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AMERICAN ROCK GARDEN SOCIETY

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THE GENUS HELLEBORUS*

FRANCES KINNE ROBERSON, Seattle, Washington

IT SELDOM comes to our attention that the genus *Helleborus* is part of the family *Ranunculaceae*, which also includes such diverse plants as buttercups and delphiniums, anemones and baneberries, peonies and columbines. Such a comprehensive group offers many beautiful flowers for our enjoyment, but none of them can usurp the unique place in our affection given to these very hardy plants bearing their flowers in winter and often grouped together, albeit erroneously, as "Christmas-roses."

The true Christmas-rose, *Helleborus niger*, comes from the rocky places of southern Europe, more particularly Italy, and well deserves its common name because its blooming season usually begins before the holidays and extends through and beyond them, and because the flower looks much like a very chaste single rose.

The Hellebores have showy sepals, usually five in number, which anyone would at first glance call petals because they provide the white or colored flower parts, which offer much of the real as well as the superficial distinction between one species or horticultural variety and another.

The petals themselves escape notice, for they are small, tubular and furnished with claws. Numerous yellow stamens of varying heights cluster about the three to ten stemless or sessile carpels of the pistil (there were seven in the specimen I examined) which ultimately become quite leathery and open at the tip to emit the many seeds they contain. Describing this function botanically, we would say that these seed vessels are dehiscent at the apex.

All Hellebores have palmately divided leaves, differing in size, color, texture and erectness according to species. Usually one long-petioled basal leaf and only one appears, but the flower stem may bear one or more sessile leaves or these may exist merely as bracts. In one species only, *H. viridis*, do the leaves die each year and in this case also, the foliage is thin, while all other species have evergreen, leathery leaves.

Standardized Plant Names lists nine species which will be considered in as much detail as my references afford. One of these, *H. cyclophyllus*, is listed in no other book at my disposal, and its features are not known to me. *H. caucasicus*, *H. guttatus* and *H. olympicus* are usually classed as varieties of *H. orientalis* and, as such, will be mentioned later. *H. foetidus* derives the common name, Bearsfoot Hellebore, from the resemblance of the outline of the long, narrow sections of the leaf to a bear's foot. The flowers are said to be "small, nodding, and olive-green edged with plum purple," and they harmonize magically with the dark green foliage. I do not know that the flower has a strong odor, but the name suggests it.

*Read before the Washington Unit, American Rock Garden Society, January 21, 1944

One of the most extensively hybridized species of *Helleborus* is *H. viridis*, which we mentioned previously and which is also known as Green Hellebore. The flowers are larger than those of the preceding species, are a yellowish green, and are said to be sweetly scented. The basal leaf is eight to twelve inches broad and its petiole and the flower stem rise about the same height above the ground, that is ten inches or more. The oblong leaf segments number from seven to eleven and are acute and sharply serrate. Contrary to the usual number of flower parts, there are four oblong, spreading, acute sepals. Plantsmen began naming *H. viridis* varieties with such practical names as *purpurascens*, but have in recent years drawn from fiction and fancy such names as Seagull, Primrose Dame, Whitecup, Friar Tuck and, of course, Robin Hood, for the Friar would hardly appear without his leader. No doubt the many varieties of *H. viridis* which are listed on the market today appeared just as the popularity of green hellebores waxed proportionately to the increase in interest in flower arrangement.

A more popular species of green Hellebore is *H. corsicus*, (sometimes mistakenly offered as *lividus*) and its popularity is easily ascribed to the fact that it is taller growing and has more beautiful foliage than the preceding one. Corsica gave it to the world; the true *H. lividus* came from Majorca. Its flowering season is from December or January to March, although I read in one English book that the flowering date was May and am wondering if that might be an error. The glaucous leaves are three-lobed and almost spiny. The globular flowers occur in "dense heads."

And now we come to the Christmas-rose itself! *Helleborus niger* acquired its specific name by reason of its black rootstock. The single leaf divides irregularly into lobes which are toothed on the outer half. The white flowers are borne on twelve-inch stems, either simple or once-branched. The leaf petiole is a few inches shorter. Varieties of *H. niger* include *H. n. altifolius* (or "*maximus*") which, as the preferred name indicates, is taller than *H. niger* and, as the second-choice name hints, has larger flowers; in fact, they are considered the largest in the genus and there are sometimes several on a stem. An improved form of this variety, known as *H. n. altifolius multiflorus*, grows even taller and has equally large white flowers in greater profusion.

The *H. niger* noted for its earliness appropriately bears the varietal name *praecox*, and is familiarly called "Littleleaf Hellebore." The foliage is less upright and smaller than in the before-mentioned kinds. The large white flowers often appear as early as October and continue until after the New Year, and are often flushed with pink (as are some of the other *H. niger* forms).

H. n. angustifolius, as its name implies, is the "Narrowleaf Hellebore" and has smaller flowers than the type. Very little mention of it is found anywhere.

Probably more variation of color of leaf, flower and stem is found among the Lenten-roses or *Helleborus orientalis* than in any other species. Consequently growers have coined a number of varietal names, but the present tendency seems to be to call them all by the species name and let people choose the desired form from selected beds of old plants, or just take their chance on seedlings. *H. orientalis* is strong-growing, with one radical leaf which is seven to nine-lobed, each segment about six inches long by two inches wide, and having a petiole one foot long. It is also acute, serrate in the outer half, and pubescent. The veins on the under side are very prominent. The flower stem is still taller, usually forked, has two to six flowers, and its bracts are leaf-like. The roundish sepals

overlap, at the same time spreading open. Originally, the name was given to a plant with white sepals, purple beneath and with purple edges. The most sought-after forms at present have pink or maroon flowers, either with or without purplish dots. You can imagine the tremendous possibility for hybridization with such a motley group of forbears; but such development takes place slowly, since it requires at least three years from seed to flowering plant.

Some of the varieties mentioned by Bailey are *H. o. colchicus*, with a purple spotted stem and bright purple flowers; *abchasicus* which resembles the preceding but has two or more leaves to the flower stem instead of only one; it came from the Caucasus, while *colchicus* came from Colchis in Asia Minor. The sepals of *atrorubens* are dark purple outside and greenish purple inside. The var. *rubro-purpureus* (or "*atropurpurea*") is one of the host of purple-flowered varieties; it has also purple flower-stems, and bold foliage. *H. o. olympicus*, *guttatus*, and *antiquorum* are classed in a white-flowered series, although the sepals of *olympicus* are green on the outer surface, *guttatus* has the same coloring plus purple crimson spots, and *antiquorum* differs in having the crowded flowers bell-shaped.



BY ROLAND G. GAMWELL

The Christmas-rose itself, Helleborus niger

Helleborus orientalis caucasicus brings us to the realization that there is even a green-flowered form of the Lenten-rose. Then, as so often happens, horticulture has burdened some very lovely Lenten-roses with almost unpronounceable trade names, which there is no point in bringing into our discussion.

Let us now consider the actual growing of Hellebores. In general, they want rich loam mixed with coarse sand and they relish a top dressing of manure annually. Plenty of moisture is essential but so is good drainage. They resent being disturbed, and, once planted, should be left alone indefinitely. Partial shade is also necessary and may best be supplied by planting in shrub borders or under deciduous trees.

Hellebores are extremely hardy, but English gardeners often plant them in beds or frames, giving them, for cultural purposes, some light protection from the sun in summer and, for esthetic reasons, greater protection from the rain in winter. The flowers then grow in suitable condition for cutting. Commercial growers who follow this plan incorporate charcoal in the soil of the beds. One writer reports a hundred flowers on one plant so grown and I am sure that that is no exaggeration.

Florists also force Hellebores by taking strong plants into their greenhouses in large pots and gradually inuring them to moderate warmth. This practice probably brings higher monetary reward in colder climates than it would here in the northwest, where even a modest garden may have blossoms all winter. I recently visited one such garden where three vigorous clumps were blooming profusely enough to furnish several stems of blossoms for cutting each week. Apple box frames covered by window glass had served to keep the rain from spotting the flowers.

Propagation of *Helleborus* by division should be done in the spring or fall, but never during the flowering period and preferably not during hot weather, when the divisions would have trouble establishing themselves.

Seeds should be sown as soon as ripe. Delay in planting multiplies the time necessary for germination a great deal, in some cases increasing it from thirty days to a year. Seeds may be sown in pans or in the open ground. A few American catalogues list seeds of several varieties.

In "Pleasures and Problems of a Rock Garden" Louise Beebe Wilder stressed color emphatically and spoke of hellebores in various chapters. She pictured for us "*H. niger* amid the brown leaves;" she suggested using "*H. niger* with Snowdrops, mauve Crocus and Winter-aconite to bloom in February;" and she mentioned hellebores again in the chapter on shade-loving plants, listing *H. niger* with the white flowers and *H. orientalis* and *H. altifolius* with the pink flowers.

The University of Washington Arboretum Bulletin for December, 1941 supplied a brief outline on hellebores. And T. C. Mansfield, in his recent book "Alpines in Color and Cultivation," notes three species and gives a bit of information which I found nowhere else: the derivation of the name Helleborus, from the Greek words "helein" meaning "to kill" and "bora" meaning "food," referring to the fact that some varieties are poisonous when eaten.

In the light of later-day knowledge that some of the Hellebores are toxic, T. F. Thistleton Dyer, in his book "Folklore of Plants" (D. Appleton & Co. 1889), uncovers an anomaly. In ancient days herb doctors regarded Hellebore as an antidote against madness. But it was later discovered to be what I would call just the opposite, for who would be so mad as a man poisoned by a supposed cure, unless he were no longer alive to feel his madness. An ancient reference to the supposedly curative powers of Hellebore may be quoted from Burton's "Anatomie of Melancholy," a volume corresponding to a modern "doctor-book":

"Borage and Hellebore fill two scenes,
Sovereign plants to purge the veins
Of Melancholy, and cheer the heart
Of those black fumes which make it smart;
To clear the brain of misty fogs,
Which dull our senses and soul clogs;
The best medicine that e'er God made
For this malady, if well assay'd."

Perhaps the secret of success was in the "assaying."

Imaginative literature contributes to our bibliography on Hellebores "The Legend of the Christmas Rose" in which Selma Lagerlof tells the following story. Robber Mother, begging at the gate of a cloister, chanced to see the Herb Garden in all its summer glory. Abbot Hans had spent much time and effort on this garden and was chagrined by Robber Mother's remark, "First, when I saw this, I thought I had never seen a prettier garden; but now I see that it can't be compared with one I know of." Abbot Hans listened intently to an account of Goinge Forest coming to life on Christmas Eve to honor the hour of the Lord's birth. It was finally arranged that Abbot Hans and one follower might visit there the next Christmas Eve. Robber Mother sent one of her children at the appointed time to lead the two holy men to the forest.

As midnight approached, each gust of wind was accompanied by a sudden illumination and brought with it signs of spring. The snow vanished, the ferns shot up their fronds, heather blossomed, seeds from foreign lands sprang into life, blue berries and lingan ripened, the birds nested, the roses bloomed, and such a celestial atmosphere prevailed that Abbot Hans felt that the glories of Heaven were approaching and he knelt in reverence. The lay brother who had accompanied Abbot Hans believed all this revelation to be evil and a shouted imprecation from him ended it.

The Abbot remembered that he had promised the Bishop one flower from the Christmas Eve garden to prove its existence and to earn citizenship rights for the Robber Father. As the flowers disappeared, Abbot Hans fumbled among the leaves and, as death overtook him in his great disappointment, he clutched one root in an iron grip. When he had been carried back to the cloister for burial, this root was found in his hand and later planted in the Herb Garden where it bloomed the next Christmas Eve.

The monks allowed the lay brother to carry some of its blossoms to the Bishop who acted on his promise to Abbot Hans and ransomed Robber Father and his family. The lay brother, as a self-imposed penance, because of his hard-heartedness and unbelief, moved into the cave they vacated. But never again did Goinge Forest come to life on Christmas Eve and only the plant which Abbot Hans saved and which the monks named "Christmas Rose" recalled the glory of that miracle.

A fanciful story, but doesn't it seem a miracle to us when we see the flowers of *Helleborus* pushing up through the cold ground and blooming in winter, sometimes even through the snow?

BACKGROUND PLANTING FOR THE ROCK GARDEN

K. W. BAASCH, Baldwin, New York

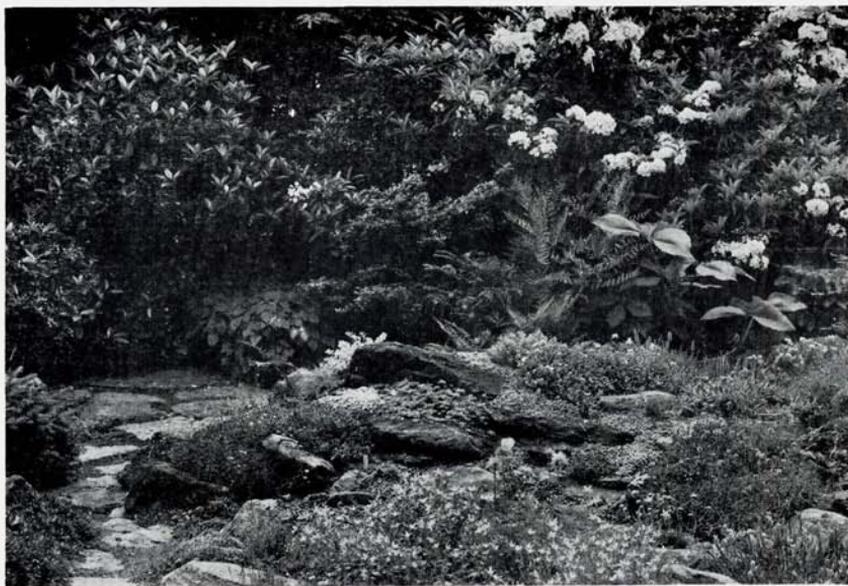
WHEN planning the building of a rock garden, the proper location in relation to its background is very important. Perhaps good use can be made of an already existing background screen of evergreens, adding here and there a shrub to blend it in with the rock formations. Not everyone is so fortunate, however, as to find conditions so easily adaptable; to set off the Rock Garden and shut off undesirable surroundings, the creating of a background screen may therefore become a tempting problem.

If the rock garden is to have the background planting on its northern border, the planting will obviously cast no shade upon it. If, on the other hand, the background planting is on its southern side, a maximum of shade will be provided, and many shade-loving species can then be used as an underplanting. A few words of caution may, however, be in order at this point, with regard to any plantings on the southern border of one's prop-

erty; this concerns a danger which new home and garden owners often become aware of too late. That is, that the success of such plantings will depend very often on the whims of your neighbor, for should he decide to grow shade trees or high shrubs close to your southern border line, the shade ultimately cast over your plantings on that boundary may cause straggly and unsatisfactory growth, which, particularly in a background planting, would mean the defeat of its purpose.

Having given consideration to these points we now come to the selecting of the most appropriate shrubs and other plants for the background planting. Unless one can afford to purchase fairly good sized evergreen trees or shrubs, deciduous shrubs will, of course, provide a screen in considerably less time; but patience should be one of the virtues of a good gardener, and in the end an evergreen background will more than compensate for the waiting. No deciduous shrubs will provide such a natural-looking and beautiful setting as some of our native evergreens.

To give height, density and a fine play of light and shadows, what could be better than our Canada Hemlock or the slower growing Carolina Hemlock. Both of these can be kept dense and in bounds by judicious pruning.



BY K. W. BAASCH

These trees, four or five feet high, can be obtained at reasonable prices, and planted four to six feet apart they soon will create the most perfect backdrop. In front of the hemlocks, lower-growing evergreens will scale down the height, and for this our native Mountain-laurel cannot be surpassed. It is in every way a magnificent shrub, going well with the hemlocks and handsome all through the year. It blooms, brightening up the shadows, just after the height of the flowering period in the rock garden. The Carolina Rhododendron may compete with the Mountain-laurel in providing variety and color and the Andromedas,—*japonica* as well as *floribunda*—also will supply interesting foliage.

All this background planting should be kept informal and natural looking, avoiding stright lines. The background has to be blended in with the rock garden proper, and here and there a few of the shrubs should be

brought forward, so that plantings in parallel lines are avoided. To tie in the background planting with the rock garden itself, low-growing plant material is called for, and a great variety to suit various conditions of exposure and of the soil is available. The Hemlock and Mountain-laurel will keep the soil close to them acid, while the nearby shaded locations will permit the use of our native woodland plants. There are beautiful Ferns, as for instance, the Maidenhair, the Christmas Fern and the Royal Fern, each so different from the other with a variety of interesting foliage. There is one plant from another continent that can be highly recommended for semi-shaded locations, namely *Epimedium*, of which there are available a number of species and varieties. These plants are particularly attractive when developing new shoots in the early spring, as well as during the flowering season. They spread pleasingly and seem to be free of all pests.

The proper placing of the various plants, taking into consideration the color, texture and shape of their foliage in contrast to their immediate surrounding, requires imagination and good taste; a high development of sensitivity for these finer perceptions is the goal of the more experienced



BY K. W. BAASCH

gardener. Placing a delicate leaved, dainty Maidenhair Fern, which quivers in the slightest breath of air, next to the solid bluish gray foliage of a *Hosta sieboldiana* accentuates the beauty of both plants. Such little tricks should not become obvious to the visitor, for above all else a rock garden should look entirely natural.

The accompanying photographs show part of a rock garden and its background planting, built on flat and bare ground on the south shore of Long Island. All plant material and the stones were placed by the owner, every effort being made to create a natural setting.

The background planting, shown in these pictures, consists of: *Berberis verruculosa*, *Rhododendron carolinianum*, *Azalea kaempferi* (*Rhododendron obtusum kaempferi*), and Mountain-laurel.

The underplanting of: *Epimedium macranthum*, Royal Fern, Christmas Fern, Jack-in-the-pulpit, and Maidenhair Fern.

THE BEARBERRY AND ITS CULTURE

MARCEL LE PINIEC, Bergenfield, N. J.

CERTAINLY a great injustice has been done when an attractive and useful native was named *Arctostaphylos uva-ursi*. Burdened under that epithet and the phonetic similarity of its common name with Barberry, one is tempted to wonder at its popularity. But a look at the plant will clear up the riddle. Always clean and fresh, compact and neat in appearance, with small dark green leathery leaves and reddish stems all seemingly running in the same direction and of uniform growth, the Bearberry—or Kinnikinnick as the Indians called it,—offers itself as a plant of rare value and beauty to many gardens. For its merits do not rest only on neatness,—adaptability and versatility are added qualities placing it near the top of the list. It is a prostrate ground-cover found growing in many parts of the northern hemisphere both on sandy wastes and rocks. One may see it at its best within a two hours ride of New York City either in the Pine Barrens of New Jersey or on Long Island, edging the highways and byways and carpeting the sand in open pine woods. It is common along the New England coast and abundant on Cape Cod. I have also found it at an altitude of 6000 ft. in the Swiss Alps growing out of rock crevices; it has been found as high as 9,000 ft.*

Twelve years ago I planted one small rooted cutting on the top of a solid shale ledge in northern New Jersey in a fissure barely wide enough to insert the roots. The plant now covers about a foot square of rock and is thriving in spite of the dearth of food and often lack of rain. On the other hand about eight years ago I planted three small rooted cuttings here at the nursery on the top edge of a low retaining wall; those three plants now cover a space 10 feet wide by 22 feet in length. Another cutting planted on the top of a wall 2½ feet high, and 18 inches wide, and 10 feet long has grown to cover it completely. All these cuttings have grown to the present stage without any care except the first watering since they were planted and neither cold nor heat, long rainy spells or continued drought has affected them. In all cases they were planted in the poorest of sandy soil. They bloom well every year but have never set fruit.

The white bells of the Bearberry resemble those of the blueberry bush and are borne in a cluster at the end of the twigs and the dark red berries, often hidden in the foliage, ripen in August. Invariably plants in good fruit are only found in the poorest soil imaginable, in what seems to be pure sand, gravel or rock and where even sedges, those ubiquitous leeches of plantdom fail to grow beyond the seedling stage. It is almost useless to attempt transplanting pieces of bearberry from the wild; a surer way to succeed is by means of cuttings. These may be taken at any time of the year; the writer's best results have been obtained with short (2 to 4-inch) lateral shoots found at the end of the trailing branches, provided they are broken off and not cut. Pulling with a downward motion is the easiest manner to separate the short twigs from the main branch. I have repeated the experiment over a number of years using both cut and broken off shoots; the best results (often 100%) have been obtained with the latter method, and with cuttings inserted in sand in early October and allowed to remain until May. Mixtures of sand and peat did not prove satisfactory, nor did

*A western variety, not essentially distinct horticulturally from the eastern one, was discussed by Mrs. Marriage in the Bulletin, volume 1, page 58.

the use of hormones or other root-stimulating agents prove to be of any advantage. No loss will occur in transplanting if cuttings are kept potted in poor sandy soil three to five weeks. It seems to prefer an acid soil, although it is found in nature also on neutral and even slightly alkaline soils. To my knowledge the plant is free of diseases, and insects do not attack it, with the exception of small maggots which feed on the leaf buds. This is rather an advantage, as it tends to make the plant branch out more freely. Barring fire and flood, the bearberry growing within the limits of its natural zone will grow and thrive under the most trying conditions, and do so provided you starve it. What more can you ask of a plant?

GAULTHERIA MIQUELIANA



BY ELSE M. FRYE

OF ALL the dwarf and prostrate gaultherias with which I have had experience I like *Gaultheria miqueliana* best—partly for its sturdy qualities and partly for its decorative value. It is a native of Japan and the Asiatic mainland, extend southward into the Himalayas. In the garden it is a low shrub with branches rising an inch or two, then curving horizontally over the ground. The branches are more than adequately clothed in dark green leaves, coriaceous and somewhat lacquered, with depressed veins. In summer they are dark green but in winter they are suffused with warm crimson,—not absolutely masking the green, which makes it more interesting. The flowers are little waxy pointed urns of palest pink and the fruits are large white waxy berries that are to my notion exceedingly beautiful. They like a sandy leaf mold with pulverized peat but they are not demanding of a strongly acid soil. Rooted bits can be pulled off a large plant and set in sand for a time before being transferred to their permanent places. Fresh seed germinates easily.—ELSE M. FRYE, Seattle, Washington.

SAXIFLORA

No. 29



Chrysogonum virginianum

Originally published as Plate 2 on December 31, 1938

CHRYSOGONUM VIRGINIANUM

Bailey's Cyclopedia of Horticulture tells us that this plant is of little merit horticulturally. Today, we might very well say that denouncement was foisted on our subject before rock gardening became an integral part of American horticulture. One attribute we can pay to rock gardening is, that it has brought about a realization and an appreciation of the value of our native plants.

For the garden of the beginner who wishes to grow only the easier plants, for the large rock garden, and for the edge of the woody path, *Chrysogonum virginianum* must be rated as a useful and a showy plant. Moreover, it is one with good qualities that many of less lowly degree do not have. It remains in flower for a very much longer period than most and, when given the proper setting, has a great deal of inherent value as a garden plant. On Long Island it remains at its best for a full month, commencing with its golden-yellow flowers the second week of May. During the ensuing month, it is laden with blossoms and up to September a few solitary blooms will be found.

This plant is confined in nature to the Eastern States from Maryland to Florida, mostly in the Piedmont and Coastal Plain. At the same time, it does stretch inland and is found intermittently as far west as Louisiana. Usually, it will be growing in deciduous woods; occasionally, it will be seen in light hemlock shade. It is always at its best in deep humus soil.

It became popular among rock gardeners after the 1933 expedition to the Southern Appalachians by Messrs. Everett and Alexander. Since then, more nurserymen dealing in perennial herbs are handling it.

In the Eastern United States, there are two very distinct species of this genus and *C. virginianum* should not be confused with *C. australe* Alexander which, as its name implies, is found farther south and could not be expected to persist for long as far north as New York. The latter species is a smaller plant in all its parts, and is easily recognized by the runners it emits from a single crown, much in the manner of a strawberry plant. *C. virginianum* has no runners but increases its growth by a creeping or stoloniferous rootstock.

No difficulties will arise in the propagation of *C. virginianum*. Good seed of the preceding year will germinate freely, if sown in pans or directly in a frame or other protected spot in April. The easiest way to increase one's stock is by division in late September or early spring. Summer cuttings can be rooted in a sandy medium.

Chrysogonum virginianum is an herbaceous perennial, capable of increasing from the base in one season into clumps of twelve to fifteen inches spread and rising up to ten inches. It is distinctly hairy throughout. The leaves, edged with shallow rounded teeth are basal and opposite. Although acute at the apex they are broadly elliptic, merging into a winged stalk or petiole. They are of a flimsy texture. The basal leafblades are up to four inches long with the petioles of equal length. Flowers first appear from winter rosettes from which lateral branches elongate. The flowers may be terminal or rising from the axils on peduncles that are one to four inches long. The involucre consists of five sepal-like green bracts. The solitary flower head, up to one and one-half inches across, consists of about five yellow rays that are three-toothed at the tip, the central tooth being smallest. A ray is up to one-half inch long. Var. *dentatum* Gray differs in that it grows slightly higher and the leaves are strongly serrate instead of crenate.

JAMES G. ESSON

EDITORIAL NOTES

In the course of study of the habitats of our less well-known wild flowers, the Editor has often come upon colonies of the Golden-star, *Chrysogonum virginianum*. The idea of some horticulturists that it requires moist soil seems to be a mistake, for it grows on dry clayey or gravelly slopes in woodlands. The photograph here added to the reprinted Saxiflora account was obtained one May in Augusta County, Virginia. Its soil is circum-neutral to subacid. It is not as sometimes supposed limited to the southern states, but ranges into south-central Pennsylvania.—E.T.W.



BY EDGAR T. WHERRY

Golden-star growing in the wild on a dry slope

A POCKET-SIZE REFERENCE BOOK.—Trees, Shrubs, and Vines for the Northeastern United States, by George Graves, contains a large amount of horticultural information in convenient condensed form. In addition to listing the plants alphabetically, they are classified as to special uses, and on pages 248 and 249 there is a list of Woody Plants for Rock Gardens.—

A special number of the Bulletin devoted to the genus *Penstemon* is now in active preparation. Members are urged to send in notes on their experiences with these plants.



A MINIATURE ROCK GARDEN

ROBERT M. SENIOR, Cincinnati, Ohio

MANY years ago the English horticulturist, Clarence Elliott, wrote an article on gardening in old pig troughs, stating that he had greatly enjoyed raising alpiners in this manner. There being apparently a dearth of stone pig troughs in this country, the present writer has raised plants in specially constructed "flats," about 20 inches long, 12 inches wide, and 6 inches deep. No doubt it would be entirely feasible to build a concrete trough as a substitute for a stone one, and there seems no good reason why plants could not be raised just as successfully therein. However, when constructing any trough, one should be sure to have a hole in the bottom for drainage. Of course the concrete trough would have a great advantage over a wooden box, that of lasting indefinitely.

When constructing a wooden container for plants, it is of course advantageous to use a wood like cypress, which would last several years; however, many times we have just used ordinary pine, in order to have the pleasure of seeing plants grow in them for a season or two. In order to make the exterior of the box more attractive, we consider it desirable to cover the outside with the bark taken from some dead tree.

As above mentioned, good drainage is essential: so after drilling a couple of holes in the bottom of the box, we put rock chips in it to a depth of about two inches, and over this we place a thin layer of sphagnum moss. On this we pour a mixture consisting of about two parts loam, one part sand, and one part leaf mold, and in addition scatter a plentiful supply of rock chips through the mass.

Let us assume that we have filled the box with this mixture almost level with the top; now, before planting, we must exercise our ingenuity in simulating a rock garden. A few small attractive rocks, placed at slightly different levels, will give an irregular outline to the surface. Usually we place the largest rock at the highest point, and as we slope the ground away from this eminence, insert here and there a smaller rock.

We are now ready to place our plants, and of course we have a wide range of choice. Here and there, along the edge of the box, we insert small pieces of trailing species, such as *Veronica rupestris*, *Thymus serpyllum*, or *Gypsophila repens*. These we encourage to droop over the outside of the box. For the main planting there is a wide choice of low-growing plants; the main requisite is that that they should not be rampant. If one has a couple of tiny evergreens, these could be used advantageously.

When our planting is completed, we scatter tiny pebbles over the surface, which not only sets off the plants to better advantage, but also aids in retaining the moisture in the soil. We then place our little garden on a low stone bench, or on the top of a stone wall, where it presents a more attractive appearance than if set on the ground. Moreover, there is the added advantage that when elevated it is less apt to attract slugs and sow bugs.

ROCK GARDEN QUIZ



Ques.: What type of soil is best suited to rock garden Gentians?

Ans.: A compost consisting of one part loam, one part leafmold and one part a mixture of dried cow manure and sand. Gentians require firm planting, good drainage and partial shade.

Ques.: Can *Mazus reptans* be successfully grown in New England?

Ans.: *Mazus reptans* has been grown at Cronamere for many years. It is an excellent ground cover for shady or semi-shady places. It spreads rapidly in any ordinary garden loam and is apparently untouched by severe winter conditions. It is also an excellent paving plant.

Ques.: Does lime have any effect on the color of plants?

Ans.: Aubrietias have a very definite reaction to lime in the soil: their blossoms will become several shades darker. Most plants, however, show little if any effect.

Ques.: What fertilizer should be used for rock plants?

Ans.: Rock and alpine plants need very little in the way of fertilization if a good compost containing garden loam, humus or leafmold is used. Gentians and dwarf Rhododendrons enjoy a sprinkling of well dried cow manure twice a year.

Ques.: Should peat be used to cover the surface of the soil in a rock garden?

Ans.: A mixture of well saturated peat and sand is beneficial to stimulate root growth when the plant is set, but peat should not be used over the surface with the exception of places where dwarf Rhododendrons are grown. A mulch of peat will prove satisfactory for these plants if not allowed to dry out.

Ques.: English garden books stress drainage for rock plants. Is it necessary to supply drainage to the same extent in this country?

Ans.: Plants with tap roots as a rule require good drainage. Fibrous rooted plants will dry out and the roots will be injured if too much drainage is supplied. A compost containing one third sand will be sufficient for these.

Ques.: When is the proper time to set rock plants in the garden?

Ans.: As a general rule spring-blooming plants should be set out in early fall and fall-blooming plants in early spring.

Ques.: The plant *Rydbergia grandiflora* discussed in January-February number of the Bulletin is not listed in the Horticultural dictionaries; why is this?

Ans.: Probably because it has not proved capable of cultivation in the average rock garden. However, its features are summarized in the article referred to.

Send questions to Mrs. C. I. De Bevoise, Greens Farms, Conn.

YEAR BOOK

BEING A REPORT OF THE OFFICERS
TO THE MEMBERS OF THE

AMERICAN ROCK GARDEN SOCIETY 1945-1946



Unlimited in species and varieties, the assembling, propagation and care of alpiners and rock garden plants is a specialized and essential branch of horticulture; to the botanist it is an intriguing field for study and research, to student or tyro or for limited space it is the ideal form of gardening; to gather and disseminate knowledge of and encourage the general practise of rock gardening is the object of our Society and that we may the more successfully fulfil our mission the officers of the American Rock Garden Society will welcome the enthusiastic cooperation of all our members.



COURTESY GARDENERS' CHRONICLE

MRS. CLEMENT S. HOUGHTON
The Mother of
THE AMERICAN ROCK GARDEN SOCIETY

From its inception the American Rock Garden Society has been fortunate in its sponsors; throughout the throes of its birth and organization, in the planning of its future and the labor of carrying on, one figure has been pre-eminent in its councils; giving unsparingly of her time, her energy, her moral and financial support, her kindly and intelligent advice and the advantage of her world-wide acquaintances, Mrs. Houghton has truly mothered our Society; and even after all her early activities and having served two terms as President she still remains active in all the affairs of the Society and in addition is Secretary-Treasurer of the New England Group.

Mrs. Houghton is an outstanding example of the fact that it is the busy folk who accomplish most in any endeavor in which they may be interested. Although Mrs. Houghton is essentially a home-loving body, she maintains an active interest in not only our Society but in the Chestnut Hill Garden Club, the Federated Garden Clubs of Massachusetts, the Garden Clubs of America, the American Horticultural Society and the British Alpine Society. Because we sincerely appreciate all that Mrs. Houghton means to us we affectionately dedicate to her this issue of the Bulletin.

TWELFTH ANNUAL MEETING

Far Hills, N. J. — May 25, 1946

The Twelfth annual meeting of the American Rock Garden Society was held on Saturday, May 25th, 1946 at "Allwood" the Estate of Leonard J. Buck in Far Hills, N. J.

After the business meeting at twelve Mrs. and Mr. Buck served lunch on the Terraces under sunny skies and in an unusual setting; truly majestic is the garden at "Allwood"; in a wide dell of oaks where shoulders of fissured rock break through the surface are three rock gardens of massive proportions that are connected by plantings of flowers and ferns and massed through the acres are many groupings of common and rare plants; here in this veritable fairyland of flora the goodly company present spent a delightful day that will long be remembered as one of the choice highlights in the history of the Society.—WALTER D. BLAIR

REPORT OF THE PRESIDENT, 1945 - 1946

The turmoil is behind us; peace lies ahead; today is a time of planning and reconstruction, and if we plan with vision and rebuild on known foundations our future wellbeing is assured. This world is scarred with the devastation of battles; peoples and nations have been expended; the works of man lie in ruins but the good earth, the rocks and the flowers abide and will be a potent factor in the upholding of our morale during a difficult period. The pleasures of our cult that have been so sorely interrupted may now be resumed and with our hearts freed of the shadow that has lurked too long and materials more abundant we shall soon be in the thick of it again. Paradoxical as it may seem, the war years have been good years for the American Rock Garden Society; in 1943 our interest and our membership rolls had reached their nadir; some there were who thought we should suspend for the duration; but since 1943 our membership has increased 28%; our finances were never in better state; interest was never so high; during these years we launched our greatest enterprise, the publication of our own journal which under the wise, scholarly and experienced direction of Dr. Wherry has attained the heights; surely we have a substantial foundation on which to build for greater things and wider influence.

As I come to the end of my regime I am very grateful for the loyal support of the Society as a whole in what to me has been a happy adventure; I wish to express my appreciation for the confidence and co-operation of the Executive Board of Directors; to Walter Blair and Harold Epstein on whom I have leaned heavily I am sincerely grateful; to Mrs. Wilson for her capable and exact handling of our funds I would convey the thanks of the Society as well as to Hildegard Schneider who has done such a splendid job with the Seed Exchange; to all who have been so tolerant of my shortcomings and have encouraged me with many kindly acts and words, Thank you.

For those who will now assume the management of the Society I bespeak the increased loyalty and support of every member, and if we will do this I am confident that we will go on, trowel to trowel, to wider horizons and the ultimate consummation of our mission.—ARTHUR H. OSMUN.

TREASURER'S REPORT

May 1, 1944 to June 30, 1946

Balance on hand May 1, 1944		\$ 631.98
Income:		
Meetings	\$ 39.00	
Saxiflora	1.00	
Year Book50	
Dues	2,773.50	
Extra binders	20.00	
Extra Bulletins	16.60	
Gifts	100.00	
Book Fund	76.00	
Advertising	195.00	
Miscellaneous	6.55	
		\$3,860.13
Expenditures:		
Clerical	\$ 76.50	
Telephone and Telegraph	11.02	
Travel	28.13	
Printing and stationery	48.25	
Lectures and luncheons	50.00	
Postage	204.57	
Regional apportionments	101.50	
Year Book	132.50	
Insurance	11.90	
Bank service charge	33.34	
Bulletin	1,466.67	
Rent	240.00	
Special book fund	54.50	
Express	3.60	
Seed Exchange	13.25	
Flower Show	125.00	
Advertising	42.34	
Miscellaneous	105.76	
		\$2,748.83
Balance on hand April 30, 1946		\$1,111.30

MRS. GEORGE F. WILSON, *Treasurer*

The American Rock Garden Society has sustained a serious loss in the death on January 16 of Violet Niles Walker (Mrs. Joseph G. Walker) of Woodberry Forest, Virginia. She had the knack of growing plants, and growing them well, under conditions where "everybody said it couldn't be done." The Editor will always remember his surprise at coming upon a clump of the lovely southern "Wild Calla," (*Peltandra glauca*) which in the wild grows in squidgy black muck in southern lowland swamps, thriving luxuriantly and blooming beautifully among granite rocks in her dry rock garden in the Virginia Piedmont. Moreover, she could write most interestingly of her gardening experiences, and contributed articles to many horticultural periodicals, including this Bulletin.

REPORT OF THE EDITOR, 1945-1946

First of all, the Editor wishes to thank most heartily the members of the Society who have generously sent in manuscripts and photographs in sufficient number to fill the pages of successive numbers of the Bulletin, year after year. In some cases articles have been published without change, in others with minor alterations in sequence of subject-matter, usage as to technical terms, etc. Whenever authors have specifically requested that a given article be left unedited this has been acceded to, even though in the Editor's judgment the presentation might not be wholly satisfactory.

It appears as though the income of the Society and the volume of contributed articles anticipated will lead to continuation of the plan of issuing a 16-page number of the Bulletin six times a year. However, we hope to be able to increase the number of pages by 4 or 8 in occasional special issues.

Inquiries received as to nomenclatorial usage indicate the desirability of restating the Editor's viewpoint: It is held, first, that species epithets should be uniformly decapitalized. Linnaeus, whose nomenclatorial procedures are generally accepted, was inconsistent in the matter of capitalization. Asa Gray insisted that epithets derived from place-names should be capitalized, but he is no longer followed. Some present-day botanists, proud of their acquaintance with the classics, capitalize species epithets derived from nouns used in every-day speech in ancient times. As we see it, the situation is much the same as in the current controversy as to whether one should say "It is me" or should show off with "It is I."

The second nomenclatorial problem concerns terms of lower than species status; for many plants require more than two epithets (genus, species) for accurate designation. If an infra-specific term has been published in accordance with the rules of technical botanical nomenclature, it is placed in italics after the species epithet; when necessary for clarity an abbreviation of the favored status may be inserted (ssp. for subspecies, var. for variety, f. for form, etc.) When, on the other hand, the epithet has not been validly published—as is the case with numerous horticultural terms—it is preferably placed in ordinary (roman) type. Here capitalization is permissible.

The articles which have appeared in the Bulletin thus far have been contributed by a rather small proportion of our membership. Surely there are others who have something to tell about their experiences with rock gardens or rock plants. Do not hesitate to write for us because of lack of technical botanical knowledge; we need lots of non-technical writings too. If you have plants of which the name is not definitely known, press a specimen and send it in along with your manuscript; if the Editor can not name it himself, he will refer it to a specialist in the group of plants concerned.

In general, it is not a good plan for a single individual to remain in the same official position in a small organization for a long time. The present Editor feels a five-year period in this capacity is about all that he can undertake. Therefore, by the time the next annual meeting comes around, it is hoped that some other member will come forward to take over, beginning with volume 6, the planning for which must start in the middle of next year.—EDGAR T. WHERRY.

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Mr. G. G. Nearing

Exchange Editor — Harold Epstein

Publishing Agent — Arthur H. Osmun

SEED EXCHANGE MRS. HILDEGARD SCHNEIDER RESIGNS

Since she took up the work at the Cloisters we have not seen so much of Mrs. Schneider as when she was such a familiar figure at Thompson Memorial, but during the past year she has made her unseen presence felt through the medium of the Seed Exchange. Now that another change has come and she must relinquish her work among the seeds we are going to miss her greatly; as she goes to new fields the best wishes of the Society go with her.

Mrs. L. D. Granger is to take up the work of the Seed Exchange and for her we bespeak the same generous support you have given to Mrs. Schneider.

The following seed are ready for distribution:

From Mrs. Mortimer J. Fox, Peekskill, N. Y.

Lilium regale

L. White funnel x *sargentiae*

White funnel lily

L. *sargentiae* x *centifolium*

L. *davidi* var. *willmottiae*

L. *formosanum*

From Dr. Helen C. Scorgie, Still River, Mass.

Asclepias tuberosa; *Viola eizanense*; *Cotoneaster microphylla*

Send your request for seed to Mrs. L. D. Granger, 28 Bayview Ave., New Rochelle, N. Y.; enclose stamped, self-addressed envelope.

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