennis
CAMPANULACEAE

SAXIFLORA No. 26

JASIONE PERENNIS

AFTER the spring flower show is over the average rock garden becomes rather bare of floral beauty, and remains so until the Composites and other late-bloomers produce their autumn display. Suggestions as to plants which will aid in filling in the summer interval are therefore always welcome. A genus deserving attention from this standpoint is *Jasione*; some authorities pronounce this with the accent on the *o*,—"jassy ohney," while others prefer to stress the *i*, yielding "jass sigh unney." Take your choice.

All the members of this small south-European genus are pretty much alike in appearance, having numerous small lavender-blue flowers clustered in dense heads. Superficially they resemble small non-radiate representatives of the Composite Family, or the lesser Scabiosas; in fact, they are often known in Europe as "Sheep-scabious," in reference to their seeming to thrive especially well in sheep pastures. Close examination shows, however, that they possess technical features relating them to the Bluebells.

Four species of the genus *Jasione* are recorded to be in cultivation in the United States; they differ in minor details of stature and leaf-outline. One annual, *J. montana*, has become naturalized locally in pasture-lands and waste-places. All are said to be readily grown from seed, and the perennials can be propagated by division of the clumps. They seem not to be particular as to soil or temperature, and do well in most rock gardens in which they have been tried, coming into bloom in midsummer and lasting for several weeks.

Jasione perennis is a compact herbaceous-perennial, about a foot in height. From a rosette of small obovate leaves there arise multiple simple stems bearing spaced alternate broadly linear entire leaves. At the top of each stem is borne, on a long peduncle, a flower-head an inch or two in diameter, subtended by toothed ovate bracts. The numerous florets are so small that examination with a lens is necessary to make out their features. They have 5 slender sepals united with the ovary and 5 narrow basally-united petals, in hue bright lavender-blue, or on occasional mutants white. There are 5 stamens united by anther-bases into a ring around the style, which is tipped by a pair of tiny stigmas. The fruit is a many-seeded capsule.—EDGAR T. WHERRY.

Jasione perennis Lamarek, Encyclopedie methodique Botanique 3: 216, 1789.

ROSES IN THE ROCK GARDEN

J. HORACE MCFARLAND, Harrisburg, Pa.

WHEN I think of roses in the rock garden my mind at once takes me to the first plants I owned of Rosa "Rouletti," which were put along a path in the Breeze Hill rock garden. They seemed to like the place, and there they have stayed for a number of years, blooming always at the very first excuse in the spring and keeping right on through the summer and fall until frost closes them off. Many times during the winter I have enjoyed these roses, even if they were not blooming, because, little and inconspicuous as they are, they speak of life and action.

All the forms of Rouletti would seem to fit the rock garden, though the white and yellow forms are not very strong in growth and may not persist. Generally speaking, I would think of the Rouletti forms as being most desirable, because if planted where convenient, and not in deeply rich soil, they will better hold their fine dwarf character.



BY J. HORACE MCFARLAND CO.

Rosa chinensis minima, widely known as Rouletti.

A good many rock gardens have a background, and where that occurs a large selection of roses can be entertained. On the basis that the background roses may go up to three feet or more, the century-old *Hermosa* will be of service because of yielding the first and last flowers of the season. *Gruss an Teplitz*, *Birdie Blye*, *Contesse du Cayla*, and the admirable *Else Poulsen* could also be taken into the picture. Because I have had admirable results in pushing around *The Doctor* into hard-luck places, I would always suggest at least one plant of that richly fragrant and extraordinarily beautiful rose for the occasional bud that may happen, and each bud counts, because I have hurriedly taken my lame left knee across

two hundred feet, drawn by the magnet of one open "Doctor" rose at the edge of what we call "Little North Carolina" because it has in it so much of the spring beauty of that state.

Rosa wichuraiana will trail into a rock garden with endurance, and bloom in due time, its foliage all the time being good enough to admit it, even if it never did have a flower. If there is a corner with a little shade, *Rosa rugosa repens alba* will provide some beautiful surprises, and in the full sun if you have it, but otherwise even to fifty per cent shade, Max Graf will give strength of greenery, beautiful and enduring foliage, and June flowers of exceptional quality. If I wanted to take a chance I would also put a Mermaid anywhere that would afford a little protection. It will not endure heavy frosts, but growing as it does, near the ground, it will prosper and continue, and offer its three-inch yellow blooms in great beauty.

Among the Australian roses which came to Breeze Hill more than ten years ago was one Polyantha called Borderer, which has not yet interested any of the rose merchants, though to me it is always exciting and pleasing. It makes a fine little bush less than a foot high which has deep endurance and a disposition to have a flower almost any time. It belongs in the same group as Gruss an Aachen, which is a taller grower and an equally persistent bloomer. I would think it time to get out of the garden game if I couldn't have the Springtime rose, and almost equally a plant or two of Marie Pavic. These are of moderate height, good foliage and pleasing habit, and to me have the rock garden appeal.

I am a rock garden adventurer, I presume, because I am not afraid to grow Bloomfield Courage with its dependable single scarlet flowers, and I have long been very friendly with Zephirine Drouhin and Kathleen Harrop, which latter two varieties are thornless, trailing and beautiful.

Now, all that I have written about varieties is intended merely to stir the rose-desiring rock gardener into trying for himself. It may be that the best Hybrid Tea he has grown will fit into the rock garden, though it probably won't. Any rose that he gets to do well is a prize, because the rose seems to belong in a rock garden, none of the inhabitants of which will be ashamed of its regal company. I commend particularly experiment, the idea in my rock garden mind being that I want enduring plants that have a desire to stay with one. All of the rose varieties I have mentioned are of this type.

EDITORIAL NOTES

For over two years each issue of this Bulletin has contained a brief essay on a plant which may appear suitable for rock garden planting, but which is so aggressive that its introduction is likely to be far easier than its subsequent removal. We are now discontinuing this series of "Keep Out" articles; but should any of our members have unpleasant experiences with species not ordinarily recognized as rock garden menaces, we will be glad to publish their accounts, so that the rest of our membership may be duly warned.

The suggestion has been made that occasional issues of the Bulletin be devoted wholly or largely to a single plant family or genus. This can be arranged, provided enough of our members send in articles on the plants selected. Three genera which have been proposed for such treatment are *Penstemon*, *Phlox*, and *Viola*. We have on hand one short article on a member of each of these, and which shall be published upon first will be determined by the additional manuscripts received. Let us hear of your experiences with these plants.

LEWISIA REDIVIVA

FRANK H. ROSE, Missoula, Mont.

THE Bitter-root, *Lewisia rediviva*, is a rock garden plant of outstanding merit, the best of the Lewisias. It is easy to handle, curious, but handsome in appearance, interesting in history and in habit of growth.

The type specimen was collected near the mouth of Lolo creek, about twelve miles south of Missoula, Montana, by Capt. Meriweather Lewis of the Lewis and Clark expedition in 1806. Lewis had seen the root of the plant the previous summer among some dried foods abandoned by a party of Indians; but first found the living plant on his return trip. Lewis carried his specimens the 3,000 miles of his return trip and turned his collection over to Frederick Pursh for determination. Months later Pursh discovered that one of the Bitter-root plants that had been dried and pressed showed signs of life. He planted it in the garden of a Mr. McMahon in Philadelphia, and there it continued to live for some time, the first of a long list of western alpine plants to be introduced into the East. This incident suggested for the plant its specific name, *rediviva*, or the plant that returned to life. I verified this story one spring when I kept some plants in a plant press under a 100 pound weight, between blotters sunned and changed daily, from March 25 to May 25, after which one of the plants continued to grow, a permanent addition to my garden.

Bitter-root, which is the state flower of Montana, has given the name to a range of mountains, a river and a fertile valley in that state. The plant puts out leaves in late fall, remaining green under the winter snows. In April or May you may find them, either a rosette spread close to the warm earth or a tuft suggesting a tiny clump of some coarse grass reaching up to the light. When dug, the reddish, fleshy roots, that tend to draw up over the short crown, with its tuft of green leaves, suggest some big bug. The large flowers are usually pink, but vary from white to red.* A well-established plant sometimes produces a large number of these handsome blossoms; there were 67 on one plant that I counted. When the weather gets hot, the leaves shrivel up, like a rubber band on a hot stove, and draw into the soil around the plant's crown, so that only flower stems are to be seen at blooming time in May and June. The rich, cactus-like blossoms do not shed their petals, but dry up entire, the color bleaching out and the seeds ripening within the flower. The stem then detaches below the flower, permitting the faded blossoms to roll about with the wind and scatter the seeds which, under favorable conditions, may produce plants the size of a pin by fall, attaining flowering size the third year. The stem, its labor finished, draws into the soil and the plant disappears completely until cool weather arrives, when it again produces its awl-like leaves.

Bitter-root seems immune to drought or root-exposure. It will accept any near neutral soil, but it will not tolerate a wet crown. It must be given a sunny site and perfect drainage. The bed should be raised above the surrounding area and the subsoil should be porous. Its soil may be rich in humus, like decayed sods, or may be fertilized with well rotted cow manure, the rich soil stimulating larger and better colored flowers. A fairly rich humus overlain by 2" to 4" of barren soil and gravel is good. Thorough

**Lewisia rediviva* was illustrated in this Bulletin, Volume 1, No. 2, p. 28, 1943.

watering is best during the growing season, or when the leaves are green, but a period of drought must follow the flowering season. Its ability to tolerate long periods of exposure to the open air makes it well-adapted for planting in rock walls, its ideal site in the moist climate of the East. A supply may be secured in advance, and placed in the wall during construction. Leave the roots undisturbed through the dormant season.

VACCINIUM VITIS-IDAEA

THE NAME, *Vaccinium Vitis-Idaea*, is somewhat puzzling. It means the *Vaccinium* (blueberry) vine from Mt. Ida; but which Mount Ida is the question. When naming it Linnaeus did not say. At any rate the American variety of it, *minus*, is one of our handsomest evergreen groundcovers.



— WILD FLOWER PRESERVATION SOCIETY

Vaccinium vitis-idaea minus, known in New England as Rock-cranberry, produces an abundance of pink bells. This photograph was taken by the Editor on Cranberry Island, Maine.

The smallish dark green leaves are leathery and glossy. The flowers are urn-shaped, white to pink and waxy; and the fruit scarlet. It will grow magnificently in pure sphagnum and well enough in any reasonably acid soil. In moderate sun it sets more fruit than in the shade. The height is from six to twelve inches, according to the amount of light it gets. Its smaller form is a gem—growing in small mounds and huddled carpets. The species is one of the circumpolar plants. In the east, the American variety extends down the White Mountains in New Hampshire at high altitudes, and along the Maine Coast. In the west it is said to have been found in the Cascades, although I have found it only in the Canadian Rockies. The taller European variety grows in Norway, Sweden and Lapland, and is much prized for its fruit. This is too sour to eat raw, but is delicious when cooked with sugar—ELSE M. FRYE, Seattle, Washington.

SOWBREAD

FLORENS DE BEVOISE, Greens Farms, Conn.

HARDY Cyclamens deserve a high rating as satisfactory subjects for the rock garden,—easy to grow and beautiful to behold. It is difficult to understand why they are so seldom seen in eastern American rock gardens, for many species and varieties have proven entirely hardy throughout New England. A planting of a generous series of the various sorts will provide bloom from early spring through late autumn, and even when not in bloom, their wonderful marbled and colorful foliage will add beauty and gayety to the garden. The color range of the flowers is from white through various shades of pink to red and purple; they resemble lovely little butterflies, and some species add fragrance to their other virtues.

According to Reginald Farrer "Cyclamen, though called the Bread of Sows, might more appropriately have been the Food of the Gods, even as *C. europæum* indeed is called *Patate della Madonna*. For their lovely charm is patent to all, and needs no brush, except to grow in." This is praise indeed for so critical a writer.

Most of the Cyclamens are natives of southern Europe and western Asia, although one species is said to grow in woodlands in England. Those which have proven successful at Cronamere are:

C. coum, which has roundish green and white marbled foliage, and is one of the earliest to produce its flowers—purple to rose in hue.

C. ibericum, also an early flowering sort, with crimson or occasionally white flowers.

C. atkinsii, considered a hybrid between the two preceding, having white flowers with a dash of crimson at petal-bases.

C. europæum, with round heart-shaped leaves attractively marbled with white on the upper surface and soft pink on the under side, producing its fragrant red or rose-colored flowers in late summer and early autumn.

C. indicum (often distributed as *C. hederæfolium*), which as the synonym indicates has ivy-like leaves, beautifully marbled and most effective; its dainty white blossoms come even later than the preceding species.


C. neapolitanum, whose pink to white flowers appear during August and September, at which time the leaves are not developed.

C. cilicicum, a relative of *C. europæum*, with larger pale rose flowers, in autumn. And another autumn-bloomer, distributed as *C. latifolium* (a name not accounted for in Hortus).

After blooming the flower-stalks twist themselves into spirals, turning downward in such a way that the seeds are deposited directly upon the soil surface, yielding a quaint and unusual effect.

The culture of these lovely plants is simple and presents no difficulties, as they thrive in well drained leaf-mold, or even in ordinary garden loam to which peat and sand have been added. A goodly supply of stone chips should also be provided, both admixed with the soil to insure good drainage, and as a top dressing to keep the leaves from coming into contact with moist earth, especially during heavy rains. The tubers should be planted 2 or 3 inches deep, in a more or less shady spot.

Cyclamens are readily grown from seed, which is best planted in a mixture of equal parts of sifted sand and peat. Their corms or tubers will reach a size suitable for planting out by the second year. When set in the rock garden, they should be given a top dressing of leafmold and sand in spring, and again in autumn. In the colder regions, it is well to cover their bed with salt hay after the ground has frozen up.



ROCK GARDEN QUIZ

Ques.—Please mention some attractive bulbs for the rock garden. M.M.A., N.Y.

Ans.—When and if you can buy them, some of the most satisfactory bulbs for the rock garden from the standpoint of permanency and beauty are the following: *Anemone blanda*, *Anemone apennina*, *Chionodoxa*, spring and autumn flowering *Crocus*, *Narcissus* "Hoop Petticoat," *Narcissus moschatus*, *Narcissus nanus*, *Narcissus triandrus albus*, *Muscari* Heavenly Blue, *Muscari* "plumosum," *Iris reticulata*, *Scillas* in variety, *Leucojum vernum*. Among the gorgeous *Calochortus* (*Mariposa tulips*) the Globe and Star Tulips are the most permanent. *Fritillaria recurva* and *Fritillaria pudica* are lovely. The *Brodiaeas* and the *Camassias* are more suitable for the large rock garden.

Ques.—When is the right time to plant seeds of *Primulas*? C.C.M., N.C.

Ans.—As soon as they are ripe enough to be gathered. Certain varieties, however, will not germinate until the following spring.

Ques.—When do plants grow, in daylight, or at night? C.T., Miss.

Ans.—Plants gather energy from the sun during the day and growth is carried on during the night, usually in the very early hours before day-break.

Ques.—Is any special cultivation necessary for the encrusted *Saxifrages*? L.E., Cal.

Ans.—In most climates the encrusted *Saxifrages* should be planted in partial shade or a site facing north to northeast on a sloping surface. The compost should be composed of garden loam, sharp sand, and stone chips to provide good drainage. Stone chips should be placed on the surface as well as under the leaves of the rosettes. A top dressing should be given in the spring and again in the autumn. Firm planting is necessary.

Ques.—Can *Lewisias* be grown successfully in eastern rock gardens? J.E., Vt.

Ans.—*Lewisias* will flourish if given the same cultivation as the *Saxifrages*. They resent too much moisture standing about their roots, and the heat of the midsummer sun.

Ques.—Please suggest plants to be used as ground covers in shady places and under trees. R.E.C., Mich.

Ans.—*Epimediums* are probably one of the best of the taller sorts not only for spring bloom, but for autumn coloring of the foliage. Dwarf *As-tilbes*, *A. simplicifolia* and *A. chinensis*, make an excellent low growing ground cover in shade. For a close ground cover in shade or semishade *Lysimachia nummularia* is excellent.

Send your question to Mrs. C. I. DeBevoise, Cronamere, Greens Farms, Conn.



ANNUAL MEETING

This is a *must* date on your calendar, Saturday, May 25, 1946. We are to be the guests of Mr. Leonard J. Buck at this estate, "Allwood" in Far Hills, N. J.; if you have ever dreamt of a real, natural rock garden, expect to find it here and you will experience one of your most enjoyable days; all details have not been worked out and these will be announced later, but save the date now.

LUNCHEON MEETINGS

The winter series of monthly luncheon meetings of the North Atlantic group was very auspiciously inaugurated on October 17 when Mrs. Jerome W. Coombs gave us a very interesting talk on the Alaskan flora with many beautiful slides to illustrate it; the next meeting will be held on December 19, when Dr. John Austin Jump of the University of Pennsylvania will address us on "Alpine Plants of the Central Colorado Rockies;" this will be one of the "highlights" of the series.

A delightful hour was spent with Dr. Richard L. Weaver of the National Audubon Society, at the monthly luncheon meeting on Wednesday, November 21; he told us many interesting things and showed us many beautiful pictures of the flora of the Presidential Range of mountains in New Hampshire.

SEED EXCHANGE

So many seeds have been received during the past two months that the list is being printed on a separate sheet, and distributed as an insert with the present number of the Bulletin.

ARTICLES FOR THE BULLETIN

While enough manuscript is on hand for the first two numbers of volume 4, members should bear in mind that material is going to be needed for later issues. In particular, it would be helpful if we had at hand a stock of brief notes to fill in space left when a long article ends well above the bottom of a printed page. Especially desirable, also, would be a series of two-page essays, accompanied by photographs of one or more of the plants discussed. And, four- or five-page articles will not be refused. Can't you write up, during the coming winter, an account of what happened in your rock garden during the past summer?

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