BULLETIN

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Dorothy Ebel Hansell, Editor

VOL. 8 September - October, 1950 NO. 5

WHY NOT HEATHER

ELIZABETH HOLLISTER FROST (MRS. WALTER D. BLAIR)
TARRYTOWN ON HUDSON, N. Y., AND NANTUCKET, MASS.

ONE thing I have set myself to determine in the year 1950 is whether Heather, one of the most fascinating groups of plants in the world, and the one perhaps most generally valuable for use in the rock garden, is reliably hardy and adaptable for rock garden use in the eastern United States.

The fact that, so far, different people have opposite tales to tell of this garden delight leads me at the moment to surmise that culture—soil, pruning, aspect—has much to do with success or failure.

Dr. Helen Scorgie has grown heaths in her rock garden at Harvard, Massachusetts, for fifteen years—yet others, not twenty miles distant, have failed. Florens DeBevoise, at Greens Farms, Connecticut, grows them superbly; plantings of *Calluna vulgaris* have petered out on the Westchester Parkways; yet at the Thompson Memorial Rock Garden in the New York Botanical Garden, heaths form one of the most extensive plantings; and they are the pride and joy of the Tyrone Park gardens, high above the Hudson, a few miles away.

At our home, Sherburne, on the wild moor, "Up No'th" from the town of Nantucket, where hawthorn trees drift the Commons in June and beach plums purple them in September, we are growing some thirty-five varieties of heather, as happily, if more slowly, than on the Goonhilly Downs or by the Lakes of Dorset.

Heather is no stranger to the Island of Nantucket. In 1868, a single plant of *Erica cinerea*, the bell heather of Europe, was discovered by a summer visitor and reported in Wood's *Manual of Botany* of 1874. Patches of *Calluna vulgaris* and *Erica tetralix* appeared spontaneously in 1884 and 1886 under baby pines imported from Scotland a few years earlier. These and the single plant of the bell heather, which lived in its lonely station for forty years—were visited by early botanists, by my grandmother, my mother, and myself as a child; and *vulgaris* and *tetralix* still persist in their hidden and secret station, near pines and larches, in the fog and the spray. *Erica vagans*, the "Wandering Heath" of Europe—and especially Cornwall—has also been reported from two stations on the moor, not far from Sherburne's rolling acres.

Sherburne, built in 1722, the second oldest house on the Island and the only one left standing where the English settlers first entrenched themselves against the gales, can tolerate no other company than the thorns, the poverty grass, the reindeer moss and the heather. Under the morose lintels, by the stone thresholds and running along under the scowling eaves, heaths as compact and rolling as box bushes—and at a distance resembling them—burst into sombre purples in January, July and August, or lean their pristine whiteness against the grey well-

sweep, bearded with its lichens of grey. Young heaths in all stages of growth—emerald ones like small Christmas trees, spreading ones like sea-weed fans, creeping ones like verdant mosses, line the rough paths which branch like sheep tracks over the moor from our dwelling, or drift across the swales into the sedge-grass.

At Sherburne we use heather as in its native Scotland; but observing and collecting the different varieties from growers and specialists and raising, these last few years, dozens on dozens of young plants from seeds, cuttings and layers, have familiarized Walter Blair and myself—rock gardeners at heart—with the amazing qualities of the lower growing heaths as rock garden subjects.

Why then, are they not generally used in eastern rock gardens? Are they not sufficiently known? Have they proved difficult when tried? Are they not reliably hardy? Research in this matter is important, for the heathers would, and easily, solve the whole problem of summer color and supply solidity of form unequalled by anything but rock itself, besides giving a succession of bloom from March to October, unsurpassed by any other genus.

Try in the rock garden, on ledges and plateaus of light rich soil, the adoralbe close purple-crimson mat of *Erica carnea Vivellii*, *Erica carnea* Ruby Glow, *Erica carnea* Springwood White and Springwood Pink for low March and April bloom along with the Julie primroses. For background the same month, use *Erica mediterranea* Brightness and see what you have to dazzle the dark days!

In June when the huge spring rock garden display is over, *Erica cinerea*, type, full bright orchid, a fine carrying color, one foot, would make noble stretches on high dry banks or verges, as would its white sister; while *Erica cinerea atrorubens*, pure ruby-red, three inches, almost vine-like, with dark foliage, would dazzle the grey rocks and peal over the ledges its carrillon of brilliant bells.

Erica carnea, *Erica hybrida* Williamsii and *Calluna vulgaris* Mrs. H. E. Beale bloom from February to September by Sherburne's doorsill.

Sherburne, 1722 - 1950

In June also, simultaneous with the *cinerea* group, arrives *Erica tetralix*, the cross-leaved heather, delightful little grey bushlings, hung with clusters of pendant terminal bells of delicate pink which would light any pool with lanterns of enchantment for many weeks. (Snip off the blooms as they fade.) A few days later, Dawn, *tetralix*'s child by *Erica ciliaris*—the astonishing large-belled heather which makes brilliant the inland Lakes of Dorset—bursts into its rosey bloom. This hybrid blooms all summer, after its first burst in July, if the faded terminal bells are removed, and is a low mat of astonishing color for many weeks, even months, as it is still in beautiful bloom when we leave Sherburne in September. Both *tetralix* and *ciliaris* have long seasons of bloom, but *tetralix* is a much less showy plant, greyer of leaf and daintier of blossom, and *ciliaris* is not considered as hardy. However, I wintered successfully October-planted specimens from the West last year in our Tarrytown rock garden, with no protection.

Erica tetralix mackaiana, a native of Connemara, and of Oviedo in northern Spain, is a midsummer bloomer with these others. The form of this plant which I like best is *Erica tetralix mackaiana plena*, an almost prostrate bright evergreen, like a miniature club moss, which bears on each terminal spray very rich pure pink double flowers, formed like tiny roses. These "roses", hanging in bunches of six or more at the tips of the bright green branches, are round and solid, pinked at the edges of the petals, and have an almost everlasting quality. Like many other heaths, they will rustle in the wind if you put your ear to the ground near their lax, swaying stems. Though I have never seen this enchanting heath in any eastern rock garden, its delicacy would be far more entrancing set off by the solidity of stone than contending—as it does so lustily!—with the short moor grasses.

While *Erica* Dawn and this even purer pink double are still at their glorious height, *Erica vagans*, the Cornish or wandering heath, from central and northern Europe, and *Calluna vulgaris*, the "Ling" of England and Scotland—which penetrates even to the arctic circle—ring out, one by one, their astonishing diversity of colors and bells. These two later blooming members of the heath family are quite dissimilar in appearance, both from each other and from the cinereas, and the large terminal belled heaths already described. Both have heather bells all

along the stalks; but *Erica vagans* has much larger and fatter spikes of bloom, much more nearly resembling the tender southern heaths seen in the florists' shops.

Visitors to Sherburne often take *Erica vagans* St. Keverne for *Daphne cneorum*—and their pure pinks are, indeed, somewhat similar. Most *vagans* varieties, the pure white Lyonnesse, the spectacular coral Mrs. D. H. Maxwell. the little white *minor*, the pure pink St. Keverne, have none of the dusty pink to purple tones we associate with heather—though in their native Cornwall these lavishly occur; and the one *vagans* reported from Nantucket is also a low toned pale lavender. But for the rock garden the more brilliant—though wild—named forms I have mentioned would be much more striking.

Erica vagans, waist high and twenty years old. *Calluna vulgaris* in foreground.

Though we grow and delight in most of the *vagans* types and colors, our real love for the moorland is *Calluna vulgaris*, the beloved heath of Scottish Highlands. In all its enchanting shades and sizes, whether the type, or the doubles, the spikes of the callunas are slimmer, more graceful, more feathered, than those of the Cornish heath, and though often not as astonishingly beautiful at close range, nothing is so becoming to the open moor, or an ancient steading, as spreads of the varied sombre purples of *Calluna vulgaris*, type, blowing against the grey reindeer moss of the Commons, or leaning against the lichened shingles of the dwelling.

Named forms of *Calluna vulgaris*, which would be movingly beautiful for the rock garden are; *Calluna vulgaris alba rigida*, brilliant white bells and emerald moss-like foliage, four inches; *Calluna vulgaris alba serlii*, feathered spikes of pure white and deep green, twelve inches; J. H. Hamilton, deep moss-like spreading foliage and absolutely pure, rich pink double bells set along the creeping stems, six inches (plant this with *Gentiana septemfida* and see the result!); County Wicklow, the earliest of the Callunas to bloom in our garden. August first with its miniature double "roses" of lavender-pink on close bushlings of twelve inches; or, for background planting in the same picture, *Calluna vulgaris* H. E. Beal, with exactly similar tiny "roses" all along its taller, feathered branches; or *alportii*, the darkest of all, purple-crimson in color, and grey-green and moss-like in leaf, twelve inches; and for spreads of compact heather purple, Mayfair Seedling, a natural seedling occurring at Mayfair Nurseries, Hillsdale, N. J., which reaches, gradually, two

feet in height and width and is smothered with single heather bells from mid August through September.

The culture of these varieties and many others at Sherburne have taught us the following facts about growing heather:

All heaths, with the exception of the *carnea* group (the winter and spring heaths) need an acid soil, rich in leafmold and peat. The carneas need a light, rich soil, but not necessarily acid. All heaths grow best in full sun. Contrary to the accepted opinion, they are not harmed by old well-rotted manure, and young plants develop much more quickly if it is present. But do not let it touch the foliage.

All larger heaths, especially the *Calluna* and *vagans* groups and the taller carneas, must be sharply pruned immediately after blooming to keep them low and bushy to withstand the winter. If kept low enough to stand beneath the snow in the icy months, the danger of frost splitting the woody stems of older plants will be negligible. This close pruning also induces them to layer themselves freely as they grow; and these new stems close to the ground are green and full of vigor, constantly renewing the youth of the plant and keeping it

Erica vagans St. Kerverne, with *Calluna vulgaris* in background.

resistant to excessive transpiration through the leaves when the ground is frozen. We give our plants no winter covering, but we do mulch them heavily with peat and acid leafmold—a warm bed for the ever-increasing layers to grow into. In cold climates pine needles would also be an assistance.

Never prune heathers in spring as that cuts off the ripened blooming wood. If rabbits prune the *cinerea* and *vagans* groups, they will often bloom again, later; but if deer or rabbits graze on the callunas—no bloom that summer!

The cinereas need the dryest and warmest positions; *tetralix* and the *ciliaris* groups, and their hybrids, the dampest. The callunas like more loam and more water in very dry weather, but seem otherwise indifferent to water content in the soil. All young heathers should, of course, be watered carefully and protected from the sun, when newly planted. They respond to little attentions of rich sandy leafmold, and, like all young things, and all people, they like to be noticed.

My real business in life is moving charactors about in fiction—quite other than St. Keverne, D. H. Beal and Mrs. Maxwell; but patterns woven with flowers in a garden or with people on a page are not as dissimilar as those who do not practice these two fine arts simultaneously might believe!

GENTIAN NOTES FROM MAINE

MRS. EDWARD M. BABB, PORTLAND, MAINE

THERE is nothing new or unusual in these notes, but they may encourage someone to try these three gentians which are easy to grow. The earliest to bloom of my three is the quite well-known G. *septemfida*. At least, that is the latest identification of a plant which was grown from seed and supposed to be the native G. *calycosa*. When it bloomed, its very dark calyces suggested *parryi*, and I have been told that *septemfida* and *parryi* are often confused in England. The one original plant, now about twelve years old, is a thick clump of close to a hundred leafy stems, semi-prostrate from the center, and reaching about ten inches in length when in bloom during July. It occupies a small space a few inches wide between two boulders, with room to spread sideways, and a deep cool root-run. The soil is rather light and rocky with additions of leafmold or compost at times. The plant gets full hot sunshine, but also underground moisture, I am sure.

The leaves are light yellow-green, about an inch long, lanceolate to lance-ovate, and three-veined. Two or three flower buds appear at almost every stem-end, about an inch long, and an inch wide when fully open in the bright sunshine. The color shades from light to rich deep violet-blue, and the tips of the little plaits or sections are delicately fringed. The black calyces give a dark brooding look to the clumps as buds, and when closed over night and during cloudy days. This gentian seems to bloom regardless of the season's weather, and last year had around fifty blossoms open at once, a heart-warming display of plant happiness. *Potentilla flabellifolia* usually opens sprays of bright yellow saucers just about the same time and is a fine companion for color contrast.

Two of our eastern native species are also reliable and hardy, excellent for a moist spot around the pool or in the wild garden. The bottle or closed gentian, G. *andrewsi*, is probably the best-known, the strongest growing, and the latest to bloom, in September. It is usually found wild along moist roadsides and woodland borders, making large clumps to two feet tall in good locations. The largest ones I ever saw wild were on a low sandy river intervale under pines, where they were undoubtedly covered with water in the spring floods. The largest seen in cultivation are in the garden of Mr. and Mrs. A. A. Dowbridge, of Springvale, Maine, growing on a steep shaded bank beside the house, and towering over tangles of climbing fern and foamflower, clumps of dwarf bleeding-hearts and violets, and other woodland treasures. My own plants are on a slight northern slope, in soil rich with leafmold and fairly moist, getting some sunshine, but their roots always shaded with foamflower and low ferns.

The characteristic gentian rosettes start growth surprisingly early in spring and grow rapidly, with tall smooth stems and opposite, almost ovate, dark green leaves, narrowed at the stems and the pointed tips. The dark violet-blue "bottles" are clustered thickly at the top, and often in a few smaller clusters below at the leaf-bases. The color shades to white at the base, and the plaited sections are often striped with white. The flowers are tightly folded together at the top, and seldom if ever actually open, although bumblebees are supposed to force their entrance sometimes.

The blossoms seem always to produce quantities of tiniest light brown sticky seeds, held in thin brown-paper pods which split open at the top as they ripen. I am not sure that I have ever had germination from my own seed, but

it should be kept moist until sowing and, of course, it needs special care and handling because of its dust-like size (or lack of size!), so it is probably my own carelessness when it has failed to appear. I am longing to see the rare white form of this gentian, but have had no luck with seed so far.

The narrow-leaved gentian, *G. linearis*, is also quite easy here, although I lost my plants in the drought last summer through my own foolishness in moving them to a different location. They had grown well for several years near the bottle gentians, but for some now-forgotten reason, I moved them to a more sunny open location, in light sandy soil fortified with half-rotted leafmold. They did fairly well there for two years or so and bloomed, but then the extreme drought conditions finished them before I realized they were suffering. This gentian is usually listed as a native of cold mountain bogs and upland meadows, but it seems perfectly willing to adapt itself to less rigorous garden conditions. It is said by Aiken to like an acid soil, while the bottle gentian prefers neutral, but both seem to like the moderately acid soil here. It somewhat resembles the bottle gentian in growth, but makes smaller, fewer-stemmed clumps, about the same height, with lighter green leaves, narrow lance-linear and three-ribbed. It is at least a month earlier in bloom, starting in late July or early August, and the buds show the blue coloring for a long time, so that there is no clearly marked date when the buds become full blooms. The flowers are very lovely and distinctly different with their light porcelain-blue color. They are about two inches long, sometimes longer than those of the bottle gentian and more slender, and these too remain tightly closed. The original plant was nursery-grown, and although I have found a few self-sown plants in the garden, I have had little or no luck growing them from seed myself.

THE GUYENCOURT RHODODENDRONS

G. G. NEARING, RAMSEY, NEW JERSEY

THOSE who have learned to know the truly dwarf rhododendrons, the charming and amenable *R. racemosum* and the more difficult *R. lapponicum*, for instance, may yet be surprised to learn that about 150 rhododendron species restrain themselves within the limit of about a yard or less in height, an arbitrary size by which we can roughly define rock garden subjects, while many of these attain only a few inches. Most of these, to be sure, are hardy only in some such climate as the Pacific Northwest. But even in non-hardy species, hardy individuals may appear or hybridization may bring any measure of hardiness.

About the year 1931, I received from England seeds of the then new *R. pubescens*, native of the Muli Mountains in western China. The densely hairy evergreen leaves, with an under surface paler and covered with minute scales, are about ¾ inch long, less than ¼ inch wide. The white or pinkish flowers, each about ½ inch long, are clustered near the tip of the shoot after the manner of *R. racemosum*, to which this species is somewhat related, though wholly different in general appearance. Growth is straggling, shrubby, up to about three feet or a little more, though it would take many years to reach that height, a millenium in our climate. Many plants persisted at Guyencourt, Delaware, and later at Ridgewood, New Jersey, but did not seem particularly attractive, in spite of the three-star rating given the species in England. The closely related *R. hemitrichotum* outshone *R. pubescens* in grace and beauty, but proved too delicate for severe winters.

Hybrids between *R. pubescens* and the sturdier *R. racemosum* came spontaneously, proving not sufficiently different from *racemosum itself*, and hardly

as good. A cross with the yellow Japanese *R. Keiskei* at first appeared no better. Hundreds of plants were grown, all hardy at Ridgewood, New Jersey. Evidently in the light of subsequent developments, these must have been stunted by their location in a poorly drained soil. A few better placed individuals attracted the attention of Zenon Schreiber, who took them to plant on a well-drained ledge in Leonard Buck's famous rock gardens at Far Hills, New Jersey. Here they have given a fine account of themselves, and bloom copiously at the beginning of May out of a foliage so distinct in habit and so pleasing that they have attracted much attention.

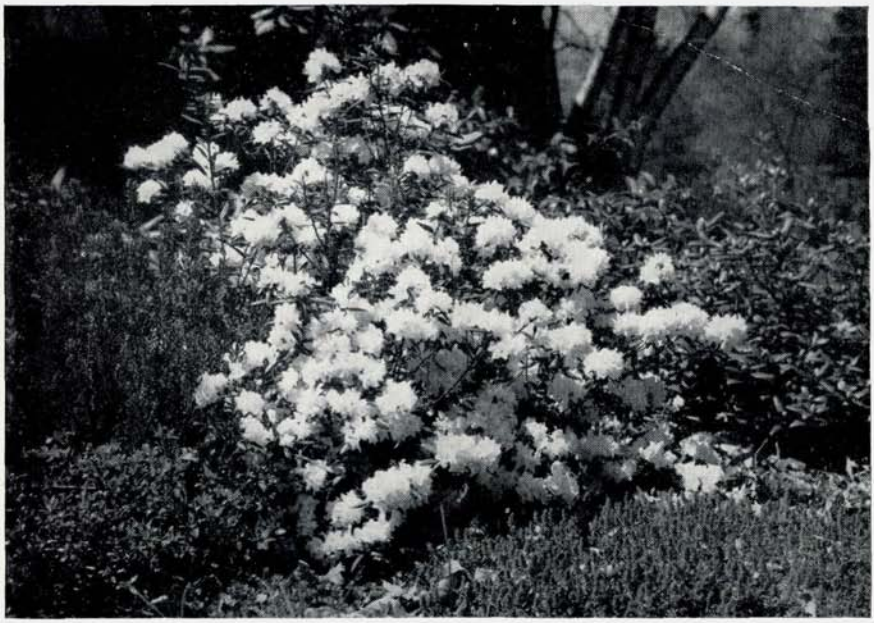
When the 1945 flood destroyed the Ridgewood plantings, most of the *pubescens* X *Keiskei* were badly injured, but survived the soaking. The following year a selection of the best remaining were planted in the garden of Alex D. Reid at Mountain Lakes, New Jersey, where they have developed into an outstanding feature of the landscape, some as a low, informal hedge, others as border specimens.

In foliage these plants resemble *R. pubescens*, but with leaves much longer, up to two or even three inches, while the larger, showier flowers cluster more densely in terminal heads often three inches or more across. These clusters are not the typical rhododendron head with a central rachis, but consist of numerous, mostly axillary flowers, crowded near the tip, so that the effect of a true flower head is produced on some plants, while on others the axillary character is more evident, the flowers more uniformly distributed. Stems and winter buds are deep reddish brown, but the bud scales often edged with white. The habit and foliage of a thrifty plant are most pleasing, and entirely unlike those of any familiar rhododendron.

While plants left to themselves would eventually perhaps exceed three feet in height, the fifteen-year-old specimens at Mountain Lakes are mostly under two feet. Each season some of them put out straight upright shoots from the root, which, if allowed to remain, would branch, and because of their slenderness, probably arch out into a shrub of larger dimensions. As this habit is undesirable in their position, most of the plants are kept low by heading back these longer shoots. Flowers open about the end of April or the beginning of May, suffering therefore if planted where late frosts are prevalent. As the bloom passes, the new growth comes out a crisp, pale green, and it too can be injured by frost, but if so, will soon replace itself. These rhododendrons do best in part shade. They will endure full sun, but in exposed positions the leaves winterburn. Dense shade is undesirable. They must have a good permanent mulch of leaves or pine needles.

To follow the English custom and give a varietal name to this whole race, which is now distributed to some extent through northern New Jersey and neighboring states, would be stupid and misleading. The purpose of a name is to enable gardeners to discuss and obtain a definite plant, and where propagation is other than by seeds, the exact same plant can be supplied if the name is known. Therefore the American custom is to name each clone deemed worthy of propagation. The flower color in this race varies from white to pale yellow and pink. To receive a pink flower when you ask for a yellow one may be satisfactory in England, but our people do not find it so. Moreover some individual plants are much more floriferous than others, and some show a more pleasing foliage pattern. Hardiness and vigor vary also.

However, this race differs so markedly from most rhododendrons that it will inevitably be talked about as a group. The name *pubescens* X *Keiskei* is clumsy and does not lend itself to popular discussion. I therefore propose that the race be referred to as the Guyencourt rhododendrons, after Guyencourt,



Rhododendron pubescens X Keiskei at Mountain Lakes, New Jersey. This clone is Chesapeake.

Delaware, where it originated. Six of these Guyencourt rhododendrons have been selected as outstanding and will now be propagated as clones, rooted cuttings to be available in 1951. The names are local geographical ones from the region around Guyencourt, chosen for distinctiveness and euphony.

Let me repeat that each name designates a clone, a single original seedling plant and all plants propagated from it by cuttings or layers. Seeds will not reproduce the clone, but may eventually give rise to other worthy forms, the best of which could later be named and propagated as clones. Anyone having a superior form of this Guyencourt race is, of course, invited to name and propagate it, either in consultation with the author or independently. The clones now named are:

Delaware. Flowers pink-tipped in bud, throat yellow, opening after May first. Individual flowers rather small, but very numerous.

Lenape. Flowers pale yellow, rather large, opening late in April. Clusters exceptionally graceful.

Brandywine. Flowers opening pale, soon turning rose, large and borne in nearly spherical trusses, opening late in April.

Hockessin. Flowers pinkish-yellowish, small but produced in great abundance late in April. Foliage and habit exceptionally good.

Montchanin. Flowers pure white, small, but produced heavily in late April.

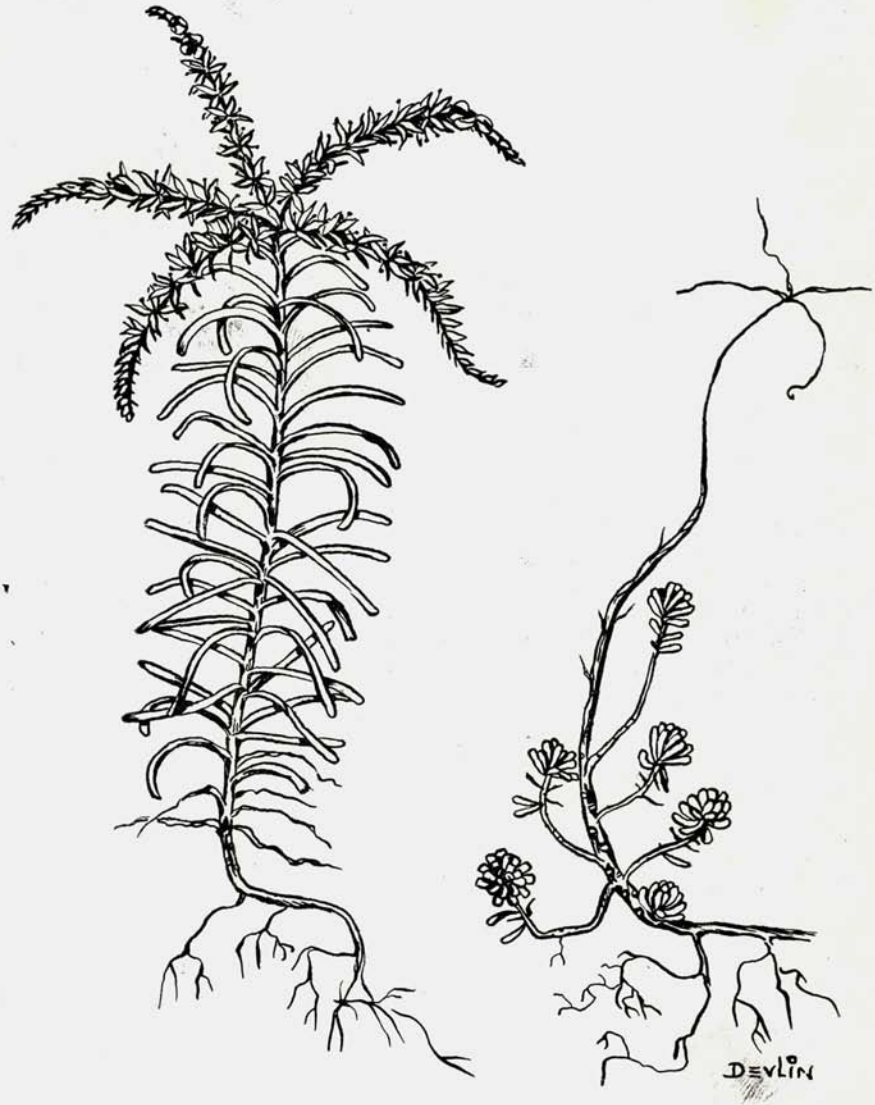
Chesapeake. Flowers yellowish-pinkish, small but in large clusters covering an unusually shapely plant, in early May.

IMPORTANT - PLEASE NOTE

The address of Miss Madeleine Harding, Director of the Seed Exchange, is now 22 Robinson Street, Cambridge, Mass. All donations of and requests for seeds should be directed to Miss Harding at this address.

SAXIFLORA PLATE NO. 27

SEDUM PULCHELLUM



SAXIFLORA

PLATEAU STONECROP: SEDUM PULCHELLUM

THE name *Sedum pulchellum* was proposed by Andre' Michaux in 1803 for an attractive annual stonecrop native on ledges of limestone or sometimes of other rocks in the Interior Plateau country — chiefly in Missouri, Arkansas, Kentucky and Tennessee. The seeds of this plant germinate in early spring, and it grows to a height of six inches or so, producing in May and June radiating groups of starry pink to white flowers. These mature rapidly, and by the time the heat and drought of summer prevail, the stems wither away, and the tiny seeds scatter, to lie dormant in the soil until another year comes around.

In its native region this plant is most generally known as "Widows Cross." In *Standardized Plant Names*, it is erroneously termed "Texas Stonecrop," for there is only one doubtful report of its growing in that state. A common name referring to its real area of occurrence is here favored.

Since rock gardeners for the most part avoid annual species because they do not stay put from year to year, it is to be noted that there are two variants of *S. pulchellum* which have developed perennial habit. One of these which has long been in the horticultural trade, but the origin of which is unknown, produces trailing leafy stems which in autumn take on toward the tip a bright red coloration.. It was termed by DeCandolle *Sedum pulchrum* but this was apparently a mis-spelling of the original name. Instead of a technical epithet, however, a horticultural variety name seems desirable for it, so it may be known as Var. REDTIP.

Some years ago the writer discovered at Lawrenceburg, Tennessee, a variant which perennates in a different manner: When the seeds are mature and the flowering stalks wither terminally, they develop toward their base tiny rosettes of flattish leaves which remain gray-green through the winter. Where these chance to touch the ground, they strike root and produce new flowering stalks the following spring. This was transferred from the writer's garden to that of Mrs. J. Norman Henry, and may well be known as horticultural variety STARLET. Its aspects in spring and in autumn are shown in the accompanying drawing by Mr. Joseph M. Devlin.

Sedum pulchellum is a glabrous annual a few inches high, usually branched from the base. While its juvenile leaves are spatulate, the mature ones are linear, mostly ½ to ¾ inch long and ⅛ inch wide. The inflorescence is a flat-topped cyme of about 5 rays, bearing numerous crowded flowers 1/3 inch across. These have their parts sometimes in 4's but usually in 5's; the narrowly deltoid petals vary from pink to white. The fruits are tiny follicles containing numerous minute, almost dust-like seeds.

EDGAR T. WHERRY

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AFIELD WITH A PLANT COLLECTOR

FRANK H. ROSE, MISSOULA, MONTANA

IT occurs to me a trip with a plant collector might prove of interest to native flower gardeners generally. The wild areas and secluded camps I sometimes reach with my jeep would appeal to all who have not read too much fiction about bears and snakes and anyone would profit by getting off the beaten path to study, each in its chosen site and proper season, the many plants nature uses to color the northern Rocky Mountains.

Imagine your garden as through a microscope which would enlarge it to the size of all Montana, northern Idaho and northern Wyoming, my collecting area. Some plants, weeds perhaps, seem adapted to grow very well over much of the area. Others by design or chance are confined to certain restricted plots. In your garden you know these areas and where to look for any particular species. It is the same with me in my large scale garden, but much more time consuming in moving from place to place.

I have before me an order for one each of seventeen species from a woman in Oregon. Let's fill this order.

First on the list is *Claytonia megarrhiza*. I know this big-rooted spring beauty on a gravelly alpine slope, just under 11,000 feet in elevation, on a mountain outside of Yellowstone Park where in late August snow banks still linger in all areas sheltered from the prevailing winter winds. On that rare day when the sun shines and the breeze is mild, the whole world spreads out—green meadows, black timber, silvery lakes and distant mountains; a picture to store in memory and enjoy again and again.

Claytonia megarrhiza is native to similar sites throughout the northern Rocky Mountains. It does not come down to lower elevations, but many of you have grown it quite successfully in your gardens or alpine houses by modifying the climate barriers which prevent the plant from leaving unaided its rocky glacial slopes. Where spring comes in July, it would be best to transplant in September; or the fleshy roots might be stored for spring planting, if advisable.

The next plant on order is *Corydalis aurea*, a plant that I see only occasionally and in widely scattered places. On a roadside bank, perhaps, or gravelly slope or stream bottom at medium elevations where moisture is more or less dependable. but the ground not permanently wet and drainage perfect. *C. aurea* forms a mound a foot high and two wide with yellow flowers and tiny bean pods of shiny black seed available at the same time on the same plant. This plant is no doubt abundant in some areas but I see less than one hundred in an entire season—always a few individuals together but in locations widely scattered. Its requirements are usually not maintained over extensive areas.

Next we want one each of four Dodecatheons. These sometimes are very numerous, locally coloring the landscape when in bloom, but generally only one species in each locale. *Dodecatheon cusickii*, with wider pubescent leaves, and *D. pauciflorum*, with narrow smooth leaves, are occasionally neighbors. We can find both of them in one afternoon. They are similar, three inches to over a foot in height, and at home on gravelly slopes, mountain meadows or open timbered areas where the plants are not crowded and the soil is not packed. *D. pauciflorum* demands slightly more moisture than *D. cusickii* but both may, and usually do, dry to brittleness in summer without damage.

Dodecatheon conjugens, slightly smaller and sometimes albino, is more distant—of the open meadow and pasture land or grassy mountain hillsides. *D. radicatum* is a very different plant. We can get it just over the divide in Idaho

in cold sphagnum bogs that are under snow until June. It has large tongue-shaped leaves. *D. radicatum* gets off to a quick start in the short season where it grows, with the first flowers only inches above ground and rushes through to seed maturity, pushing up its stem to keep pace with the surrounding vegetation. It often matures its seed at three feet above the ground.

Dodecatheons can be moved in early spring, but the flower stalk shows almost as soon as the leaves so roots of the season must be already established. I prefer, as with most western wildflowers, to move them early in the dormant period; *D. cusickii* in June, *D. pauciflorum* and *D. conjugens* in June or July, and *D. radicatum* in August or September. I realize that with dormant plants, you get no flowers the year they are moved; but likely you get no flowers at all from plants moved too late in active growth. Winter is the critical time for dormant transplanted plants and if in an unfavorable site, especially a wet one, they may not show come spring. Spring moved plants may live to flower, if only they have moisture, even when not sufficiently established to live over. I should appreciate some comments on the transplanting time of dodecatheons.

Next are three Drabas; *D. densifolia* from the high mountain tops, *D. andina* from the dry mountain ridges, and *D. aurea* from where and when we can find it. Drabas are quite showy when in flower, but not so showy when the sheep finish with them, which is, I think, the time to transplant.

For the white *Gilia cephaloides*, we ought to go to the Big Horn Mountains in Wyoming. There are a number of so-called roads into the high country down there, tracks mostly of sheep camp wagons, and a world of interesting plants. Cloud Peak, 13,165 feet in elevation, seems a low hill so whereever we pitch camp is high country. July is early spring in this region and even so *G. cephaloides* may have bloomed before we arrive. It doesn't matter for Gilias are short-lived perennials and the first year rosettes should be sought. I first saw this plant on Elk Creek in the Crazy Mountains at a relatively low elevation. It was much taller there, so the little one from Cloud Peak may grow a foot or more tall in your garden.

Hypercium scouleri is one of the showy plants of Logan Pass in Glacier Park. We should not fail to save an hour or two to walk out among the flowers when we reach the pass. What we see will depend upon the date of our arrival but will be worth while at any season. If not past the middle of July, Logan Pass will be a field of dancing yellow avalanch lilies. They bloom by the end of April at Missoula, *Penstemon ellipticus*, *Valeriana sitchensis*, *Erigeron salsuginosus*, *Castilleja occidentalis*, *Mimulus lewisii*, *Gentiana calycosa* and *Pulsatilla occidentalis* make grand seasonal displays in favorable years and none better than *Kalmia* and *Phyllodoce* in bloom a half mile south up the creek.

I find all these plants outside of the park but nowhere in just the same combinations. I usually collect *Hypericum* on a hill in Idaho where Lewis of expedition fame looked across seven timbered ridges, each bluer than the last, toward snow-capped peaks still between him and the Pacific.

Getting back to the order, *Lithospermum mandanense* is widely distributed in the foothills and across the plains but never, it seems, when wanted. I have spent hours searching for it. When the plant carries its fragrant yellow flowers in spring they attract attention, but the tap root seems to rot out in wet winters, forcing it to come again from the shiny hard seed so that it varies from year to year in abundance on each site.

Mertensia oblongifolia is one of the three plants of this list that is available within a half day of Missoula. It is best collected dormant in June or later, if rains keep the root from becoming brittle—for it blooms in April. Without the

green leaf, it may be difficult to distinguish the species from its variety, *nevadensis*, which should be smooth above.

Physaria didymocarpa and *D. geyeri* look alike but grow miles apart. They are restricted to site but wide in general distribution. A clay ridge, stream slope or gravel river bar unsuited for sod-forming grasses seems to satisfy both species, with *didymocarpa* at lower elevations and *geyeri* more alpine. The gray plant is attractive even without its yellow flowers. As with most gray-leaved plants, they like sun.

Penstemon caelestinus and *P. aridus* seems to separate by degrees of moisture —both dry but *aridus* dryer. Weathered granite is right for *aridus* which forms grass-like patches on the eastern slope of the Rockies as far west as Butte. *Caelestinus* begins here and extends west and north. Both are clear blue, small-flowered and heavenly, as nature grows them in a favorable year. Plant *P. caelestinus* alone for a clear blue bank or mixed with *Eriophyllum lanatum* if your colors are blue and gold. The tiny *P. aridus*, sodding barren sand or gravel or displayed as a living bouquet in the meager soil or a small pocket high on the side of a weathered granite boulder, seems to me our most courageous penstemon.

RANDOM NOTES FROM A CAR WINDOW

ELSE M. FRYE, SEATTLE, WASH.

THE geographies certainly never prepared me for this beautiful world as it is—names of cities and rivers, perhaps, but mountains that almost spill into the sea and deserts that creep up high ridges and stop only at the shore, no! Geography deserts are a blinding sandy waste with an oasis now and then—slight resemblance to the deserts I know.

To anyone brought up in Washington, desert means sagebrush country with eriogonum, phlox, mertensia, violets, ranunculus as undergrowth; with serviceberry and choke-cherry on the edge of small dry streambeds; *Pinus ponderosa* on the slopes and tall fragrant poplars in the lower canyons.

In the southwest, the deserts are altogether different and of several kinds. The vicinity of Tucson, Arizona, spread out on a wide mesa with an elevation of 2,390 feet, is covered with a very monotonous growth—the creosote bush, *Larrea* (*Covillea*) *tridentata*. When I first observed this I felt a little bitter, thinking man had removed all the cacti and undergrowth. But I learned better. This is the way it was long ago and this is the way it is now, except where ground gives way to building. The creosote bush in the wild looks almost planted, the bushes being spread evenly and almost in rows, the number of individuals being determined by what the ground will support—a beautiful theory that could be applied elsewhere!

As the ground rises toward the surrounding mountains, the desert takes on more life: mesquite, *Prosopis julifera glandulosa*: desert ironwood, *Olneya tesota;* cat's-claw acacia, *Acacia greggii*, comes in mixed with a great variety of cacti; the jumping cholla, *Opuntia fulgida;* the grizzly-bear cholla, *Opuntia ursina;* the stag-horn cholla, *Opuntia acanthocarpa;* engelmann's prickly pear, *Opuntia engelmanni;* the santa rita prickly pear, *Opuntia santa-rita;* barrel cactus or bisnaga, *Echinocactus wiszlizeni* and close to and up on the mountain slopes the giant saguaro, *Cereus giganteus*. Because it is so conspicuous, we are interested in the distribution of this ancient tree. While some of the greatest concentrations are around Tucson, it does extend into California and southward almost to Guaymus, Mexico. It gathers in the draws but is also found on the mountain slopes and

phalanxes on the ridges up to 4,500 feet may be seen from afar. It is interesting to see how single specimens pioneer in the most unpromising situations on the rocky scarps. Mixed with this are many yuccas: our lord's candle, *Yucca whipplei;* the soap-tree yucca, *Yucca elata;* and *Yucca arizonica.*

As we approached elevations of 4,000 feet, we came into stands of live-oak, tree-like or shrubby, with juniper and underneath, the sotol (*Dasylirion wheeleri*) and bear grass (*Nolina microcarpa*) which was used by the Papago Indians in their basket weaving.

Much higher than this and often facing the southwest appears an almost pure succulent desert. Isolated *Cereus giganteus* may be the bulkiest plant and next bisnaga. *Agave wisleyensis* sends up a flowering stalk almost as tall as the cereus. *Agave schotti* is a smaller plant with leaves less than a foot and grows in very continuous colonies. *Nolina* and *Dasylirion* grow here also, with an overall filling of *Fauqueria splendens*, occotillo. I must mention the occasional rainbow cactus that is seen. This is a fascinating desert association to the newcomer.

One can usually look down into canyons from such an area—the dark green will be live-oak, *Quercus arizonica* and *Pinus ponderosa;* more gray-green, *Juniperus pachyphlaea; Juniperus utahensis* with *Cercocarpus brevifolius* and *Arctostaphylos pringleyi* forming thickets. In December, Wright's sycamore and Fremont's poplar command the scene. The sycamore is a large picturesque tree with several white, satin-smooth trunks from the base and large branches sent out in unpredictable directions. It is a beautiful tree. At this season it holds a few burnished leaves and the poplars are a golden glory.

In one such canyon, we found another very beautiful tree, *Arbutus arizonica.* The bark on the specimens observed is not nearly as beautiful as the cinnamon-colored sheaths of *Arbutus menziesii*, but it is a very desirable tree, nevertheless. The young shoots are bright clean crimson, the leaves dark and leathery and coarsely toothed.

Southward from the border at Nogales the desert is more open, more tormented. Lack of sustenance is apparent in plant and animal life — I could add human life. In the vicinity of Hermosillo, north and south, are two great tree-cacti: the organ pipe cactus or pitahaya, *Cereus thurberi* and senita, *Cereus schottii;* old woman. I translate this to "the old one" which seems much more respectful and much more in the Mexican character. It is so called because at the apices the thorns are white and hairlike. Both these cacti make enormous structures — usually not more than fifteen feet high and ten feet in diameter. Most branches are from the base, close together and these usually unbranched.

We saw one other cereus, about thirty inches tall and the branches somewhat approaching two inches in diameter. It formed a tangle of weak upright branches at the base of some shading tree. With insufficient literature to check, I tentatively call it *Cereus alamosensis.* Also in this region we found a curious tree, white-barked with a comparatively wide base, an open diffuse crown. The bare branches were well adorned with white flowers. (Dec.-Jan.) It was identified for us as a *Ceiba*, kapok tree.

Old-timers in the southwest deserts tell of a very interesting phenomenon. In the very occasional years when there is a greater than usual rainfall, seeds of plants that are rarely seen germinate. And in those years the action of the life processes lifts the soil so there is almost visible movement and audible sound.

These desert regions are far apart geographically but one thing they have in common—the sudden setting of the sun in a molten, metallic flow of pure gold, set off by crimson and blue-purple edges and the beneficent purple-blue twilight that comes after the heat of the day.

IPHEION UNIFLORUM

FOR many years, I have had in my garden a bulbous plant about six inches high, native to the Argentine, which has been classed at different times as a *Brodiaea*, a *Triteleia*, or a *Milla*, but I always considered *Triteleia uniflora* to be the correct name. And now, in the National Horticultural Magazine for January 1950, I am informed that the correct name is *Ipheion uniflorum*.

As the writer in the above periodical states, it is an excellent plant for the rock garden with good-sized, rather flat, delicate violet, terminal flowers and usually blooms in my garden in Ohio in late April.

Ipheion uniflorum

Bailey, in his *Cyclopedia of Horticulture*, states that the plant is short-lived, but this has not been the case here. I planted it before the war in light, well drained soil, and it is still occupying the same position in which I originally placed it.

A Contributor

A BOOK REVIEW

A new book, *The Propagation of Alpines*, written by that well known horticulturist and author, Lawrence D. Hills, was published this last spring by Faber & Faber Ltd., 24 Russel Square, London, England. This book will make a strong appeal to all gardeners as well as to the alpine enthusiasts. There are 2500 species mentioned, their cultivation and propagation described. Recent developments in rooting mediums and seed raising are carefully dealt with bringing out many new and successful ways of propagation.

The Propagation of Alpines offers the greatest fund of information that it has been my privilege to see in print for many years and I feel sure that the rock gardener fortunate enough to possess a copy of Mr. Hill's book will feel we all owe him a debt of gratitude for the labor, study, and experimentation he has expended in bringing out this excellent book. There are many fine photographs as well as line drawings.

Chapter six deals with different types of stem cuttings, where and when to take them, and the several types of rooting mediums.

Seed raising - natural and artificial - is of interest in Chapter nine, followed by seed sowing and storage and "Dictionary of Propagation-Seed".

The chapter on "Root cuttings, Leaf Cuttings and Layerings" is of special value to the rock gardener.

Chapter fifteen "Encyclopedia of Propagation", mentions the different types of soil mixtures used by Kew Gardens for the raising of alpine seeds, potting of seedlings, and which mixtures the different types of alpines require for best results.

Appendix 1, "On Botanical Names with a Glossary of special interest to the alpine gardener", will prove most helpful to the amateur as well as the experienced rock gardener.

Florens DeBevoise, Greens Farms, Conn.

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This Society, founded in 1930, has well over a hundred members in North America. As distance prevents their taking part in the Society's other activities, it is obvious that they have found the Quarterly bulletin to be good value for their subscriptions.

Further particulars regarding the Alpine Garden Society may be obtained from the Secretary, C. B. Saunders, Husseys, Green Street Green, Farnborough, Kent or, better, from Mr. C. R. Worth, Groton, New York, who is one of the Society's Ass't. Hon. Secretaries (foreign).

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