

BULLETIN
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SOUTHEAST FROM SEATTLE IN THE EARLY SPRING

ALBERT M. SUTTON, *Seattle, Wash.*

WINTER IS WINTER and as such has its own interests but summer is mountain time to all who love the high wild outlands and the flowers that flourish there. The time between is spring, a busy and a happy time but to us also a time of frustration, an interlude of anxious waiting. The mountains call us and we are eager to go to them but there are no flowers—nor will there be until winter has relinquished its chill grip on the high places and this it will not do for several months. So we wait.

When the robins and the crocus come to our Seattle home we know that spring has made its first overture although the gray days yet outnumber the gold. When the threat of frost and fog is lifting from the land and the children's kites sail the windy sky we know that spring is about to raise the curtain on a far gayer scene. When the setting sun burns its way through the storm wrack and its slanting rays, searching for and finding an arrant rain squall, paint the dark clouds in the eastern sky with brilliant curving colorways, we envision the summer mountains resplendent in their flowery raiment, each flower sprung from a fragment of these same rainbows, shattered by some Titanic artist and scattered with lavish hand over mountain meadow, cliff and talus slope. When occasional sunbright days bathe us in gentle warmth and throughout the city there are gay explosions of pink where *Rhododendron mucronulatum* arrays its bare branches in ballet attire and waits not for its hesitant leaves—it is then that our thoughts reach out for the vernal delights and our spirits long for the solace of summer mountains.

There still remains the waiting period to be endured. Of course, spring brings great activities in our own gardens but as interesting and rewarding as such activities are we cannot long endure the urge to be away into the wild country. We will strive to break free from our winterized lethargy and make our annual pilgrimage to the flower-strewn land east of the Cascade Mountains. The middle of March should be the time to go although the Cascades and the great snow domes will yet be in thrall to the Snow God, whose numerous

acolytes practice their strange and strenuous rites on the glistening slopes. Beyond these mountains we will find our own adventure. Adventure that will sustain us while we wait for the lengthening days and a resurgent sun to rout the snow and ice, unlock the frozen hills, awaken the anxious flowers and transform the mountain scene into the summer heaven where all good flower lovers and amateur botanists have already roamed in their winter dreaming.

Now March is half sped and Seattle begins to bloom. It is one vast flower garden and will remain so for many months. Flowering plants, inured to civilization, will expand leaf and flower buds, unfurl colorful banners, linger awhile in perfection and then fade, each species in its appointed time. As much as we enjoy this lovely and continuous display, this ever changing parade of color throughout the residential districts, the parks and now even in the business areas. It is the wild flowers that draw us to Eastern Washington at this time of the year. So on a Saturday morning we left home, close to the shore of Puget Sound, and started the long drive. Sparse traffic allowed us to make good time through the city streets, across the Lake Washington floating bridge, across Mercer Island, another bridge, through the farmlands, the wooded hills and on into the mountain pass.

The four-lane highway led us through Snoqualmie Pass, the lowest of the several passes used for motor traffic through the Cascades. This pass is a bit more than 3000 feet in elevation and, since it was yet March, snow was everywhere, although the roadbed had been swept clear. Skiers were everywhere, too, and the steep slopes were alive with color and movement. On we went past blue Lake Keechelus and down the long eastern slope which falls away to the high basaltic plateau of the Columbia River's interior basin in a series of gentle terraces. We were travelling through forested country and before long the warm red trunks of *Pinus ponderosa* were flashing by and we knew that we were in Eastern Washington.

Now the dark forest was brightened by an occasional larch tree, *Larix occidentalis*, clothed in new raiment, delicately green and delicately textured. In the fall these trees are glorious and are the only conifers that join the deciduous trees and shrubs in transforming the sombrous forest into a dazzling world of color. The evergreens stand dark and disapproving while the deciduous tree world goes mad with flamboyancy. Cottonwoods, *Populus trichocarpa*, riot in shimmering yellow; vine maple, *Acer circinatum*, sets the underbrush afire with golden flame and the mountain ash, *Sorbus occidentalis*, blushes scarlet in the clearings. Above all, the towering larches thrust their golden torches into the sky. Brilliant color everywhere and still the evergreens disapprove.

When winter comes these lovely larches become the ugly ducklings of the tree world—unloved and disowned by all true evergreens. Disowned because they do not conform. They dare to be different. They are guilty of ignoring the evergreen's basic obligation to remain fully clothed at all times. Hence they stand in disgrace during the long, cold winter months. But they cannot be wholly blamed.

In the moment of their greatest glory, Winter, that cruel usurper of seasonal power, sends the east wind to snatch away the larches' golden autumnal mantles and then empties his snow clouds to outline their bare branches in chill ermine and drive the life of them into their nether roots buried deep in Mother Earth. Then when winter starts its slow retreat northward these larches remain for weeks as though bereft of life until, at last, on an unexpectedly warm day in early spring, they revive in a miracle of resurrection, a kind of arboreal Easter, and by their soft beauty bring glad tidings to the winter-weary forest. I am sure that the spirit of spring, the spirit of the eternal renewal of life, must be felt by the somber fir trees and the regal pines and by the hemlocks and the cedars,

as well, and that they must, in their mute way, ask forgiveness of the lovely larches.

On we rode, past the towns of Cle Elum and Ellensburg and on into the exciting Yakima canyon. Here the driver must keep his eyes on the road which follows the Yakima River, deep in its tortuous gorge, for many miles. Sometimes the road is near the river level with only an occasional pine tree between the shoulder of the highway and the hurrying water and sometimes it curves high on a hill's steep flank, hundreds of feet above the river. Spring had been felt but little here in these bare basalt hills.

Coming out of the canyon we were soon in Yakima, a city famous for the apples grown in its broad valley. Past Yakima and Wapato we ran out of the orchards and were soon in the hills between Toppinish and Satus creeks. Here we saw evidence that bunch grass, *Agropyron spicatum*, is beginning to reclaim the treeless hills. In the early days the hills and prairies where bunch grass grew nourished a thriving cattle industry, but as is often the case, overgrazing proved fatal. It is good to know that this fine grass is reasserting itself.

Our first stop was on the banks of Satus Creek just before the road began its climb to the low pass. We had been watching for a certain little composite which we had learned to use as a floral barometer. If *Crocidium multicaulis* is in bloom abundantly at this spot we could be reasonably certain that the other wild flowers we hoped to find along the way and in the hills would be in their prime. We were happy, therefore, to find small open glades along the creek carpeted with the soft yellow of thousands of the little dandelion-like flowers who seem to love each other's company so much that solitary plants are seldom seen.

We crossed the creek on a small bridge and explored the north slope of a low bare hill. This was typical scabland. It is rough to walk or climb on because of the black basaltic outcroppings and the sponge rocks that are scattered about the ground. These rocks are lightly embedded in the thin topsoil and are deeply pitted. Some of them are covered on their exposed surfaces with a very bright green moss that has the appearance of velvet. Others have small round cushions of moss like halves of spherical emeralds clinging to them. It is among these rocks that *Viola trinervata* loves to grow. This desert violet has everything to recommend it to flower lovers except that it does not take kindly to removal from its chosen home. The leaves are gray-green, pedately-parted and they get quite stiff with age. At first glance the flower, held well above the foliage, appears to be composed of three petals, two lateral and one below, of a clear orchid, joined together with a golden clasp. Upon closer inspection the two upper petals appear. They are a deep, rich violet, a color which absorbs so much of the sun's rays that it seems a part of the background. These violets are lovely to behold, as individuals or in drifts among the rocks.

We had our luncheon on the grassy bank beside the running water, and while so engaged the sun broke through the clouds that had been with us all morning. The landscape brightened and so did our spirits for to us Eastern Washington and sunshine are synonymous. By the time we were ready to explore farther the sunbeams had unlocked the delicate fragrance that is this violet's special charm and as we approached the rocky hillside again we were enveloped in an invisible cloud of perfumed air that only the rare combination of desert violets in abundance, warm sunshine and a minimum of air movement could create. We are not trained to retain scent impressions nor to reproduce them in our consciousness upon demand. Hence as I write this I cannot recall this desert violet's fragrance but I would recognize the wild sweetness instantly if, perchance, I happened on this scene again under like conditions even though I were blindfolded.

We were soon on our way again. Over Satus Pass we went, down the fir-clad slopes, through the pretty town of Goldendale and its wide valley. Our next stop was to be on Columbia Mountain. Larry Semler was with us and because he knew the area well was acting as our guide. He had mentioned Columbia Mountain so many times that we expected something special in mountains. As soon as we reached Satus Pass we began to search the horizon to the south but no mountain worth the name appeared. We were well past Goldendale when Larry directed me to turn right off the highway into a very secondary road which cut through several farms and then angled up the side of a long ridge, treeless and much too rough for cultivation.

"Where is this wonderful Columbia Mountain?" someone asked Larry. "We are on it now," he replied. We were dumfounded. It was just a flat ridge between Goldendale's valley and the Columbia River and not very high at that. But it was high enough to give us several pleasant surprises. The first one came as we drove along the twisting dirt road. A glimpse of bright color brought us to a halt. We found *Fritillaria pudica* in compact abundance, so different from its usual scattered habit of growth. They appeared as a platoon of foot-soldiers marching down the slope of the roadside cut bank and each soldier wore a golden helmet. The impression of marching was heightened by the gentle swaying of the helmets as the light breeze touched them. We were surprised to find nearly forty of the little warriors in the loose line of march. These fritillaries, known locally as mission bells, when taken into our Seattle gardens will bloom nicely the next spring and perhaps show leaves the next and after that they are seen no more. They miss the long summer baking in the hot dry earth that they cannot get in our Western Washington gardens.

The sun shone brightly for it was still early afternoon and we were comfortably warm in the car. Near the top of the ridge but still on the northern slope we found a place to park and got out to explore. The wind was blowing at gale strength at this exposed spot and extra jackets were needed. We walked to what seemed a good vantage point from which to view Goldendale Valley and Mt. Adams. The fertile valley was spread at our feet and its great extent was evident. Farm buildings on the far side and at the other end were barely discernible. The valley floor was a checkerboard of black, gold and new green and the farmsteads scattered aimlessly about, each punctuated by a gaunt and restless windmill, were weathered gray and innocent of paint. Freshly plowed fields of black loam grew in extent before our eyes and the golden stubble fields diminished in area as the tractor-drawn gang plows made their endless rounds to prepare the soil for the coming wheat crop. The tractors appeared as small insects, whose droning we were too far away to hear. Tall dust devils sped their whirling way across many of the fields for the wind was strong there, too.

Across the valley and seeming to rise out of the far edge of it stood Mt. Adams, its vast snow fields glistening in the sun. This imposing mountain has no near competition and this tends to make it appear more enormous than it is. It is 12,620 feet high and its great white bulk rises fully 8,000 feet above the surrounding country. Soon Eileen, my wife, who is never happy when the wind is cold, and our daughter, Sherry, and Larry drifted away to search for *Ranunculus triternatus*, which was known to make its home on this bare ridge. I stayed awhile to become better acquainted with Mt. Adams, a mountain that we have neglected in our summer wanderings.

I reviewed in my mind the whole chain of exciting peaks that grace the Cascade Range from Mt. Baker in the north of Washington to Mt. Shasta in northern California. This chain has one broken link. I was thinking of ill-fated Mt. Mazama in southern Oregon, the once great peak that destroyed itself and is now known as Crater Lake. I thought of the great mountain-maker and of



Basalt scree and cliffs—home of *Penstemon barrettae*. Albert M. Sutton.

the infinite care with which he chose the site for each of his tremendous creations. In other mountain ranges, such as the Rockies and the Sierra Nevadas, he tumbled and jumbled his mountain material into ragged ridges, high plateaux, great escarpments, continuous chains of massed mountains, always wild, sometimes very high but he was most careful that no peak rose too high above his brothers. In the Cascades it was different. Each white mountain stands alone, a monarch in his own right, rising tall and beautiful from the surrounding countryside. No peak stands shoulder to shoulder with a brother peak to the mutual dwarfing of both.

Mt. Baker, seen from Port Townsend on the Olympic Peninsula or from an incoming steamer steering an easterly course in the Strait of Juan de Fuca, rises almost from the water's edge and its white silhouette against the blue heavens is an inspiring sight. Sometimes when the ground mists are heavy and the sun is low in the west Mt. Baker becomes the essence of ethereal beauty, a rose-gold confection seemingly afloat on the gray clouds that have not yet been brightened by the spreading colors of the sun's last rays. The great mountain-maker chose well for Mt. Baker.

He placed Glacier Peak in the midst of the unbelievable North Cascade Wilderness Area which extends many miles southward from Mt. Baker. This

is a region of wild and jagged peaks that pierce the sky at odd angles and bear names that are surely a challenge to the climbers of mountains. Blizzard Peak, Mt. Challenger, Forbidden Peak, Mt. Formidable, Mt. Fury, Sinister Peak, Mt. Terror and Mt. Torment are a few of them. But Glacier stands among these lesser peaks as a nobleman stands among his kneeling vassals. They do not dwarf the great one by their proximity. Rather they emphasize his lordliness.

To the south again and dominating the Puget Sound area is massive Mt. Rainier, highest of all Cascade peaks and the nearest to Seattle. Rainier reigns alone from its throne of low wooded hills and is wonderfully photogenic with the quiet waters of Puget Sound in the foreground and the green hills in the middle distance. From Spirit Lake, farther south, one may see two symmetrical cones, white and shining—Mt. St. Helens reaching heavenward and St. Helens again perfectly reflected in the lake's still water. In Oregon, Mt. Hood, near Portland, has the Columbia River at its feet and the leaning sharpness of its crest has a special beauty of its own. On and on the peaks march, ever southward—Mt. Jefferson, Mt. Washington, the Three Sisters, grouped but none detracting from another. Let us steal quietly past the ghostly emptiness where once stood mighty Mazama and hurry on to Mt. Shasta standing at the end of the line like a portly exclamation point. Mt. Shasta is a mountain of great beauty when fully snow covered but appears somewhat shabby when the hot California sun has done its work. All of these mountains are well placed and are shining accent points in the range's long continuity.

But Mt. Adams! Of course, it too dominates its environs and stands tall and white for all to see but there seems nothing dramatic about the mountain in relation to its surroundings. Its base is hemmed in by low forested hills that roll away to the east, lose their verdure as they mingle with the still lower scabland ridges and finally flatten out as rough sagebrush desert. This does not seem a worthy setting for a great peak. It is as though the great mountain-maker, failing in strength after his enormous labors, and wishing to rest, had tossed his one remaining mountain, Mt. Adams, carelessly aside, caring not at all where it fell. As I watched the play of light on the snowy slopes I found great beauty there, the same beauty that is always present when a snow dome rises alone into the sky, but, somehow, the beauty of this peak does not thrill me as does that of Baker or Rainier.

Regretfully I turned away and joined the others where they were admiring the delicacy of the foliage of *Ranunculus triternatus*, a small ground-hugging buttercup with finely cut leaves that are as charming as the lacquered yellow blossom nestled amid last year's stricken grass. Without those bright flowers one would never find the plant at all. Returning to the car we were glad to find shelter there from the cold wind. The road crossed the top of the ridge and wound down the hillside, curving to follow the contours of the southern slope. Not yet had we caught a glimpse of the Columbia River or of Oregon beyond. Cultivated fields, grazing lands and fields enjoying a fallow period bordered the road and were well fenced. Few were the fence posts that did not serve as a perch for a meadow lark and as we passed we were serenaded with the exultant bursts of cheerful song. It was a triumphal march with the constant thrill of lark music to accompany us.

We stopped to watch a lark through the binoculars. He was brought so close to us that we could see the swelling of his throat as he sang and it seemed as though the song came clearer and more joyous because of some unexpected magic of the polished lenses. As Larry took his turn with the glasses he caught a flash of color beyond the lark and upon closer inspection he told us that there was something worth investigating in the field where there was evidence of

considerable dampness. We crawled under the fence and there ahead of us was a broad drift of rose-pink where *Dodecatheon poeticum* defied the lethal plow and for us alone, perhaps, and for the birds of the field, had prepared a carpet of lovely color. Rose-pink is a general term and does not indicate the individual color variations of these dainty dodecatheons. The black earth from which they grew formed just the right background for their happy blending of color and the sun's low angle gave them added brilliance.

Resuming our way we rounded a sharp curve and there ahead of us stretched Oregon and far below us rolled the Columbia. The whole southern horizon from east to west was filled with the northern part of central Oregon. In the slanting light this portion of the state appeared as a series of terraces rising from the river. In many places diagonal cliffs cut through the terraces to enchant us with beautiful geometrical patterns of light and shadow. Many of the upper terraces were in various stages of cultivation to judge from the tawny color of some and the light green and earthy brown of others. Our immediate and downward sloping foreground, being a part of the Evergreen State of Washington, of course, was green—the green of new grass.

Oregon presented a tremendous landscape, properly completed with lazy clouds in a sky of tender blue. On the cliffs opposite us we knew that many of Oregon's choicest plants were in residence. We were comforted to know that these same plants had their colonies on the Washington side and that in the morning we would make their acquaintance.

We were near the eastern portal of the gorge of the Columbia which extends many miles westward. As the others took pictures from our vantage point I had a few minutes to think about what might have happened in the past to form this great gorge. The Columbia River, or its ancient ancestor, a great serpent of living water, sustained at its source by the unending fountains that gush from the depth of the earth, found its passage to the ocean blocked by the slowly rising range of the Cascades. The serpent recoiled upon itself and in the slow course of time gathered its strength for the battle that would come in some distant age.

The empty lands of eastern Washington and Oregon were slowly inundated. The thwarted river's identity was lost, drowned in its own impounded waters—in the waters of a vast inland sea that grew in volume and extent as the years stretched into centuries. Still the youthful Cascade range maintained its blockade and the interned flood could not gain the ocean. The ice age crept down from the polar regions and our part of the world was caught in the grip of unremitting cold. The vast Cordilleran ice cap forced its fearful punishing bulk well into western Washington and maintained itself there until that climatic cycle's nadir was reached and the agonizingly slow upward swing to warmth began.

More centuries passed into geological history. The lovely warm breath of a relenting nature brought changes to this beleaguered land. An almost forgotten sun rediscovered a region that once it had loved. Warm winds, the boisterous Chinook wind, swept over the mountain barrier from the southwest, hesitatingly at first, and then with full vigor carried on the assault against the stubborn cold. The ice crystals of the sprawling ice probe and the lightly compressed snowflakes that carpeted the uplands in white learned that permanence, hardness and immobility were no longer theirs. A phenomena known as melting changed them instantly into water, yielding, fluid and volatile. With the melting of each ice crystal and each snowflake more water poured into the land-locked sea. The ice cap retreated to its arctic home and the waters rose. Century followed century. The Columbia lay impotent, unrecognizable and forgotten.

Proudly the Cascades surveyed that portion of the earth's surface above which it towered. To the west tossed the mighty Pacific Ocean and to the east,

the captive waters of the inland sea. How noble! How grand to be powerful enough to thwart the laws of hydromechanics—to say “Nay” to the waters of the unhappy sea which, by every right, should have mingled its freshness long ago with the saltiness that is the ocean’s outstanding attribute.

It is not well to be too proud. Time and the elements are the mortal enemies of all earthy formations that reach for the sky. Their tool is erosion. All mountains must eventually succumb to its deadly work. So, in time, the weakest link in the Cascade chain was broken and the eager water found the way opened and the inland sea poured its pent up might through the breach, enlarging it. More and more water, carrying boulders and scouring sands, made greater yet the break. Then when the surplus water had drained to the ocean and great areas of land lay exposed to the sky once more, there emerged old Columbia, taking up his ancient task again. These have been my thoughts and right or wrong I found them exciting. And now as I watch the mighty river flows quietly between the frowning cliffs of the broken range—flows to the salt sea.

We watched the sun out of sight and then in the gathering twilight drove on to the town of Hood River, in Oregon, where we found a good meal and a motel on the bank of the Columbia.

Early next morning, with the sun shining and a cold wind blowing, we sought the basalt cliffs on the Washington side of the river, near Bingen in Klickitat County, and found only disappointment. These cliffs are high and vertical and at their feet are rough talus slopes where chunks of basalt of odd and irregular shapes have fallen. Fracturing of the cliff face leaves a raw scar which detracts from the weathered surface where chartreuse lichen gives the only relief from the dismal gray and dull black of the unadorned basalt, except when *Penstemon barrettae* is in bloom. This year we were too early for this lovely display, hence our disappointment.

However I remember another year when we visited these same cliffs, later in the spring, with Brian and Margaret Mulligan and their two sons, Michael and Robert. We were fortunate then and there was gaiety on the cliffs. *Penstemon barrettae* had reached its greatest splendor. Each shrubby plant, whether it perched precariously on the cliff face or indolently reclined on the safer talus, was so covered with glowing flowers that the leaves were hidden. How does one describe the color? Is it a luminous pink that in any other flower would be an uninspired lavender? Or is it a lavender of great brilliance, or a fortunate blending of the two? Regardless of my confusion in describing the color of these flowers when they are massed on a cushion of glaucous leaves against the dark basalt the effect is startling and well worth travelling far to see. There was one clump spread out over the rubble that measured 62 inches across while those hanging like gay flower baskets on the vertical cliff were more nearly the size one would expect of a healthy penstemon. No other flower appeared to share the penstemon’s liking for this stark spot.

Although we were too early for the penstemons this trip we were not discouraged. We walked along the base of the cliff and soon found soil instead of rubble and another plant that made us forget penstemons for a while. At the base of the cliff was a small semi-circular cove, more nearly a cave which was all in shadow—and basalt in shadow is black indeed. As we passed this dark cave a shaft of sunshine, like a golden spotlight, illumined the only flower that grew there—a plant flashing a dozen sun-bursts before our startled eyes. It was one of the few aristocrats in an otherwise lowly family, the Umbelliferae. At first we thought it was a lomatium but later we found that it is sometimes known as *Leptotaenia dissecta*. It has a bold beauty. It is the beauty of numerous small flowers gathered together in compound umbels on long stems that hold the



Albert M. Sutton.

Leptotaenia dissecta, one of the few beautiful Umbellifers.

flower groups well above the finely cut, soft emerald foliage. Each umbel of yellow flowers is a shining star in a brilliant constellation—each constellation a flaming figure in a golden galaxy. Behind this galaxy glows the nebula of leaflets, emitting subdued light and behind all the black vault, not of the midnight sky, but of the basaltic cave. One plant, a ray of sunshine and a darkened cliff and we have beauty enough to last us until the mountains and the beauty there is ready to receive us.

Where ever we went in this fascinating area, except where it was heavily wooded, we saw these yellow leptotaenias, as solitary plants or in great hillside colonies. There is a dusky rose counterpart, too, that serves to relieve the overpowering yellow, where moisture is more abundant. Many lomatiiums, of several species, are scattered throughout the district and add some white and purple to the scene.

When we had finished with the cliffs, Larry led us through the small town of White Salmon, perched high above the Columbia where its residents have a spectacular view of Mt. Hood, and on into the wooded hills where modest homes and small farms lazed in the early morning sunshine. We left the car and walked along a straight dirt lane that led slightly uphill until a low summit was reached. On one side of the lane straggled a decrepit fence with wild rose and snowberry, *Rosa gymnocarpa* and *Symphoricarpos racemosus*, growing in its protection. These shrubs had not yet heeded Spring's urging to "Awake and clothe thyself in verdure!" Again, as on Columbia Mountain, each fence post, regardless of its degree of variation from the perpendicular, served as a podium from which the meadow larks poured forth their adulation to the morning sun. Smaller birds were busy with their thicket-hopping and a flight of crows, their raucous cawing harsh on the quiet air, stilled for a moment the music from the fence posts.

We reached the turning of the lane at its high point and there ahead of us, many miles to the north, Mt. Adams stood in dazzling beauty as the ardent rays of the morning sun recoiled from the mountain's glistening slopes. Little puffs of clouds were born when the sun's inquisitive rays met the cold mountain atmosphere and as these cloudlets ascended into the blue sky above the scintillating dome they lost themselves and we saw them no more.

We turned in our tracks and looked in the opposite direction. Mt. Hood had replaced Mt. Adams. We were standing equidistant from the two shining peaks. Between us and Mt. Adams had stretched nothing but wilderness—miles of tree-covered hills and steep-sided valleys. The scene was different when we

looked at Mt. Hood. Farm lands lay in the immediate foreground and lazy plumes of blue wood smoke rose from several of the farmhouses to blend with the dark woods at the edge of the fields. One could almost taste the Sunday morning breakfasts being prepared there.

Continuing down the lane where it cut around the side of a low hill, we came to what Larry said was ladyslipper country. All we saw was a hillside just barely conscious of winter's withdrawal and not yet awakened by the magic touch of spring. Bare alders and maples with a few small evergreens made up the tree cover of the hillside and it was under these deciduous trees that we hunted for evidence that *Cypripedium montanum* made this drab spot its home. Last year's fallen leaves had no sooner finished their swirling descent to the ground than they were covered with a blanket of snow which had remained until recently. Now the hillside was paved with a covering of wet leaves which made a slippery carpet an inch thick. Of course, we did not expect to find more than mere pips that had pierced the sodden leaf layer to reach the light. Diligent searching disclosed many lettuce green pointed shoots about an inch high, but they were not all ladyslippers.

Mostly the shoots were solomon's seal, *Smilacina amplexicaulis*. Larry told us that the plumper shoots were sure to be ladyslippers and that they could be dug at this time, if care was used, and that one could have these lovely orchids blooming in his garden within a few weeks. Clumps of these ladyslippers are very ornamental with their fresh foliage and many showy flowers with white sac-like lips, oblong and faintly veined in purple, and long reddish-brown twisted lateral petals. If they are happily situated in one's garden and the snails are kept from them they may delight all who behold them year after year.

(To be continued)

A DINNER FOR MR. TOTTEN

DOROTHY E. HANSELL, *New Providence, N. J.*

Forty members of the American Rock Garden Society gathered at the Swiss Chalet in Ramsey, New Jersey, on the evening of June 23, 1961—the occasion, a dinner in honor of Edgar L. Totten, the Society's Secretary, and Mrs. Totten. Four days later, Mr. and Mrs. Totten departed for their new home at Hendersonville, North Carolina.

It was a warm, friendly, informal affair—no set program, no lengthy after-dinner speeches, but long before the evening had far advanced, Mr. and Mrs. Totten were aware of the esteem and affection in which "Ed" is held.

Harold Epstein, in a few well-chosen words, made the presentation of an Amos (perpetual motion, no less) clock and a generous cash purse to which some ninety members of the Society had contributed. He reminded the diners that when Mr. Totten became Secretary in September, 1955, the secretarial responsibilities were being done by three women: Mrs. Mary Johnson as financial secretary, Mrs. Ida Thomas as recording secretary, and Mrs. Dorothy E. Hansell as corresponding secretary. Mrs. Thomas and Mrs. Hansell were present at the dinner, as was Alex Reid, Treasurer of the Society.

Jerome A. Lukins, a member of the Board of Directors and a past president of the Amateur Magicians Society of America, entertained the gathering with sleight of hand tricks and amusing patter. Altogether it was a delightful party to speed the Tottens on the way to their new home in a pleasant section of North Carolina, from which Ed will continue to function as ARGS Secretary.

ROCK GARDENER'S PARADISE

GRACE F. DOWBRIDGE, *Springvale, Maine*

EVERY ROCK GARDENER dreams of a natural rocky hillside as a paradise on earth, but few of us are so fortunate as to possess one. Three years ago when I remarried and moved to my present home in Springvale, I began to think of this garden as such a paradise—and all of our visitors seem to agree. My husband too is an ardent gardener, and while I am playing with plants, or just “puttering around” and dreaming up new plantings, he does the routine mowing and clipping, and mixes fresh soil for me, or works in his own pet projects in the vegetable garden. No wonder I feel so truly blest!

My previous gardens had been the “handmade” varieties: the first in a small woodland with an abundance of wildflowers found nearby; then a completely artificial rock garden for the western alpenines and wildflowers which had been introduced to me by Betty Hayward, a near neighbor for a time; and later another garden which at least had a natural slope, but all the rocks brought in. Betty had also initiated me into the fascinations of growing from seed, and the pleasures of ARGS membership, for both of which I shall be forever grateful. These varied experiences over some thirty-five years have been immensely valuable in the garden here.

There seems to be almost every wanted condition for planting somewhere on these few acres, with sunny beds, shaded woodland, swampy area and dry hillside—and everywhere ROCKS of all sizes from gravel to room-size boulders, many of the old-timers with beautiful coats of moss and lichens. We are well protected from weather extremes, being high enough to escape many frosts, and wooded on the north and west, so that both cold winter winds and hot summer sun are kept from most of the gardens. The long wooded ridge above and behind us is composed of a series of small abrupt rocky hills divided by miniature valleys, often kept damp by springs, and drained by small brooks which run wildly in the spring. Several of these small hills are in the garden area, with a quite steep one rising directly behind the house. Many of the large trees there went down or were badly damaged in the recent hurricanes, and most of the remaining ones were taken down two years ago for safety's sake. We missed them badly for a while, but welcomed the added sunshine around the house. It also gave me another type of garden, and “I'll try it on the hill” has become a regular by-word.

When my husband took over the place in 1927 the house was set on an ungraded slope of gravelly soil with woods close around. During the next few years he moved richer composted soil—by the wheelbarrow load!—to grade up the present lawns on two levels around the house. The rock gardens were made by fitting in rocks of movable size around the large boulders in a natural effect. They form a series of small terraces with rock paths for easy access. The perennial beds are on more level areas, but I believe every one has at least one boulder included, too large to have been moved out readily! It is quite a rarity to dig deep into the soil anywhere and not to hit a rock, but the plants surely love it.

Hundreds of plants were moved from my previous garden to this one, mostly the small and more choice things. Many other large perennials and shrubs were left for sheer lack of time and strength, and some are badly missed. On the other hand I have gained many choice things which were already growing here. Andy's past wife and I were close friends for many years, and had exchanged many plants, so that there were happy surprises here of things which I had lost in the other gardens. Some of the more rampant plants had spread

badly during her illness, and much of the first fall which I spent here was used to clear out some areas and make plans for replacing the spreaders with plants from the other garden.

The following spring and summer were truly hectic. We would spend a few days or a week in my former home, about thirty miles distant, dig and pack plants like mad, working from the endless lists which I scribbled in every spare minute. Then the next week plants were set into various parts of the gardens here. Then another session in the old garden, until the weather became too hot and dry for more transplanting. (By that time we had begun to move furniture as well, and that is a tale in itself, since we each owned a home full to the roof of furniture and "things"!) One very useful trick which we used in moving plants was to pack many things such as *Phlox subulata*, violets, asters and others in plastic bags which could be tucked in around the edges of the boxes and cartons in the car trunk.

Just as Andy predicted at the first, it has taken me these three years to become really acquainted with the garden conditions and how plants will grow in each area. Plants were put in mostly by guesswork the first season. Some were well satisfied at first try, many others have since been moved again. Almost none have been lost, and many have been happily rejuvenated on some lucky "hunch" as I watched the plants' behavior. In making notes for this account I found there are at least fifteen different areas, large and small, but each so varied by conditions of light and shade, soil and moisture, as to have a definite "micro-climate" which is more favorable to some particular group of plants than another area perhaps only a few feet away across a path.

Would you like to take a quick tour of the garden, in mind's eye? Snapshots have so far failed to give a clear picture of the heights and contours which add so much interest to the garden as a whole.

Most visitors at any season (except perhaps iris time) notice first the flowers below and beyond the house and begin their tour in that direction over a strip of lawn. Along the base of the high-set porch are shrubs of white-flowering almond, syringa, old-fashioned snowball (which each year attempts to take over the whole bed) and a fringe tree (*Chionanthus*) which is truly a small tree of some fifteen feet here, with a shower of its fragrant fringy white sprays in June. Blue and white violets make a ground-cover, with a wide edging of hostas which provide varied foliage and a succession of lavender-bell stems among the six or more species. We hope to add the old-fashioned white August lily. A recent gift of the dwarf white variety has been planted along a woodland path for trial.

On the lower edge of the lawn is a long bed of annuals and our favorite miniature glads to provide midsummer color and house bouquets. Spring bulbs, oriental poppies, tall purple globe thistles, and peonies bring interest in their seasons, while clumps of honeysuckle and syringa provide nice green backgrounds to make up for their otherwise dull existence after bloom. Yellow and white Scotch roses ramble over a gray boulder, backed by a beautiful mountain cranberry (*Viburnum trilobum*) which is a delight to behold at any season from its showy white flowers in June to the many sprays of berries changing slowly from yellow to bright red, as lovely as holly. They often stay on all winter before migrating birds strip them off. A row of hybrid blueberries also gives continued beauty of flower, fruit and foliage. Farther on next to the woods are many wild shrubs—viburnums, wild blueberry, chokeberry (*Aronia*), clethra, flowering raspberry and rose acacia, the last two needing constant supervision and restriction.

The flowers that first attract interest are mostly hardy perennials, but of all sizes and kinds, the garden here nearly level or with only a slight slope. As

visitors reach the corner of the house they often exclaim at sight of the steeper slope made into a rock garden and reaching up to another stretch of lawn at the back of the house. There seems always to be something colorful and exciting in bloom somewhere here. Although I moan over each favorite as it goes by, I know another is just beginning. Each year is bringing more order and beauty, as the too rampant things are moved out, or at least discouraged from seeding.

There are masses of pulmonarias in clear blue, rose and mixtures, together with the lovely one with white spotted foliage; trollius and polemoniums, violets in all colors, including some dozen or more species and hybrids; several color varieties of the little crested iris, from white and palest milk-blue to deep violet; several other dwarf iris species and hybrids, including the purple *I. setosa*, lavender *I. missouriensis*, a lovely yellow—perhaps *I. forrestii*—the western *I. tenax* and *I. innominata*, and others. Clumps of wild geranium in mauve and white, the pale *G. pallescens*, dwarfish blue *G. grandiflorum* and the taller husky *G. pratense* with its pale lavender and white varieties, as well as bright magenta *G. sanguineum* and its more dwarf white form, are colorful for long periods. The little wild ragged robin, *Lychnis flos-cuculi*, in bright pink and pure fringy white, seed around but are seldom pests. *Lychnis viscaria* in several shades of rose also shows bright patches of spring color. Of course the big Solomon's seal is here, with tall meadow rues in white and lavender, and masses of blue and white Canada phlox for cooler color. A mass of *Baptisia australis* fills the far corner with its gray-green foliage and countless stems of deep purple-blue pea flowers, followed by odd black seedpods for the benefit of winter arrangements. This is a fine background for the later blooms of white *Penstemon digitalis*, phlox, blue and white peachbells and several species of aconite. Borders of old-fashioned bright yellow and orange polyanthus edge some areas, little pink and white English daisies others.

One large gray boulder is background for masses of orange geum with a ruffle of purple violets and a clump or two of blue centaurea. Later, delphineums in shades of blue back up the rock, along with shasta daisies, Japanese iris (the first place we have found where this is happy), and filipendula with its effective ferny foliage and feathery white sprays. A clump of *Potentilla alba* has done well here, with lovely grayish foliage and a summer-long succession of white flowers. Also, to my surprise, a clump of the west coast eriophyllum is happy here, covering itself with golden daisies for many weeks. Mats of rose-purple prunella border part of the grassy path here, and a little mimulus from Dr. Worth's collected seeds is forming green mats which I hope will prove winter-hardy; its bright gold monkey flowers were quite profuse during its first summer. Lupins in many colors, and the similar thermopsis with spikes of soft yellow, are followed by masses of phlox in variety, and several species of *Liatris*, with a low dwarf one beginning in July, and taller ones continuing into September.

Several clumps of Canada lily enjoy the shade of violets and phlox over their roots and are often head high, in yellow and orange, and most exciting last summer, the lovely red variety. Foxgloves self-sow in profusion and usually sent up new basal growth to promise renewal of favorite colors. Blue and white platycodons, both the tall ones and the dwarfish blue *P. mariesii*, combine colorfully with mallows in pink and white, the bushy *Malva moschata* and a much taller species. Gloriosa daisies are truly spectacular, huge black-eyed Susans in many variations of orange and brown markings. These and the mallows continue to bloom into late fall. Another long-blooming plant which seeds around, in addition to being perfectly hardy, is the tall blue lobelia, with its lovely pure white form. A few plants in pretty light lavender have appeared in the past year, to add variety.

A low rock wall runs along one edge, with narrow beds above and below. At its farther end the soil is quite light and sandy, and many species of sedum and sempervivum are settled among the rocks along the path. Other sedums and dwarfish plants are in the upper bed, such as dianthus, alliums, a patch of chives, dwarf veronicas and geraniums, with lavender and white bristled asters and golden chrysoopsis for fall color. Here too is a very dwarf filipendula with a flat basal mat and flower stems only a foot high. A lovely midwesterner, *Aster sericeus*, leans its silky silvery leaves over the top of the wall and covers itself with inch-wide flowers of an unusual and most lovely bright lavender. A fine pink erigeron blooms for weeks but spreads rather too freely and must be watched, while the tiny-flowered *E. flagellaris* would also completely cover the ground if allowed. Just across the path, the bank is thickly carpeted with thyme and that most choice of dwarf shrubs, *Gaylussacia brachycera*, which delights all year long with its reddish evergreen foliage mats, delicate pink flower-bells, and—sometimes—bright red berries in fall. This is slowly spreading across the path toward the flower bed, and it may have the whole area so far as I am concerned.

At the foot of the wall it is more shady and moist, and several wild flowers do well, red trillium and Jack-in-the-pulpits (should I say Jacks?), with ferns to fill in when they go dormant; white Siberian iris and a lovely light blue with flat blossoms—name unknown. A few little wild orchids, the lovely pink bearded *Calopogon pulchellus*, came up and bloomed well the past spring, but the even smaller pogonia failed to show up. A large clump of rose loosestrife is so happy that I haven't had the heart to move it as yet, although it is much too husky-growing to fit in well. Another seemingly inappropriate plant in the drier end is the Louisiana iris, *I. foliosa*, with long droopy leaves and gorgeous huge blue flowers which nestle down in the foliage instead of standing erect. Just why it should endure and even like this area is one of the garden mysteries; probably it is easily adaptable and will accept as happily some other spot.

Colorful as are these perennial beds, my greater interest—and probably yours—lies in the rock garden slope which rises more steeply. There are several large boulders here and there, with smaller rocks added wherever needed to make good plant pockets or simulated ledges. This area has much morning sunshine in summer months, but little or none in the afternoon because of the shade of a giant beech nearby. At the foot of the slope a rock path runs between rock garden and perennials, bordered with a collection of dwarf astilbes. These provide a long season of bloom, beginning with the types often sold in florist shops, but completely hardy out of doors, making bushy clumps of attractive foliage topped with many spikes in two shades of pink and pure white. Next come the handsome red 'Fanal' and *A. simplicifolia* with graceful airy sprays of palest pink, a pleasant contrast to the stiff spikes of the other species. The very dwarf *A. crispa* blooms in midsummer with very short deep pink spikes just barely atop the curled deep green foliage mats—this is one of the hybrid forms. Latest of all is an unnamed one with stiff pink spikes over low light green foliage clumps, in August and early September, perhaps *A. sinensis pumila*.

A clump of *Daphne cneorum* is some fifteen years old, spreading over this slope, an especial joy to me since I had little luck with it myself, in the other garden. Between this and the path are mats of gray-leaved *Potentilla tomassiniana*, with small clumps of ferny-leaved *P. fissa* and the dainty white-flowered *P. rupestris nana*, and patches of woolly thyme. *Iris lacustris*, that sweet miniature of the crested iris, has spread so rapidly that I have had to clear out some sedums to give it more space. This is always a delight because, after generous spring bloom, it opens surprise buds at intervals all summer. Next to it is a

colony of a little androsace, *A. lanuginosa* I believe, which has thrown its little rosettes on red ribbon-runners in greatest profusion, atop the iris and along the path. This has also had a new area cleared for its future expansion.

Several young plants of shrubby penstemons were tried on this slope and have done well. *P. cardwellii albus* covered itself with lovely pure white blossoms, the first penstemon to arouse Andy's interest. Another with smaller dark leaves proved to be a hybrid, ancestors unnamed at the moment, with lovely red flowers. A small spring of Texas rose, *R. foliolosa*, came up with one of the penstemons, to my great joy, and has bloomed sparingly. This I grew from seed many years ago, and it romped all over the other garden, coming up in well-chosen but unexpected places from long stolons. Everyone loves its dainty palest-pink inch-wide roses, but few ever succeed in making new shoots grow. I hope this start will spread its little stems around; they are spineless and only a foot tall, and flowers are produced off and on all summer.

Another favorite little plant here is *Gypsophila repens rosea* which drapes itself over a flattish rock and is a shower of delicate pink flowers over a long period in early summer. Clumps of white iberis are here, and colorful *Euphorbia corollata*. Polemoniums, dicentra, dodecatheons in pink and white, dwarf phlox in many colors, and also the lovely *Phlox procumbens* (formerly *P. amoena*), *Silene caroliniana*, dwarf scabiosa—all show spring colors along with tiny drabas in yellow and white, a nice pink *Lychnis alpina*, and yellow alyssums. Yellow-eyed grass springs up later with its myriad golden flowers, as does the lovely pure white *Sisyrinchium mucronatum album*. Several clumps of prairie smoke, *Sieversia ciliata*, bloom sparingly and always bring questions from visitors.

Geranium lancastriense and *G. dalmaticum* spread over some spots between the rocks, while further up is *G. renardii* with its thick grayish leaves and white saucers. *Anthemis biebersteiniana* contributes effective gray-fern foliage topped by brilliant gold daisies in summer, and *Artemisia* 'Silver Dome' adds its silky gray balls. Another gray-leaved plant (I am very partial to gray foliage) is *Centaurea uniflora*. Its buds blighted this past spring, depriving me of its handsome purple flowers, but it has increased from one to many basal rosettes, and was easily divided and reset in what seems likely to be a better spot. Lovely patrinia, recently described in the *Bulletin*, is spreading nearby.

On the far side of one large boulder are several woodland plants which seem to get enough shade to satisfy them, but will probably be moved eventually to the real woodland. These include hepaticas, foamflowers and wild ginger. The handsome evergreen ginger also spreads here, and clumps of triclyrtis, that unusual Japanese woodland plant which buds in September and opens its pretty upright white bells in October. This is often browned by frost here, and will be tried in the woodland for better protection. Columbines like this upper rock garden and provide a lot of color from both species and hybrids of all heights. A clump of the white pasque flower has been perfectly happy, and I have added a batch of seedling plants which should include both purple and red varieties.

One boulder here is completely covered with a close mat of *Euonymus kewensis*, while another squarish rock so resembled one in the other garden, on which *Cotoneaster apiculata* was growing, that I moved the shrub into place and fitted its stiff stems across the top in a perfect fit. A young plant of *C. dammeri* had been moved several times in trying to find a spot it liked in the old garden, while my first attempt here proved the perfect answer. It is laying its beautiful flat branches in every direction across a long slanting boulder, and is well covered with its showy white flowers in spring and red berries in fall, one of the most charming of its clan.

(To be continued)

OF COURSE YOU CAN GROW ALPINE PLANTS FROM SEED!

NELL LEE GOSLING, *White Pigeon, Michigan*

Recently one of our sons, who had never grown anything from seed since the "bean" in kindergarten, asked us how we go about raising our alpine plants from seed. When I tried to tell him, I realised that it was impossible to condense into a few sentences a procedure that we have built up during 25 years, from our own trials and errors, combined with suggestions from dozens of seed growing instructions.

We decided to write down our ideas on the subject, in the hope that it might be of help to one of our future Gosling "alpinists", or some other beginning rock gardener, who is about to try his luck at this fascinating pursuit.

It seems to be generally agreed that it is a more difficult task to raise alpine plants from seed to blooming size than most other types of plants, but it is proportionally more rewarding. Being a successful propagator would seem to be an important asset to any alpine gardener. First, because it is often impossible to buy the plants we want in this country, and therefore seed from other collectors or from abroad, provides the only means of getting the species we desire. Secondly, so many of the choicer and more temperamental alpine plants have so precarious a hold on life, that we are in constant danger of losing them from our garden, unless we are able to propagate them, by either seed or cuttings, and so have more of them coming along. A third consideration is that plants grown from seed are sometimes better able to adapt themselves to one's garden, than plants that have become accustomed to life in another part of the country, where the climate may have been quite different. It is reassuring, too, when a pot of seed produces a dozen or more sturdy plantlets, to be able to try them in many parts of one's garden, with varied exposures and soil mixes. One is often surprised to find that the plant that grows best, is not necessarily the one that has been given the advantage of carefully following the book instructions.

At our house, a chain of activity is put in motion on that day in January when my husband comes in from the rural post box with the year's first package of exchange seed. While he is at his desk looking up the names that match the numbers on the envelopes, recording them, and printing up little 4" plastic labels for each, I am busy assembling all the material that we will need for our work.

This is my check-list:

- (1) a 3" pot for each seed packet
- (2) a can of stone chips
- (3) a can of coarse sphagnum moss
- (4) a pailful of soil mixture
- (5) a panful of sterile milled sphagnum and a large kitchen spoon
- (6) a can of "chick grit"
- (7) a jar of Rootone, with fungicide
- (8) a small box approximately 1" x 1" x 1"
- (9) a few toothpicks
- (10) something to tamp the filled pots
- (11) a large baking tin half filled with water
- (12) flats filled with sawdust
- (13) sheets of polyethylene, 1' larger than the flats in both dimensions
- (14) giant rubber bands

Since this may seem a bewildering list of items, including many things that must be prepared in advance, here is how we do it:

(1) The pots should be new or scoured clean. After scouring we soak them for a couple of hours in a permanganate solution, made by dissolving 3 or 4 five grain permanganate potassium tablets (obtainable in bottles of 100 at the drug store) in a large bucket of water. (2) We use crushed stone $\frac{1}{2}$ " or less, such as is sold for drives and roadways. A large 2 quart fruit juice can holds enough for 30 pots. (3) I save the sphagnum that comes packed around plants when shipped, use it moistened. (4) We use the same mix for all our alpine plant needs. No precise amounts, just a shovel full of leaf mold or neutral peatmoss, another of light garden loam, and one of sharp mortar sand. These are sieved together through a $\frac{1}{4}$ inch screen of hardware cloth and then a shovel full of stone chips is mixed in. (5) We buy the sterile milled sphagnum moss from our garden shop. It is light and powdery and needs to be well mixed with water until of a soupy consistency. (6) A 50 pound sack of "Chick Starter Grit" costs \$1.00 at the feed store. It is crushed granite and an absolute "must" for tiny alpines. (7) "Rootone, with Fungicide" is the same powder in which we dip cuttings and is available at any garden shop. I use the tip of a plant label as a scoop. (8) I use a small round plastic box in which one brand of zippers is sold. (10) The tamper should have a flat circular end $2\frac{1}{2}$ " across. A piece of wood, or a glass jar filled with sand will do. (12) Our flats are 13" x 16" and hold fifteen pots each. They could be filled with vermiculite or peatmoss instead of sawdust. (13) Use a good strong, transparent polyethylene. (14) Bands cut from inner tubes are perfect.

Seed planting, we find, is much more pleasant when done in our country kitchen-living-room, with a wood fire crackling cheerily, and the dogs nearby for company. No doubt, with all the mess, the basement or potting shed is the more logical place, but wherever one works, one must surely have a stool of the proper height to sit on, and a very good light. We use a goose-neck lamp that can be aimed exactly where needed.

The pots are filled with an inch of stone chips in the bottom for drainage, then a few sprigs of rough sphagnum over the stones so the soil will not settle into them. The pots are filled to the top with soil which is pressed down firmly with the tamper so that the level is about $\frac{1}{2}$ " below the top of the pots. A large spoonful of the milled sphagnum mixture is put on top of the soil. When it is spread about and allowed to soak in, there is less than $\frac{1}{4}$ " of sphagnum on the surface. Over this we sprinkle a teaspoon of chick grit, and then tamp it in a bit. This is to keep the sphagnum surface from washing about, and also to provide a grit surface for the tiny seeds to settle into.

We empty the seed from its envelope into the small box, and add a bit of Rootone, just enough to provide a light film of powder on each seed when well shaken. We distribute the larger seeds on the pot surface by pushing them out, one at a time, with a toothpick. If the seeds are too tiny for this, after shaking them up with the powder, we add a half teaspoon of dry milled sphagnum and shake again. When this mixture is scattered over the surface of the pot, the seeds are generally well distributed. Really large flat seeds, like those of lilies, we press edgewise into the sphagnum moss surface. *Anemone pulsatilla* seeds have their "tails" removed before being dusted and are much easier to handle without them. All seeds having appendages to help their distribution are able to germinate without them, and it may be are better off as less material is present to encourage molds.

When seeds are in place, chick grit is sprinkled over the pot, only a bit of fine grit over the smallest seeds, and a teaspoonful over the larger ones. Then we tamp the entire surface firmly, watching that none of the seeds adhere to the

tamper. The plastic label, giving the name and a number that indicates the date of sowing, and the source of the seed, is inserted and the finished pot is put into the pan of water until the moisture on the surface shows that it is thoroughly soaked. The pots are pressed into the filled flats and a sheet of plastic fastened over the top with a rubber band. The labels hold up the plastic an inch or so above the surface to make a miniature greenhouse of each flat.

We let the flats of planted pots stay in the warm house for a day or so, so that the seeds are saturated, and then set them out in the coldframe. They could be set out on a patio or any sheltered place. We put 1" poles under them, so that they will not freeze to the ground. When there is a snow we remove the plastic covers and let the snow drift over the pots. If the snow thaws, as it usually does with us, we cover them again with the plastic. If the weather stays below freezing all the time, we make a thaw or two by putting the flats in the greenhouse for 24 hours, and then return them to the coldframe to freeze again.

We suspect that snow directly on the seed pots is not necessary. The freezing under the plastic covers may have just as satisfactory results, and there would be no danger of some seeds being washed from pots during a sudden thaw. We plan to try some with no snow this winter.

At least ten flats of pots will have accumulated by early March, when we move them all into the greenhouse. The latest arrivals will have been outdoors for at least two weeks.

With no greenhouse, they could be left outdoors, in their own miniature greenhouses, to germinate later on, in the spring sunshine. We have never found that our germination improved when the seed pots were kept in the dark, and the danger is great that a few hours of reaching for light, before one discovers they have germinated, may ruin an entire potful of seedlings.

In the greenhouse the seedpots are put into a tile tank that is built at the end of the propagating bench, where it has extra bottom heat. A lid covered with transparent polyethylene can be elevated for ventilation, and a drain plug in the bottom makes watering the pots from below an easy task. A sprinkling of chlordane around the edge of the tank keeps out the pests. One could improvise in a basement with one of those large old kitchen sinks, that could be found at a junk dealer's or plumber's dump, with fluorescent lights properly placed above it.

In this warm, humid atmosphere some of the seeds will begin to germinate within a few days, and by the end of the month about 75% of the pots are filled with seedlings. They seem not to mind being left in the tank indefinitely but, when I am sure no more seeds are going to germinate in a pot, and the roots are down in the soil, I put that pot back in the sawdust filled flat, on a pipe shelf, and mist-spray it frequently.

Whether grown indoors or out, the small plants are soon large enough to be pricked off into small deep pots, or flats or frames filled with the alpine soil mixture and topped with chick grit. If only a few are growing in a pot they are left, and transplanted directly from the seedpot into the garden. Our only trouble from damp-off has been in a few pots where the seedlings were very crowded. We always dig out a dinner fork full of plants from these crowded pots, even though very small, and prick them off, just in case, though natriphene will generally control damp-off. When planting in a flat, I often lift a forkful of seedlings from eight different pots, and plant a row of each in one flat. Then I have an assortment to choose from when setting them out.

One is sure to have some pots that do not germinate; by mid June we put these back in their flats and cover them with plastic again. They spend the next seven months outdoors in a shady, out-of-the-way spot. We give them a weekly check, to make sure they are moist, and sometimes find a pot full of seedlings.

Generally nothing will happen until they are brought into the warm greenhouse tank in January. Then we have many pleasant surprises, for some of the choicest kinds will germinate after a year of sitting about. When they are ready, up they come. One year there were three pots of dodecatheon species, from different parts of the world, planted at different times the previous winter, all of which germinated profusely on the same day.

Some pots we hold over for still another year, if they contain a genera noted for slow germination, but with others (perhaps 10% of the total) we concede defeat after the second winter, wondering why we have failed.

Did the seeds dry out just as they were germinating, perhaps even before they showed a trace of green? This is unlikely in our tank but is sometimes the cause of failure when pots are left outdoors or uncovered.

Have ants carried off the seeds, or sowbugs and slugs eaten the seedlings just as they were starting to grow? Mice often dig up the larger seeds. It takes a great deal of ingenuity and care to prevent these raids, especially when pots are kept for a year.

Were the seeds too damp and cold and poorly ventilated, so that they rotted? One year we regularly examined plantings that we had subjected to three different growing conditions, through our son's high powered medical microscope. What we saw through the microscope convinced us that time spent baking soil and trying to produce "hospital" conditions was largely wasted, for great patches of the most horrible looking molds surrounded each rotting seed in spite of all precautions, and any batch of seed is apt to contain some that are not viable. It also proved to us that even alpine seed germinates much quicker and more certainly, in a moist 70° to 80° temperature, than under cooler or dryer conditions. Nor could we detect that the babies that were started in heat were any less sturdy when they grew up than their counterparts that began life under more rigorous conditions.

Probably the most frequent cause of failure is poor seed. If it has been improperly gathered, or kept too long, or under adverse conditions, there is little chance that it will ever germinate. Since this factor is generally beyond one's control, we always have something to blame for our failures.

One is tempted to gloat a bit when one surveys pots and flats full of lovely little tufts of plants of one's own growing. However, the real challenge lies ahead, and there are many disappointments before these infants are full grown plants blooming in one's garden. But that is another story.

A COMMENT ON SEED-SOWING

DORETTA KLABER, *Quakertown, Pa.*

In the April, 1961, *Bulletin*, Mr. Adamsen discussed seed raising with what seem to me complicated methods. Of course, each advanced gardener has his own way of raising plants from seeds, and I do not expect anyone to change to mine just because I find it easy. However, for the gardener new to growing alpenes and rock garden plants from seed I would like to say, "Do not believe everything you read about the necessity for pots, polyethylene, sterilizing, sifting, and what not". I am willing to admit that it would have been wise for me to plant a few of the known slow-coaches in separate containers that could have been held over for another year. Those that did not come up this year included rhododendrons, *Iris mellita*, *Sisyrinchium douglasii*, *Ranunculus amplexicaulis*, *Douglasia montana*, haberlea and a few others. However some of these are among

seeds that must be planted immediately when ripe. All my seeds were planted in late February and early March (which was as soon as the snow had melted enough this year). They were put in my home-made coldframes, in gravelly, unsifted, unsterilized soil mixture, with a light surfacing of vermiculite. Because many of these seeds are considered difficult, and many are extremely small, I list some of those that came up. Most did so in quantity and were transplanted by the end of June. Some have suffered since then for one reason or another, but most are growing lustily in the nursery beds.

- Adenophora nikoensis*
 Aethionemas
Alyssum wulfenianum
Anacyclus depressus
Anchusa caespitosa
Androsace chamaejasme, brigantiaca, lactea
Anemone lesseri, magellanica, rupicola
Aquilegia discolor, glandulosa, scopulorum
Artemisia glacialis
Cerastium alpinum
Codonopsis clematidea
Cyananthus lobatus
Dianthus alpinus, callizonus, and others
 Drabas
Dracocephalum tanguticum
Dryas octopetala
Dodecatheon pauciflorum, tetrandrum
Gentiana: Drake's strain, *hexa-farreri, ornata*, 'Kidbrook Seedling', 'Inverleith' (all Himalayans); *bellidifolia* (New Zealand); *verna, waltoni*, and several others
Genista humifusa
 Geraniums, including the white species from Alaska
Geum montanum, rossii
Hypericum polyphyllum
 Iberis, dwarf forms
Iris farreri
Meconopsis baileyi
Papaver alpinum
Platycodon apuyanum
Polemonium pulcherrimum
 Potentillas
 Primulas: all the vernal (including blues, pinks, goldlaced, etc.) auriculars, candelabras, *geranifolia*
Ranunculus calandrinoides
Ramonda myconi
 Saxifrages: mossy, encrusted, *primuloides, mandschurica*
Senecio abrotanifolius
Symphandra armena
Trollius acaulis
Parahebe lyallii
Viola "palmata", *gracilis, lutea* and others

Editor's note: It is doubtless foolhardy to present in the same issue two such diametrically opposed viewpoints on the treacherous art of raising plants from seed as those of Mrs. Gosling and Mrs. Klaber. We have had little success

with the rather casual methods which Mrs. Klaber advocates, yet others (among them Grace Dowbridge) have excellent results (even to the raising of eritrichium) from mere frame-sowing. Perhaps soil and climatic conditions are in part responsible, yet some elusive "green thumb" element must play an active role. We maintain, as we have in the past, that each gardener must find for himself, by experiment, the treatment of seeds most suited to his garden and his personality.

REPORT OF THE NEW ENGLAND UNIT

DOROTHY STILLWELL, *Woodstock, Vermont*

The New England Unit held its annual meeting in Auburn, Maine, on May 28, with Chairman Angie Pease presiding. The following officers were elected for the coming year:

Chairman: Ruth Hunkins, Plaistow, N. H.

Vice Chairman: Helen Gilbert, Danielson, Conn.

Secretary-Treasurer: Dorothy Stillwell, Woodstock, Vt.

Directors: Angie Pease, Auburn, Maine

Burr Bronson, Watertown, Mass.

Alice Baylor, Johnson, Vt.

Merle Emerson, Somersworth, N. H.

Mrs. Hunkins welcomed the new members present: Mr. and Mrs. Donald Lennox of Jefferson, N. H., who have started a rock garden nursery; Mr. and Mrs. Walter Gray of Portland; and Dorothy Brown of Boothbay, Maine.

It was voted to have a list of members mimeographed and mailed to all the New England members.

Ruth Hunkins reported on the by-laws. It was voted that a committee of three prepare by-laws for consideration at the next meeting.

The members ate a picnic lunch and enjoyed cake and beverages furnished by Mr. and Mrs. Pease.

Burr Bronson auctioned off the plants donated, with Sidney Baylor acting as cashier. \$41.95 was realized from the sale of plants.

The group admired the Pease rock garden, which was colorful with early spring flowers. No count was made of the varieties seen, but probably it would be in the thousands. The specimen of *Salix uva-ursi* from the White Mountains was much admired.

On Saturday evening Mr. and Mrs. Dwight Granger showed their beautiful slides taken on a trip to Europe in 1959, while the next evening Grace Butcher of Lewiston, Maine, displayed the lovely ones she had made on a western trip in the same year, and gave a fine lecture. Many nearby gardens were visited over the weekend.

MISS MADELINE HARDING

Miss Madeline Harding, secretary of the New England Unit of the American Rock Garden Society from 1953 until 1959, and for several years Director of the Seed Exchange, died recently in Cambridge, Massachusetts.

Miss Harding did canteen work for the Red Cross in Paris, and in the later stages of the war was a nurse's aid at the American Hospital at Rheims, France. She served many years as secretary of the Advisory Committee of the Harvard University Infantile Paralysis Commission. She had been a director of the New England Wildflower Preservation Society, and an officer of the Herb Society of America.

—Dorothy Stillwell

DISTINCTIVE ALPINES AT KATHELEN

RUTH B. MANTON, *Durham, N. H.*

It was some thirty-five years ago that we first started to grow alpiners. In those days there many fine rock garden nurseries to supply our wants. In addition, there were hundreds of amateur growers who sold plants from small wayside gardens, and who were probably the forerunners of the garden centers that are so numerous today. Each of these amateurs maintained a rock garden to supply salable plants and to delight the customers. Many were women with pin-money projects, and all were possessed of ardent enthusiasms for rock gardening that were most contagious.

The Thirties then, you must concede, had more than just "atrociously built puddings" in their gardens. I read and reject the writings of many who sneer at those gardens, for it was in that era of imperfection that rock plants were plentiful in America. Not all rock gardens built in the Thirties were unwisely constructed, nor did all prove inhospitable to alpine and rock plants. It seems to me that, in America, the so-called specialists have driven the art of rock gardening from the common door and made it the specialist's private possession. It is possible that this has not been good for rock gardening in general. I miss the tiny wayside gardens that were wont to catch the eye in spring, I miss the signs that hung rather humbly by the wayside declaring "Rock Plants for Sale", and I miss the happy venders of plants, who were never too busy to pass on the lore of propagation and division. I miss the feeling that every plant I bought had been raised by loving hands!

I wonder whether our professional air of sneers and jeers at imperfection or our specialist attitude of great disdain for those who cannot attain our great ideals can be responsible for the loss of advantages we rock gardeners enjoyed in the Thirties. We must acknowledge also that, out of the Thirties, came the great writings of Louise Beebe Wilder and others. Are we responsible perhaps for the fact that rock gardening stood still through the years of the Forties or was in "the doghouse" until the past ten years? All down through the years it was my heart's delight to grow alpiners, but I remember that it was perhaps something to acknowledge in whispers!

Today we see few of our rock garden and alpine plants upon the counters of garden centers. We see them bedded out and grown under greenhouse conditions in nurseries that advertise themselves as specialists in rock plants. In our books and writings we try to meet the challenge of an age of "low maintenance plants" and urge their use in borders or raised beds. We shut our eyes to the charm that ledge, moss and stone contribute. Down through the years they have been suggested for raised beds and small outcrops when there is no ledge available. It is an oft repeated thought that if we grow alpiners as well in beds as in well-built rock gardens, then why should we build special gardens to hold the alpiners? The answer is very simple: you cannot grow alpiners, those very tedious and high mountain alpine wonders without stone and the culture high alpiners demand. We fool our readers into trying, but the experiment usually ends with failure, with an assortment of hardy rock plants doing as poorly as they ever did in the pudding gardens of the Thirties.

The charm of the cottage gardens of Great Britain is well recognized. In daily travelling for six months by automobile over Britain we saw few gardens of perfection, and many that were as atrociously built as any we picture in our articles against our own gardens of the Thirties. Yet we loved them! They were mostly well-kept but assuredly not the gardens of the specialist. All seemed to

be sprung from a deep love for gardening in general and for rock and alpine plants in particular. Their designs were original and seemed to be expressions of the owners', or renters', own ideas rather than copies of the gardens of others on the street. There was no sameness of design, no perfection. On the outskirts or suburbs of every small town or large city I was reminded of the gay gardens we saw in America during the Thirties when the "common man" planted his small creations and brought life and color to drab ways. Puddings? Yes, perhaps, but did they not balance the good against the bad—the good winning?

The specialist's world is nice to live in when one is bent upon specialization, but we have many fine gardeners who would like rock gardens yet hesitate to tackle the building of one since they have been hearing that "experts" only should build them. There is a vast difference between Paris gowns and the homemade variety, but many women still dressmake for their families with very good results.

Back in the Thirties we built our rock garden. It was built on natural ledges and its construction, in thirty years, has changed little. We grew many plants from seed even then and continue to do so to this day because only the common rock plants were sold by nurseries. Our seed came from Correvon in Switzerland. Mr. Henry Correvon had a list of seed that puts the modern domestic, colored lists to shame. Our flower shows and the rock gardens built in those shows were superior to the great mechanical water works seen too often now. These gardens have little educational value for the public and indeed foster incorrect ideas of rock gardening in general. Many of the tiresome plants being "introduced" each year have been growing in this garden for thirty years.

It is my recollection that plants were easily procured during the early years of rock gardening, but that seed, except for that of Correvon, was not as plentiful as it is today. There are many fine commercial houses and excellent seed exchanges of rock garden societies, both here and abroad, while our sister organization, the American Primrose Society, has an excellent seed exchange, and our collectors are very active. Dr. Worth, in the past few years, has collected at possibly great expense to himself, a tremendous harvest of unusual seeds and has placed them within our reach. That cherished friend of mine, Frank Rose, for many years has collected mountain plants and seed for rock gardeners here and abroad. How trustworthy are the seed and plants of Prairie Gem Ranch! Claude Barr has made the Plains species available to us, and all three of these collectors have spent untold hours on *Bulletin* articles to make their growing more feasible. New England does not always have a climate favorable for establishing these new plants, and Kathelen does not always find success easy.

Down through the years we have painfully hewed the home ground area from its wilderness of poison ivy and wild sumac. We have suffered the disability that comes after vigorous sessions with poison ivy and know no greater inconvenience or discomfort. We have known solid clay soil, and in dealing with it, have leavened it with all the ingredients known to gardeners of this era. From our sweat-laden labor we have fashioned five small, distinct gardens. We have named our gardens, or sections, that comprise Kathelen, because it helps in locating plants when records are taken each November. The winter is always spent in walking the paths, on paper, when snow lies deep and catalogs press us into deep study and research.

In the first early days of the Thirties we issued our first commercial catalog, printed and beautifully illustrated. Among the plants offered were *Silene elizabethae* (true!), *Gentiana acaulis*, *G. verna*, and androsaces in five varieties! Some of these plants were lost, during the years of the Second World War, and a few have never been recovered. In 1958 we again felt that we had a great enough



Ruth B. Manton.

The "little garden"
at Kathelen.

supply of alpiners to become partially commercial and issued our first list since the war.

Of the five gardens at Kathelen, we think first of the "little garden" because it is the only garden seen from the highway and has so often been photographed in color for the magazines. It is cultivated—or built—on a natural ledge around, and for some hundred and forty feet following our tiny colonial office building. This small building has the appearance of a rather large model in a flower show exhibit. The garden curves with the highway its entire length, and granite ledges crop out from one end to the other. Snow melts here first in spring on the southern exposures when yet another month or six weeks must elapse before the other gardens across the street begin to show a melting of pathway, or tiny rosetted alpiners begin to melt the snow around their upward surging spring growth.

With such an aspect, how could we resist planting an early spring garden? How could anyone resist those sun-warmed exposures? The spirits of Gertrude Jekyll and Louise Beebe Wilder and Henry Correvon were built into those gardens, since theirs was our literature of rock gardening at that time. Miss Jekyll advises that the spring garden be hidden from view and to the rear of the gardens since its dying foliage is unbeautiful in summer. This did not seem advice applicable in this beautiful snow-laden land of New Hampshire. Winter is long and snows are deep while spring is short and very sweet. How precious to steal a few weeks and to meet the spring with bulbs and early flowers when alpiners are scarcely starting under the snows. Later we must indeed cringe at times at dying foliage, but it is at that time that the alpine garden, sun garden, woodland garden and framed nursery garden are coming to their peak performances of spring.

Just as the little garden reaches its fullness in crescendo, and color has swept our spring to complete beauty, the slow enveloping charm of quieter mountains plants begins to creep over ledges and woodland reaches. It becomes an emotional experience to walk the pathways daily. The Composer leaves his music and his unfinished oils to walk each morning, pipe in hand, in a wonderland that

cannot be reproduced easily by music or canvas. The gardener leaves her packing of plants and, camera in hand, tries to hold the hundreds of pictures on film. There is a bafflement to this commercial work that makes of spring a time of hurry.

To the alpine grower who has, for thirty years, brought together a collection of alpines that have slowly and surely filled crevice and ledge with the small wonders of the mountain ranges, there comes a time when she must send her beloved plants to others across America, so that they come to know the joy she has found in her treasures for many years. It is difficult to ship an androsace raised through tender years to flowering stage and to trust the plant to another's care. It is difficult to snatch lewisias, even in sturdy growth, from their ledges and hot, baking homes to endure, perhaps, wet gardens under improper conditions and careless handling. She wonders if the buyer can appreciate what jewels he now possesses. Does he know how to acclimatize these mountain plants? Many of our alpines, from seed, are but one generation removed from the wild seed that was collected for us. It is a pity if they cannot survive the trip and careless handling along the way. Across America there are hundreds of alpine gardeners who do know and understand these plants and can give them the right conditions for happy survival. Dr. Worth at one time in our *Bulletin*, in speaking of rare seed, requested that rare and difficult species be ordered by experienced gardeners only. It is wise to make such a request for, after the difficult gathering of rare seed, which may never be available again, it is certainly sensible to place the seeds in hands that will produce the most plants for increase and distribution. Seldom can we think of the rarer alpines that go out from Kathelen in terms of whether you have the money to pay for rarities, but rather in terms of whether you can use every facility at your command to keep the plants living upon arrival, and whether great patience is possessed by the buyer. This is a strange creed for one who ships so many hundreds of plants across America each spring, but it is the creed established by years of growing alpines.

We added a miniature bog to our garden this summer. There was a shady walk in the sun garden which, each year, seemed unattractive to us as well as to visitors who seldom ventured down the pathway. It looks as though primroses ought to delight in growing there but indeed the soil dried out to cracked clay in summer heat though it was shaded. We built a simple bog to accommodate bog primroses and gentians. The overflow from the time-honored dog drinking pool, a small affair, was used, with tap water turned on daily from a hidden trap. This bog garden seemed a silly affair until we saw how the primroses and gentians responded. *Arenaria verna caespitosa* and various mosses were planted about the overflow, allowing water to trickle in cool ways over the stones and down the long trench. When *Oenothera aurea* opens its great chalice cups at eventide and the bells of *Campanula raineri* glow in triumph, the water trickles with added coolness.

A few days after the bog was completed and placed in operation, we heard the throaty croak of Mr. Bullfrog. Laddie, the Scotch collie of long lineage, did what any self-respecting dog would do to guard his beloved drinking fountain from this intruder, but when scores of birds deserted their own bird bath to bathe and flutter water with great abandon, he retreated in high dudgeon. When we saw his need, he was taught to drink from watering apparatus, and finding this a game to his liking, he resigned himself to grumbling distance.

In one short year Lad learned to run about the alpine gardens with small hurt to any plant. It became second nature for him to turn those tiny curves of pathway and woodland walk with graceful ease. There is a pathway, named by childish lips the "tippy-toe path", which veers from the alpine walk, in

diminutive mossy way, to the green. How dexterously and with what intelligent skill does this collie of one year frisk his magnificently built body down this tiny path, never availing himself of the straight cut to the green over alpine rarities.

The first Lad, in the Twenties, helped the mistress to plant the now great evergreens that tower over barn and entrance gate, offering coolness and shade for the Jack-in-the-pulpits and a background for the bank of azaleas. He had stood upon the huge lookout ledge and had viewed meadow and pond and all the gardens. He had indeed helped her lay out the garden plans and had, for sixteen years, companioned every barrow load of soil and sniffed every plant introduced.

The second Lad had travelled in the footsteps of the first, and the Composer was wont to say he could always find the mistress by seeing the great head of the collie turned always in her direction from his resting place.

Now the third Lad, with young prancing spirit, stands upon that ledge beside a mistress whose spirits have remained, but whose step is a bit slower, and through the years there has, perhaps, been a growth in wisdom. Looking down to the north, for some one hundred and fifty feet, the alpine garden and sun garden stretch before us after a period of some thirty-six years of concentration upon the growing of alpine plants. These two gardens have many distinctive plants and most are quite miniature and neat. The sun garden was once a lawn, but when the children no longer needed play space the alpiners began to flow quite naturally down the excavated ledges and found sunny exposures. In the blistering heat of our "dry spell" this past summer, the alpine garden, with its wisps and buns and decumbent inhabitants, was a constant joy.

Whether *Aquilegia jonesii* deserves first place among the distinctive early alpiners is questionable, but it certainly gained attention from all who saw it in blossom this spring at Kathelen. We have always admired the lacy, silvery foliage and have dreamed of blossoms some day, but were startled when it began so early to open the solitary blue flower on a two inch stem. It is good that "Mr. Jones", in the persons of Frank Rose and Dr. Worth, went up to its mountain heights and brought it to us, as Farrer requested. With this generous distribution of seed, it is very likely that this aquilegia grows in many gardens now. It is not yet a certain plant at Kathelen, but the plants that blossomed have remained lovely all summer, unlike many aquilegia rarities that take themselves off after blossoming. It certainly does not like our frames in wet weather, but does rather well in pots after being established. It loves the hot reaches of the sun garden where shrubby penstemons hold forth. The transplanting stage is very untrustworthy but moving can be accomplished if the roots are not disturbed at an early stage. We sow thinly and move in a circled aluminum ring.

Aquilegia scopulorum, from seed sent me from Dr. Worth's collecting several years ago, blossomed somewhat later. Its three inch stem, slender long-spurred blossom was paler in hue and seemed far more beautiful than that of *A. jonesii*. This has been a difficult aquilegia to germinate and very difficult to make happy, but our plants that flowered this spring still look well and show no sign of destructive farewells.

To leave *Aquilegia* without writing of the lovely creeping *A. saximontana* would be amiss. It is noted as being eight inches high, but our variety is almost stemless, its blue and white flowers with long spurs with hooked style. It is a charmer but does not live after the startling exhibit—and what an exhibit! The most casual admirer is converted into a collector of aquilegias. The seeds come true and germinate well. We scatter them about the plant and always have the seedlings coming along.

Ramonda myconi caused a furor of orders as soon as our lists went out last

Ruth B. Manton.



Ledges riotous
with color at
Kathelen.

January. The plants were grown from seed sent to us from the Seed Distribution of the Royal Horticultural Society four years ago. This year has shown a tremendous growth in comparison with that of previous years, for their growth was very slow up to this summer. All about the garden, in rather dampish shade provided by hose and tree are plants that look exceedingly fine. They spent last winter in their present positions protected by deep snow. In the frames are potted plants that spent last year in the frames and this spring under fluorescent lights in the packing shed. This winter they are under the frames again. The summer was spent in open shaded frames, were watered from above, and show no ill effects on leaf or plant, but have increased with double the speed of those in the garden. Plants in the alpine garden are not so lushly green but are sturdy and of good foliage, showing that they are fine outdoor plants for New Hampshire and not nearly so hard to grow as, say, *Androsace pyrenaica*.

Haberlea rhodopensis, unfortunately, has not been proven in this garden as yet. Seed has not come to us in such quantity as has that of ramonda, but the small plants have wintered near ramonda for two years. Our large five year old plant of *H. rhodopensis* was eaten last winter by Mr. Rabbit as dessert for a meal of dianthus and phlox. Small plants will take another few years to blossom, from seed sent by the R.H.S., and Lad has set as his goal the keeping of bunnies out of Kathelen.

Edraianthus dalmaticus is a very distinctive plant. The entire genus is filled with charming miniature varieties, but many have not proven hardy in New Hampshire, or we have not found the right spot for their wintering, except in frames. Each year we sow seed of many varieties and slowly add a few plants to our collection. *Edraianthus pumilio* is a smaller version which has lived here for three years in the open. It does not scatter its seed about the garden as does *E. dalmaticus*. In strange places the latter germinates in the hot days of August, in the midst of androsace, saxifrage, or *Silene acaulis*, along the pathway and among thyme, but is never hard to extract and set in colonies on the sunnier ledge pockets. We have never quite enough for our own use and the many orders each spring.

Thlaspi rotundifolium is caespitose and a heart's delight to any alpine gardener. It seeds about the gentian bed in rather acid soil, but does as well in the sun garden in ordinary soil, though it does not self-sow there. Its flowers are lilac, and coming very early in spring, are never more lovely than growing in a pot where the flowers can be seen more clearly. *Thlaspi stylosum* is of the same order, but a bit smaller in stature and of a more uncertain temperament.

To go to *Alyssum spinosum* is but a step into sun-baked ledges of the little garden. It is woody and spiny, and here in six years the plants have not attained more than a six inch height. The seedlings damp off after germinating well. It is not an easy plant to grow and to keep happy. The blossoms of our plants are white.

By May 12, the townsendias had started to blossom. *T. rothrockii*, *T. grandiflora* and *T. exscapa* were intriguing, but only *T. exscapa* remains in perennial duty for next spring. Its delicately cut foliage is lovely, its flowers a variation of the daisy.

Among plants of this type we must mention *Erigeron trifidus (compositus)* and *E. ursinus*. Their foliage certainly makes them an addition to neat and miniature sun garden reaches. *E. pinnatisectus*, collected by Dr. Worth, is a larger plant and quite lovely.

Senecio incanus, *Achillea argentea* and *A. clavennae* are plants of gray or silvery silky beauty and make of any creviced ledge a beautiful spot. To us they are difficult only in that they need little water. They like sun, and all can look very sorry in wet and prolonged dampness.

It has often been written that penstemons take the sunnier and more sun-baked areas of the rock garden. I fear that is untrue in our gardens. We have grown many varieties at Kathelen, but few seem to come up to the standards we must set for a garden of miniatures. Of course we have use for those of the shrubby type and try all the miniature plants offered. *Penstemon nitidus* has the power to turn the head of every visitor with its color beauty, but the spaces left after blossoming are appalling in hot summer. We have found that penstemons need frame life for the first year and respond very well to pot culture, establishing beautiful root systems to go into the garden the following year. They like watering in summer and a little shade. The smaller varieties like constant care and provide a green of foliage that is superb, but the flowers are rather stingy and do not last very long. The seed does not germinate readily here, but almost always comes through the second year. The seedlings can look very poor and need care to bring them to size. We plant very sparsely and transplant only when we see the necessity. In the sun garden we built a tiny mountain range for the shrubbies. The western phloxes grown from seed, *Aquilegia jonesii*, the achilleas, the senecios, *Polemonium delicatum* and many varieties of lewisia companion them. Here grows also *Onosma albo-roseum*, a great beauty. Proving very adaptable and beautiful of foliage and blossom, the following penstemons have especially won the title of distinctive plants: *PP. barrettiae*, *wrightii*, *cardwellii*, *crandallii*, *crandallii v. albus*, tiny *hallii*, lovely *tolmei*, a very miniature *eatoni*, *haydenii*, *newberryi* and *pinifolius*. Forms of *P. davidsoni v. menziesii* are very engaging plants and surely are, so far, our favorites, choice company here for *Veronica saxatilis*, *Iberis pygmaea*, and *Globularia nana*.

Dianthus alpinus is a plant of quite another order. I might call it a tricky plant from seed since it has many frustrating habits. It is easy to procure seed labelled *D. alpinus*, but seldom is it true seed. It is offered every year in the seed exchanges, but often proves disappointing unless it comes from Floaire.

There is a colored photograph in our files of Kathelen in the early days, taken to show *Lewisia rediviva*, but unknown to the photographer *Dianthus alpinus*, in a twelve inch plate-size specimen, stole the show from the lewisia. It has never repeated that magnificent a performance of the green years at Kathelen.

Next in performance, here at Kathelen, are *D. glacialis* and *D. neglectus*. I do not know a lovelier pair. *D. neglectus* is represented here by several variations, one of them very minute and needing part shade, the other, more or less straggly and loving the sun garden. Both have that lovely buff reverse.

Lewisias turn this garden into a fairyland each year. *L. tweedyi* is the first to blossom and *LL. rediviva*, *brachycalyx*, *nevadensis* and *pygmaea*, deciduous types, come last. In between there are the great, glorious masses of *LL. howellii*, *finchii*, *heckneri*, *leana*, *oppositifolia* (deciduous), *purdyi*, and beyond compare that lovely *L. columbiana* which is difficult from seed. Carl Purdy was an expert on lewisia and his writings are in the first issue of our *Bulletin*. I shall perhaps never be able to add to his work, but I have profited by the fortunate inclusion of his writings in our literature.

Gentiana acaulis blossomed here this spring. *G. verna* is growing into very nice plants, but now in the garden *G. farreri* is opening its Cambridge blue trumpeted beauty to the ecstatic gaze of the visitors. Even the squirrels, in their hurrying to procure nuts for the winter, must stop to view it. All through the summer's heat hundreds of gentians have blossomed and brought great hanging trumpet beauty to shaded and sunlit ledges. The foliage alone would be worth the space they occupy.

Soon New Hampshire will be all red and bronze and yellow and gold of tree and leaf. The western sun will cast its beams across the little garden at Kathelen and make it a reddish glowing wonderland that is perhaps comparable in beauty to its spring beginnings. It will be a beautiful ending for distinctive plants, for buns and wisps and rare alpiners.

When spring became summer, the Composer wrote an orchestral tone-poem. It was entitled "An Old Garden", and upon the fly-leaf he wrote:

Old gardens dreaming in the sun,
With their blooms, creation done.

Roses, lilies, and alpiners rare
Winding paths and moss-grown stair.

All sweet blooms, and symbols dear
Of love undying, linger here.

(Robert W. Manton)

REPORT OF THE SEASON 1961

BETTY JANE HAYWARD, *Scarborough, Maine*

Ranunculus calandrinoides. After waiting three years for this choice plant to blossom, it was rewarding to watch the development of the gray-green rosette. When the spear-shaped leaves were partly grown, five lovely blossoms were borne on short stems all at one time. The plant becomes dormant early in summer and remains so till the following spring. Now that it has matured, we hope for an even better display in 1962. The situation is a well-drained spot where the morning sun reaches, followed by shade later on.

Crassula milfordii. This small plant was reported on in the July *Bulletin*. We can further report that it came through a second winter unscathed. In June tiny white blossoms covered the mounds. They were on the shortest of stems, so

that they rested on the green tufts. With chocolate stems and calyx they look for all the world like those small round chocolate candies with white sprinkles, called Non-Pariels.

Carlina acaulis. The complaint is that this plant does not live up to its name of "stemless". Thinking that wall planting might display the thistle blossom better, we thrust a plant in between the stones part way down. When dormant, before growth had started in spring, it could barely be seen. Soon, however, the spiny leaves came forth flat against the rock, and in early August the silvery satin flower, three inches across, opened wide against the prickly leaves as flat as it ever does in the mountains. Side growths promise future results too.

Dianthus peristeri, the little pink related to *D. deltooides* and listed as *D. deltooides* var. *serpyllifolius* in L. H. Bailey's "The Garden of Pinks", is a favorite with none of the annoying traits of the species itself. It does not scatter seeds indiscriminately; in fact, few seeds are set. It is neat and low, with fine green foliage. In the form we have, the color of the blossom is a clean light pink, very pleasing. A variation is white flowered, with a narrow crimson ring at the center.

Gentians—Asiatic and Himalayan varieties. Beginning in August, the thrill of every morning is to go out to see what lovely flower has opened with the dawn. We wish we could give each one its proper name, but perhaps an expert would be unable to do so, as they have all been grown from seed. There is wide variation among them in both foliage and flower. There are some with fine grass-like leaves, while others have heavy-textured dark green pointed foliage. The blossoms pass through many shades of blue, from an almost unbelievably pure turquoise to luminous cobalt and marine blue. Among them are a few white ones. Several years are required to grow a good specimen, and some of mine are four or more years old. They have some definite requirements in that they cannot stand the full sun in our climate; however some brightness is necessary if the flowers are to open properly. The soil must be well drained but full of humus. We avoid giving lime, but a bit of high-grade fertilizer can be added—only a small amount. We often surface the bed with stone chips to afford drainage and to keep the blossoms clean. We do not as a rule love dried flowers, however popular they are, but these glorious blue gentians dry to look as fresh as when they are picked. With a few pink rosebuds they look lovely in a small old globe ten inches high. Then we can remember the beauty of the summer when winter covers the garden and all it holds. Borax and sea sand is the drying medium.

Gentiana kirishima-rindo. We have a goodly number of plants that were thought to be *G. scabra* var. *buengeri*. However, it appears that they fit more closely the description of the Japanese species. "Gentians in the Garden" by G. H. Berry shows a plate of *G. kirishima-rindo* with trailing habit, but the author states that under garden conditions the plant will be upright to nine inches, which is exactly the height of ours. Also it is the last gentian to bloom; in late October or early November some blooms will be showing. For some years the plants grew in a bed away from the full autumn sun, and failed to open any of the flowers. Now they grow at the foot of a wall facing south, where the warm sun has full sway in the shortening fall days. They are a lovely addition to that particular spot, with the autumn crocus and colchicums as companions.

Nurserymen and native plant collectors are urged to supply the secretary, and also the editor, with their latest catalogs or price lists. They receive many inquiries for a source for various plants.

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