BULLETIN

of the

AMERICAN

ROCK GARDEN SOCIETY

Vol. 22 October, 1964 No. 4

DIRECTORATE

BULLETIN

Editor Emeritus
DR. EDGAR T. WHERRY, University of Pennsylvania, Philadelphia 4, Pa.

Editor
ALBERT M. SUTTON
9608 26th Ave. N. W., Seattle, Washington 98107

AMERICAN ROCK GARDEN SOCIETY

President Emeritus
HAROLD EPSTEIN, 5 Forest Court, Larchmont, New York

President ..... H. LINCOLN FOSTER, Falls Village, Conn.
Secretary ..... LAWRENCE HOCHHEIMER, Norwalk, Conn.
Treasurer ..... ALEX D. REID, Mountain Lakes, N. J.

Vice-Presidents
MRS. HARRY HAYWARD — MRS. COULTER STEWART — BRIAN O. MULLIGAN
RICHARD LANGFELDER — MRS. HENRY C. FLEMING

Directors
Terms Expires 1965
DR. E. T. WHERRY — MR. ALEX J. SUMMERS — MR. BERNARD HARKNESS
Term Expires 1966
MISS ALYS SUTCLIFFE — MRS. SALLIE D. ALLEN — DR. A. R. KRUCKEBERG
Term Expires 1967
MR. JOHN P. OSBORNE — MRS. JOHN KNIPPENBERG — MR. CLAUDE A. BARR

Director of Seed Exchange
BERNARD HARKNESS
385 Hollywood Avenue, Rochester, New York 14618

REGIONAL CHAIRMEN

Northwestern ..... SCOTT A. MCCLANAHAN, 2643 38th Ave., W. Seattle
Oregon Subgroup ..... FLOYD W. MCMULLEN, 5420 SW Alfred St., Portland, Ore.
Western ..... RAY WILLIAMS, 108 Meidl Ave., Watsonville, Cal.
Lakes ..... ROBERT M. SENIOR, 1607 Fifth Third Bank Bldg., Cincinnati, Ohio 45202
Southeastern ..... RALPH W. BENNETT, 5607 N. 22nd St., Arlington 5, Va.
North Atlantic ..... J. A. LUKINS, 44 Lincoln Ave., Port Chester, N. Y.
New England ..... MRS. HELEN GILBERT, Rt. 2, Danielson, Conn.
Midwestern ..... MRS. LILLIAN M. LEDDY, 3124 No. 78th St., Omaha 34, Nebraska

---

Published by the AMERICAN ROCK GARDEN SOCIETY, incorporated under the laws of the State of New Jersey. You are invited to join—annual dues are: Ordinary Membership, $5.00; Family Membership, $7.00; Patron Membership, $25.00; Life Membership, $150.00; Overseas Membership, $3.50. Address communications regarding membership, dues, and other matters relating to the Society to Lawrence Hochheimer, Ridge Farms Road, Norwalk, Conn. Address manuscripts and other matters relating to the *Bulletin* to Albert M. Sutton, 9608-26th Ave., N. W., Seattle, Washington 98107.

BULLETIN

of the

AMERICAN

ROCK GARDEN SOCIETY

Albert M. Sutton, Editor

Vol. 22 October, 1964 No. 4

SAGA OF THE RED BUTTES

BOYD KLINE, *Medford, Oregon*

For the past ten years I have been fortunate to have the companionship of a great plantsman and friend, Marcel Le Piniec. We met at his nursery where I had gone to inquire about his knowledge of our native lilies which, at that time, were of special interest to me.

We have, since then, been on many trips, exploring together the vast and wonderful area surrounding us. Each trip has been a great experience, always undertaken with keen anticipation, due, no doubt, to his gift of recounting, in a most inimitable manner, the plants that he has found on previous visits, or those we could expect to find if on a new venture. All our trips have had a prelude. One of the most memorable is the trip we made to the new *Kalmiopsis* area that he discovered before I met him. Other explorations have taken us through the most interesting sites of the Siskiyou Mountains; the peaks along the Coastal Range, Oregon Mountain, Pearsoll Peak, Vatican Peak, Snow Camp, and many other botanical sites.

Our trip to the Red Buttes also had its prelude. We were having luncheon in a majestic grove of weeping spruce *(Picea breweriana)* on Pearsoll Peak when Marcel began to reminisce about a pack horse trip he and some friends had been on a few years before, scouting along part of the crest of the Applegate River watershed starting from Grayback Mt. at the northwest extremity, then travelling in a southeasterly direction and ending, on this trip, at the base of the Red Buttes. My sole acquaintance with this mountain, at the time, was a cross on the map marked Red Buttes, with the height, 6731 ft., inscribed beneath. When the story ended it seemed to me as if this split monolith called Red Buttes had been the original point of dispersion for all the endemics of the Siskiyou mass.

One reason we hadn't made the trip before was that the southern approach, a rough mountain road, had been blocked by slides for several years and the foot trail on the northern slope was four miles of arduous climbing often obstructed by occasional snow drifts. It was not until the middle of June, 1959 that we decided to go up the trail. It had been a mild winter and we'd had a rather warm spring. We started before sun-up hoping that the snow had melted enough to allow us to make the ascent. Lawrence Crocker, another enthusiastic plantsman, came along.

Our first find, near the entrance of the trail, was a young specimen of the weeping spruce, out of place at this low elevation; it is a subalpine species rarely found below 6000 feet. Further along we found good specimens of *Phlox adsur-*

gens. We marked several outstanding types with large flowers, some of deep rose color, and some good white forms to be collected on the way back. Familiar plants began to appear along the path: *Dodecatheon hendersonii, Brodiaea crocea, Lilium columbianum, L. washingtonianum, Trillium ovatum* and *T. sessile* var. *giganteum, Fritillaria recurva* and *F. lanceolata.* About a mile along the way where the trail passes through tall pines and firs, we came upon one of my favorite ground covers, the glossy trailing blackberry, or snow bramble *(Rubus nivalis).* We were at about 4000 ft. altitude and the rare evergreen deer-oak *(Quercus sadleriana)* was beginning to show. This is an intriguing shrub, growing to some five feet in height by six to eight feet wide with long slender branchlets, rather large leaves, and bearing the usual catkins and acorns of an oak.

From this point on, the trail passes through deep forest with occasional open areas where we found *Iris chrysophylla, Erythronium klamathense, Disporum hookeri,* and *Calochortus maweanus.* The season regressed as we climbed and soon we were finding *Synthyris reniformis (rotundifolia), Calypso bulbosa,* and the snow plant, *(Sarcodes sanguinea).* Patches of snow were here and there and from the edges showed the colorful blossoms of *Erythronium grandiflorum.*

We came, at last, upon the long scree meadow at the base of the awesome crags of the Red Buttes. Snow lay deep in protected areas and the melting of it formed a rushing torrent draining the hillsides. On the banks of this creek we found *Mertensia longiflora* and *Dodecatheon jeffreyi* intermingled in a nice combination of blue and pink. Dwarf buttercups and ferns further enhanced the setting. Leading back from the creek's edge into the massive boulders at the foot of the crags, we found a profusion of ferns. The maidenhair fern, *(Adiantum pedatum),* the fragile fern, *(Cystopteris fragilis),* the holly fern *(Polystichum lonchitis),* and the rare *Polystichum lemmonii,* and *P. scopulinum.* Appearing among the ferns, we could see the nodding heads of *Lilium wigginsii,* formerly called *L. roezlii.*

In places, slabs of very hard limestone protruded from the earth and upon these grew a variety of plants: *Phlox diffusa* in many shades of white, blue, and pink, *Penstemon rupicola,* several types of *Heuchera* and *Arabis.* Good rock ferns were flourishing here: *Cheilanthes siliquosa,* which has light green delicate fronds six inches high, *Cheilanthes gracillima,* graceful as the name implies with four-inch, dark green, lacy fronds, *Cryptogramma acrostichoides,* the parsley fern, an apt name. The most interesting of all was the rare Brewer's cliff brake *(Pellaea breweri),* a small plant about four inches high with straight delicate fronds half an inch wide. It is a difficult fern to keep in captivity.

On our left, facing upstream, was a large rounded ledge covered with plants of *Lewisia cotyledon,* the blossoms an unusual apricot with pink stripes. At the base of this ledge we found a gem that left us quite breathless. It was *Dicentra pauciflora,* a delicate little plant of exquisite beauty. Spreading in mats of grayish-green, finely cut foliage, topped with flesh-colored "steer's head" blossoms, the whole plant was about three or four inches high. This is much on the order of *D. uniflora,* except it has a larger flower.

On the steep slope leading to the ridge of the mountain grew *Lewisia leana, Phlox diffusa,* numerous species of *Penstemon, Erigeron, Eriogonum* and colonies of pine-mat manzanita *(Arctostaphylos nevadensis),* and green manzanita *(A. patula).* Very few plants grow on the hard red rock of the Butte itself, but an exceptional one is a tiny cushion of a plant, *Draba howellii,* a grey-green tuft wedged into clefts of the rock. It has loose racemes of deep yellow flowers on stems about three inches high.

As we worked our way from the ridge down onto the southeast slope, we spotted a grove of Brewer's spruce and one lone Baker's cypress *(Cupressus*

bakeri ssp. *matthewsii)*. Another sharp ridge pointed directly south and on it grew a very curious plant, *Eriogonum lobbii,* which, when in bloom, appears very much like a huge *Spraguea.* Farther down the slope a steep slide of large boulders was afroth with the blossoms of *Lewisia cotyledon* and below this alpine rock garden was a gently sloping sandy scree with masses of *Lewisia leana* in bloom. We soon were searching diligently for the natural hybrids of the two species which Marcel had originally found on his previous trip. The hybrid plants bear foliage and blossoms intermediate of the species. We collected but a few as they are quite scarce.

By now our time had run out as it was late in the afternoon and our interest was sated for this trip, although we could see many exciting-looking peaks and ridges in all directions.

Our weary return trip to the car took but half the time of our ascent and though we were exhausted from our full day's effort, we had the pleasant feeling that the Red Buttes were indeed a balm for the plant hunter's fever.

CONSTRUCTING A PORTABLE ROCK GARDEN

LAURA LOUISE FOSTER, *Falls Village, Conn.*

Having unsuccessfully attempted to grow dwarf trees and alpines out of doors in ceramic containers, which promptly burst their seams in our minus 20 degree F. New England winters, I looked with longing and envious eyes at the fascinating miniature gardens grown in stone troughs and sinks in England. These were not for me I knew; stone troughs and sinks are not frequently, if ever, found lying around our barnyards, and I am not a stone mason. While in Scotland, I inquired of Mrs. Knox Finlay, whose beautiful garden in Keillour we were visiting, whether it was possible to get frost-proof pots. She replied by giving me a recipe for making them of 1/3 cement, 1/3 sand, and 1/3 peat.

I knew that sink-size pots made with this mixture would be very heavy and as I hoped to have them at least semi-portable, I decided to try to lighten the amalgam by using Vermiculite or Perlite in place of the sand. This mixture has worked out most successfully. Even a fairly large pot, 22 inches by 22 inches by 8 inches deep, is light enough for me to lift with no great difficulty. I have since experimented with even lighter mixtures and have found that a mix of one part Portland cement to 1½ parts peat and 1½ parts argicultural Perlite is both strong enough for my purposes and completely frost-proof.

To further strengthen my finished product, no matter which mix I use, I build it on a framework of one-inch chicken wire. By adding dry limeproof coloring powder to the mix (approximately ½ cup of powder for each quart of Portland cement) I can vary the rather dead grey of the concrete. This powder should be stirred into the mix before moistening it with water. A variety of cement coloring powders can be obtained through most hardware or building supply stores. I found black, burnt umber, raw and burnt sienna, Venetian red, and ochre the most attractive, but blue, green, and vermillion are also obtainable. These colors can be combined when dry to obtain various shades. Or several wet mixes of different colors may be blended to a lesser or greater extent in the molding of a pot.

It is important in making the mix to be sure that the Perlite, well-crumbled peat, and the coloring matter, if any, are thoroughly combined before adding the dry cement. This mixture in turn should be well-blended before adding the water *a little at a time,* stirring well after each addition. The cement mixture should be thoroughly moist, but not so wet that it slumps into a muddy puddle; the consistency of cottage cheese is about right. I use my hands both to mix the

cement and to form the pot, and I have found with a little practice that it is not hard to make a mixture that is easy to work.

As I did not want to go to the trouble of building a mold, and anyway, wanted my pots to be free-form and of various shapes and sizes, I use well-dampened fine sand and a sheet of thin flexible plastic to make a mold for my pots. I make them upside down on a sand table about four feet square and six inches deep. Using an assortment of kitchen bowls and plastic food containers, also upside down, as a base, I cover these with well-packed damp sand to form the shape I want for the *inside* of my finished pot. The outside will be approximately the same shape, but larger by the thickness of the cement. This sand mold is then covered by a dampened piece of old sheet to protect it during the next step. I find that wetting the sheet down with a spray at this point is a help.

I next shape a piece of chicken wire over the mold by clipping and bending it. This wire form should fit quite smoothly over the sheet-covered sand lump. Having shaped the wire armature, I remove it to some handy location, and take off and discard the sheet covering. Using more damp sand I next build a low dam around the base of the sand mound. This sand delineates the outside of the rim of the pot, and should enclose a channel one or two inches wide and about one inch deep; the dam itself should be firmly packed. On the sand table, outside the dam, I have plenty of extra sand for future use.

Over this sand mold I now spread a sheet of plastic. This should be big enough to completely cover the mold with enough remaining around the edges to more than take care of the outside depth of the finished pot. The plastic should be gently pressed down into the trench around the mold. Wrinkles do not matter, as they will add to the interest of the outside shape, or, if preferred, they can be smoothed off after the pot is partially hardened.

There should also be on hand a few wooden dowels or short pieces of stiff plastic tubing to make the drainage holes in the bottom of the pot. These should be the same diameter that you wish the drainage holes to be, about ½ to ¾ inches. (See Fig. 1 through 6 for the steps so far taken).

I am now ready to mix and pour the cement. Using my hands, a spoon, or a mason's trowel, I fill the trench around the inner mold about one inch deep and completely cover the mold itself with approximately ½ inch of wet cement. Next I take the chicken wire armature and place it over the cement-covered mold, pressing it down firmly so that the rim is embedded in the cement in the trench. The armature will not fit snugly, but should not be allowed to buckle too much. I cover the chicken wire with more cement, working it down through the mesh so that it bonds well with the cement underneath. The total thickness of the cement should be at least one inch on the sides of the pot and a little more on what will eventually be the bottom. The thicker the cement, the stronger the finished pot will be, and the heavier.

The next step is to bring the edges of the plastic sheet up against the cement, pressing damp sand firmly against the outside of the plastic to hold it in place. Leave the top open and work several dowels down through the cement and the chicken wire until the ends are firmly against the under-layer of plastic. An exploratory finger helps find the holes in the chicken wire, and the plastic beneath the cement. A hole about every two to three inchs will give adequate drainage. A low ridge of cement may also be placed around the edge of the bottom of the pot to insure good drainage.

I allow the pot to dry and set for 12 to 24 hours without being disturbed, then pull away the sand and peel back the plastic. The larger the pot and the more peat and Perlite in the mix, the longer the pot will take to dry. It should be soft enough to scratch with a fingernail, but not so soft that it yields to finger

Figure 1

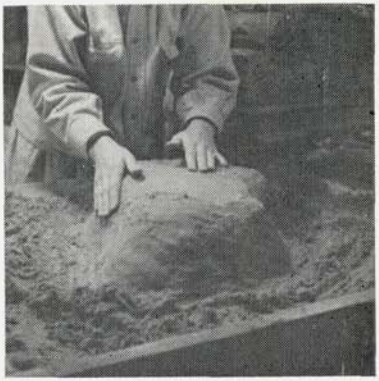


Figure 2

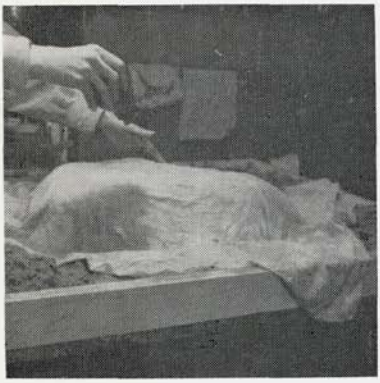


Figure 3

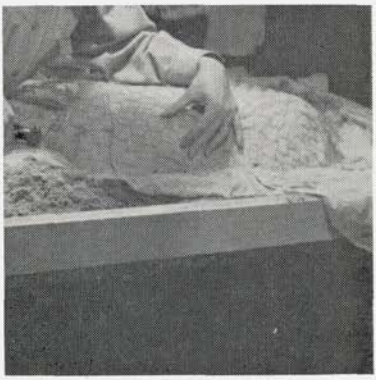


Figure 4

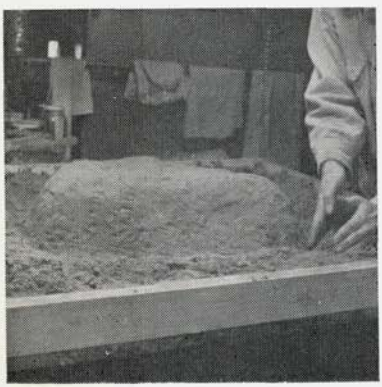


Figure 5

Figure 6

pressure. I then remove the dowels by twisting them gently and level off the bottom by scraping away extra cement with the edge of a horizontally-held piece of glass or a flat board. The concrete will still be soft enough to carve and shape if desired, and the outside can be textured by brushing it with a stiff brush. Any crumbs of cement can be brushed off with a soft brush.

It is quite possible to leave the pot in its upside down position over the inner sand mold until it is completely set and dry. The plastic will peel away quite easily from the hardened concrete.

I usually pick the pot up and turn it over before it is thoroughly hardened (a ticklish business as the damp concrete is still tender and apt to crack); however, it does mean that I can carve and shape the rim and brush the edge and inner surface to roughen the texture and give the pot a more stone-like appearance. If the pot is a large one I may want assistance in turning it over while it is still in a tender condition. Also it will still be heavy with unevaporated water which adds to the difficulty of lifting and turning it over without breaking it. A thin layer of concrete will cover the holes on the inner surface of the pot. This can be readily removed by working through from the outside with an awl or drill, whether the concrete is still somewhat soft or is completely hardened.

Once the pot is finished, it should be loosely covered with a sheet of plastic and allowed to dry slowly. Concrete gains in strength as it slowly matures. When it is completely dry I put it out to weather for a month or so before planting it as many plants do not like being in contact with fresh concrete. I have, however, been told that soaking a pot for several days in a wine-colored solution of potassium permanganate (purchasable in crystals at the drugstore) neutralizes the free lime in the fresh concrete and speeds up this weathering process.

Most alpines thrive in these porous concrete pots. A grouping of real stones, or artificial ones made of the same mixture as the pot enhances the appearance of the planting and creates suitable crevices for alpine roots. The majority of plants will be happy in a good standard potting mix of one part loam to two parts crushed gravel, or coarse sand, and two parts leaf mold. More gravel and less loam and leaf mold in the mix will make it suitable for desert lovers, while plants needing woodland conditions will appreciate more generous quantities of leaf mold and the addition of some peat. More peat can be used for plants that require acid soil; lime chips in lieu of ordinary gravel will make a mix suitable for those that need a limey soil. A light dusting of dried sheep manure or bone meal added to the mix will benefit most plants.

Because the quantity of the soil in a pot is necessarily limited I prefer to fill the entire pot with an open but nourishing soil mix rather than underlaying a heavier soil with drainage material. Small pieces of aluminum or plastic screening will keep the soil mix from sifting through the drainage holes. A quarter- to a half-inch thick layer of gravel spread on top of the soil around and among the plants after they are in place keeps the crowns dry (an important requirement for most alpines) and prevents mud splash on the leaves. (See Fig. 7 through 12 for the final steps and the finished product).

Frequency of watering will depend on weather, the type of plants in the pot, the site in which it is kept, the soil mix used, and the size of the pot—a larger one needing less frequent attention than a small one. It is important, if the planting is a mixed one, to use together plants that like the same habitat, also that a robust grower is not planted in the same pot with a tiny delicate treasure.

On the whole, however, rock gardening in one of these planters is relatively trouble-free. Besides, these miniature landscapes have a peculiar charm all of their own.

Figure 7

Figure 8

Figure 9

Figure 10

Figure 11

Figure 12

THE PRESIDENT AND THE SECRETARY RETIRE!

DOROTHY E. HANSELL, *New Providence, New Jersey*

Two men who have devoted themselves to the best interests of the American Rock Garden Society deemed it wise, for reasons of health, to retire from their official positions—Harold Epstein and Edgar L. Totten. While the Society reluctantly saw them step down as President and Secretary, confidence was expressed that H. Lincoln Foster and Lawrence Hochheimer, the two men to whom they turned over their responsibilities, would capably guide the affairs of the Society.

Harold's interest in gardening began thirty years ago—back in 1934. Three years later, having read an announcement in *The New York Times* about a meeting of the American Rock Garden Society, to be held in New York City, he attended it, joining then and there. This sparked his interest in rock gardening which has continued and increased ever since. The beautiful rock garden at his home in Larchmont, New York, and the propagating beds and green house testify that Harold is not content with easily grown plants; he is challenged by the difficult, the "miffy" ones, as they say in England.

Nor is he content to grow plants, but fares forth—around the world, in fact—to see them in their native habitats and to collect them. This summer he and his wife, Esta, joined some of the northwestern members of the Society on a plant-hunting trip (H. Lincoln Foster and his wife, Timmy, were also in the party). Harold collected in eastern United States during the years 1940-1950; western United States and Canada a number of times since 1946; the French and Swiss Alps, the Dolomites, and the alpine mountains of Sweden in 1952 and 1955; Japan in 1954 and 1959; and Mexico in 1956. Esta was an enthusiastic companion on these many trips in search of the rare and unusual.

Five years after he joined the American Rock Garden Society, Harold Epstein was elected to the Board of Directors; six years later, in May, 1948, he was elected to the presidency. He has given unstintingly to the Society—his time, his energy, his enthusiasm, and, what many are not aware of, financial aid when occasion demanded.

While the A. R. G. S. has been his "first love," Harold has also been active in other horticultural organizations. To cite a few: The American Orchid Society of which he is a trustee; the Greater New York Orchid Society of which he is a past president; Men's Garden Club of New York of which he is also a past president; Hortus Club of New York, which he organized with T. H. Everett, and in which he holds the presidency for the twelfth year; the former American Horticultural Council of which he was a director.

Harold is a life member of the Horticultural Society of New York and now a director; a member of the Corporation of The New York Botanical Garden, and of the Torrey Botanical Club; a member (since 1942) of the Alpine Garden Society of Great Britain and of the Scottish Rock Garden Club; a Fellow of the Royal Horticultural Society of Great Britain, and a member of many specialized plant societies. And Harold doesn't just join—he attends meetings whenever possible, reads and contributes to the official publications, etc., etc. In other words —Harold is a real horticulturist, a grand person, a fine friend.

Ed Totten, too, has a long-time interest in rock gardening—ever since the fall and spring of 1935 and 1936. The large rock garden on the back of the Totten's former property in Ho-Ho-Kus, New Jersey, was built in 1937-1938. It contained a two-ton rock which the Tottens hauled in, in the fall of 1937. From that rock and their many plant-collecting picnics the garden continued to grow until the final results in 1961.

Ed and Louise have a beautiful rock garden behind their charming new home in Hendersonville, North Carolina—again the result of choosing and gathering rocks carefully, of collecting plants in the Carolina mountains, of purchasing discriminately from local and distant growers, and of raising the unusual, difficult-to-get kinds from seeds obtained through the Society's Seed Exchange (which project of the Society, by the way, was initiated by his good friend, Harold Epstein).

Ed has always been ready to share his plants and his knowledge with members of the Society and with others. He helped Mr. and Mrs. Winkler of Saddle River, New Jersey, both ARGS members, build their rock garden. They think "the world and all of Ed."

Ed joined the Society in 1945, became a director in 1948, and secretary in 1955. He was appointed chairman of the North Atlantic Regional Group in 1949. That is when I became acquainted with him—at the interesting and well-attended luncheon meetings, then held at the Essex House in New York City.

Four days before Ed and Louise left New Jersey for North Carolina, they were guests of honor at a dinner. Harold took the opportunity to tell the forty members present that for the past six years Ed had been doing what it had taken three women to do the previous five years. And Ed continued to do so efficiently and enthusiastically for another two years. The increase in membership is in no small measure due to Ed's excellent performance as secretary.

RANDOM NOTES ON PHLOXES, 1964

EDGAR T. WHERRY, *Philadelphia, Pa.*

The Flag Mountain *Phlox*.—In the *Bulletin* for April, 1964, Claude Barr wrote up his interesting experience of finding on Flag Mountain, South Dakota, a phlox differing from any with which he was previously familiar. A small pressed specimen which he sent me for identification seemed to resemble *Phlox caespitosa,* but as that is a plant of more western range, additional material was awaited. When this came to hand, the only conclusion that could be reached was that the Flag Mountain *Phlox* is an aberrant form of *Phlox alyssifolia.*

This species was described by E. L. Greene in 1896 from a specimen collected in Saskatchewan, Canada, on the basis of having the leaves "rather thick, with callous white entire margins, and similar midvein very prominent beneath . . ." The specimens preserved in herbaria show this plant to range far below its type region, to southwestern Wyoming and adjacent Nebraska. In the Black Hills of South Dakota and vicinity it is represented by a relatively large variant, which was named *Phlox abdita* by Aven Nelson in 1924. Since this did not seem distinct enough to justify segregation at species level, however, the new combination *Phlox alyssifolia* subspecies *abdita* was proposed for it by the writer in 1944. This is the plant which Mr. Barr has long been distributing to rock gardeners.

The leaves of the Flag Mountain *Phlox,* at least when young, are marginally thickened to only a slight extent; in every other respect, however, the features are identical with those of Greene's species. This deviation seems insufficient to justify recognition in technical nomenclature, so the plant may simply be listed as *Phlox alyssifolia* 'Flag Mountain.'

Phlox douglasii of contemporary rock garden lists.—This species was named by Sir W. J. Hooker in 1838 from material collected by David Douglas in 1827. While Douglas indicated it to be a high-altitude plant, the type specimen in the Kew Herbarium represents a phlox which occurs in the plains which he traversed

on the way to the mountains. Over the years the epithet *douglasii* came to be a sort of catch-all for all sorts of tufted phloxes, but in recent years taxonomists have come to apply it only to the plants resembling the type.

On a visit to Rex Murfitt's Stonecrop Nursery several color-forms were seen of the plant currently being grown in England under the name "douglasii." These proved to represent a variant of what had been named *Phlox diffusa* by Bentham in 1849, the type locality of which was discussed by the writer in the *Bulletin* a couple of years ago. The representative of this taxon, which ranges from northern Oregon up to British Columbia, is characterized by having an especially long style, and was accordingly named *Phlox diffusa* subspecies *longistylis* by the writer in 1938. This, then, is technically the correct name of the cultivated "douglasii."

A "remake" of *Phlox* x *procumbens*.—If one purchased from a dealer a plant labelled *"Phlox amoena,"* it will almost certainly turn out to be not the species to which that epithet belongs, but a hybrid of which the authentic name is *Phlox* x *procumbens*. This was named by Lehmann in 1938, and represents a cross between the markedly dissimilar *Phlox stolonifera* and *P. subulata*. Like many hybrids it is a vigorous grower, and in spite of a none too attractive pink flower color, is a popular rock garden subject.

Last year, H. Lincoln Foster, now our Society's president, gave me a clump of a hybrid which appeared spontaneously in his garden, and resembled the 125-year-old *P. procumbens,* yet seemed not quite the same. When this bloomed in the Morris Arboretum Phlox garden* this spring, it proved to have essentially the same characters, but the flowers were more attractive, the pink hue being enlivened by a pale eye-halo surrounding a tiny, red eye-star. It is, moreover, even more vigorous and blooms over a longer period. It can be readily propagated by rooting the stolons, and deserves widespread rock garden use. Its place of origin may well be indicated by terming it *Phlox* x *procumbens* 'Millstream.'

*An experimental area of 150 square feet where the writer is trying to grow various species on rocks corresponding to those of their native haunts. Some day a report on experiences there may be published, but severe droughts in 1963 and 1964 disfavor this for the present.

THE DAINTY SHADE GIVERS

ELIZABETH PETERSON, *Seattle, Washington*

There are in the world dainty trees which can be used for rock garden, wild garden and other purposes. They can provide protection for alpines which, even in the gray Northwest, need some light shading from summer sun; they may furnish a link between formal areas and rock-strewn or conifer-forested portions of the grounds, and they can make enchanting small compositions of their own in any area.

The Japanese maples and flowering cherries and dogwoods are too familiar to warrant individual description. However, I cannot resist mentioning that in my garden in September the green-orange glory of Kwanzan cherry leaves is reflected in the coloring of *Euphorbia cyparissias* nearby. Also of interest to Long Island rockless grounds might be the laciniated Japanese maple by my kitchen window, underplanted with daffodils and brick-red polyanthus primroses, which provide delightful yellow-bronze combinations through several seasons. In rockless regions, too, there can be adapted the Japanese composition of a delicate tree, ONE rock, quantities of mound-like armerias or moss and perhaps one azalea.

Now as to other dainty specimens; first alphabetically and beloved in the Northwest are the vine maples, *Acer circinatum,* 5- to 35-foot trees of arching branches which carry red-tinted leaves in spring and brilliant color in autumn. This brightness is supplemented by tiny red-purple flowers in spring, followed by red keys. In the conifer thickets of this country, the vine maples create the effect of a liana-strewn jungle.

The mimosa tree, *Albizzia julibrissin rosea,* also in my garden, makes a perfect umbrella for small rock plants. This light tree of ferny foliage bears pink powderpuff blooms in summer, is hardy to zero and grows 30 to 40 feet high. *A. lophantha,* from southwestern Australia, carries yellow flowers in early summer and may be useful in warmer climates as a temporary tree. Albizzias grow wild from Persia to Japan with several species too ungainly for garden use.

The amelanchiers, of the rose family, cover the world and are surrounded by interesting names and stories. Bearing numerous white flowers in spring or early summer and reddish-purple fruits, these trees have fed man, given him beauty, and provided Indians with arrow shafts. Their light green foliage colors well in autumn. The Juneberry, *A. canadensis,* is considered the most beautiful and the earliest to bloom; *A. oblongifolia* grows 5 to 6 feet; *A. laevis* 30 to 40 feet; *A. asiatica,* in Japan and Korea, grows 30 to 40 feet; the European, *A. ovalis,* 6 to 9 feet, and the Canadian saskatoon, *A. alnifolia,* is a 20-foot tree. Somewhere in your neighborhood is a shadbush, service berry, saskatoon or shadblow, to mention a few.

In some regions the Katsura tree, *Cercidiphyllum japonicum,* provides moderate growth to 20 feet of several upright, arching stems with round leaves arranged in pairs along the branches. Summer foliage is tinted with purple, and the leaves turn scarlet or yellow in autumn. *C. j. sinese* is more delicate and has deeper coloring. In the Southwest these trees may prove too fast-growing for rock garden use as they can reach 100 feet.

Enkianthus campanulatus is a peat-loving shrub or small tree to 20 feet from Japan and Asia, has bluish-green pointed leaves carried in whorls, and bears pale yellow bell flowers ornamented with red in spring or early summer. Foliage turns brilliant red in fall and seed capsules remain in winter. There is a variety of the above, *E. c. albiflorus* with white flowers, and another, *E. c. palibinii* which has rich red flowers. There are other oriental species into which breeders are trying to develop hardiness.

Halesia carolina, the best known native from West Virginia to Florida and Texas, is a 20- to 40-foot tree with spreading branches which bear dainty white or pink bell-like flowers in May and has triangular-toothed leaves which turn yellow in fall. *H. monticola rosea* has pale pink flowers. This silverbell or snowdrop tree is a favorite small shader, but there is *H. monticola* which grows to 100 feet in the mountain ranges.

Stuartias, of the tea family, are lovely trees to 25 feet which bear white or cream five-petalled flowers in late summer. There are *Stuartia ovata,* 10 to 15 feet, and its variety *grandiflora* whose flowers have purple stamens, *S. malacodendron* and oriental species. Most used, perhaps, is *S. pseudo-camellia* whose light green leaves turn purple in fall. These trees are reported hardy to minus 8 degrees.

And last, from Japan and China, comes *Styrax japonica,* a 10- to 30-foot tree of spreading head, oval leaves, and pendulous fragrant white flowers. It has hard seeds which ripen in autumn, and is rated hardy to minus 8 degrees. There are also the less common and beautiful *S. obassia* from Japan, *S. americana,* a shrub, and others not hardy in the North.

Most of these beautiful trees are as delicate as their appearance, needing

shelter from strong winds, and a leaf mould soil. One advantage, however, is that pruning can be kept to a minimum. Do plant some of these trees and write about them that members may know what pleasing compositions you have created.

OUR NEW OFFICERS

Though H. Lincoln Foster, recently elected President of the American Rock Garden Society, has spent most of his professional life as a teacher, it would perhaps be fair to say that his consuming interest has been gardening. Rock gardens, though his major love, have not been his exclusive horticultural interest. Wild flowers, rhododendrons, trees, and ferns have all commanded his attention, and still do. Since his retirement from teaching, he devotes his entire time to horticulture. He and his wife, Laura Louise (Timmy, as she prefers to be called), divide their time between making gardens for other people, writing about gardens, and tending, without assistance, an extensive and greatly admired garden at their home in Falls Village, Connecticut.

The garden itself, which occupies about three acres, through which runs a swift mountain stream, contains many different rock garden features such as raised beds, an alpine lawn, screes, ledges, both sunny and shady, a large woodland garden of rhododendrons, primulas, and related plants. Most of the material grown in the garden, including the azaleas and rhododendrons, have been raised from seed and nurtured in the nurseries connected with the garden. The seeds have come from the Seed Exchange of the ARGS and other horticultural groups, also from collecting in the wild in Europe and North America, plus quite a number from Mr. Foster's own crosses. It was this interest in hybridizing which won for him in 1962, the Florens DeBevoise Memorial Award presented by the Garden Clubs of America.

Mr. Foster was born in 1906, in Newark, New Jersey. Following his high school career in Morristown, New Jersey, he attended Williams College, from which he graduated in 1928. Following a few years in editorial activities, he began his teaching career at the Morristown School in the fields of Latin and English. In 1937, with a colleague, he founded and became co-headmaster of the Norfolk School, in Litchfield County, Connecticut, where he had summered as a boy, and where he has since lived.

Following World War II, during which the Norfolk School closed, Mr. Foster interrupted his teaching career for about five years and became engaged in forestry and horticultural experimentation at Great Mountain Forest, Norfolk. During this period, he assisted Professor Harold Lutz, of Yale University, in a botanical survey of this 6,000 acre forest. He also found time to raise many hundreds of azaleas and rhododendrons from seed, and to begin a program of hybridizing. In addition, he was active in local politics, serving a term as Representative in the State Legislature.

In 1949, he married his present wife, and moved, with his two children, to Falls Village, taking up once more his teaching career at the Housatonic Valley Regional High School. In preparation for this shift back into the teaching world, he took a year's study at Trinity College, Hartford, and earned his MA degree. In 1955-56 he studied for a year at Yale University under a Ford Foundation Fellowship in the field of Ecology. In 1962-63 he was granted a leave of absence from teaching in order to write two textbooks, an anthology of contemporary American poetry, and an edition of *Moby Dick* for the Macmillan Company. In addition to these two books he has written many articles for publication in various horticultural magazines and journals. He also wrote the chapter "Ferns in the Garden" in Boughton Cobb's *A Field Guide to the Ferns* which was illustrated by Mrs. Foster. He and Mrs. Foster also helped Mr. Cobb with the field

work for this book, which is one of the Peterson series of Field Guides published by Houghton Mifflin.

Mr. and Mrs. Foster are on the board of the Root Glen Foundation, of Clinton, New York, for which they made a collecting trip in the western mountains this past summer. Mr. Foster (known to his many friends as Linc) became a member of the A.R.G.S. soon after its founding, and has served two different terms as director, and for two years acted as Director of the Seed Exchange.

During the recent collecting trip in the Siskiyou Mountains, the Fosters were joined by President Emeritus Harold Epstein, Editor Albert Sutton, and other members of the A.R.G.S. Stops in Portland, Oregon, and Seattle, Washington, provided opportunity for the new president to visit many members' gardens, to meet the gardeners themselves and to talk A.R.G.S. affairs.

Lawrence Hochheimer, our new secretary, is a man of various talents, with a droll sense of humor and an abundance of energy. Together with his charming wife, Irene, he gardens intensively yet finds time to carry a full share of civic activities, and the typical business involvements of semi-retirement.

New York City was the site of his birth in 1895 and the locus of his early education and business. In business he has been associated with textiles and manufacturing, including the founding and management of five successful manufacturing ventures.

During World War I, he served in the United States Navy with the rating of Seaman Gun-pointer, First Class.

In 1936, he joined the ranks of metropolitan commuters when he moved to West Norwalk, Connecticut. On the outskirts and high above the city, the Hochheimers have created a delightful garden. Both Larry and Irene enjoy the challenge of alpine plants and add spice to their enjoyment by a friendly rivalry. Each has a special segment of the garden. Larry has remodeled an existing stone wall into a congenial home for his special treasures, while Irene has developed a natural rock outcrop into an enchanting alpine ledge.

Their mutual energy and enthusiasm have been turned full-steam into the functions of the secretaryship of the American Rock Garden Society.

INTERCHANGE

New address for ARGS Seed Exchange—Direct all letters to Mr. Bernard Harkness, Director of the Seed Exchange, to his new address, 385 Hollywood Avenue, Rochester, N. Y. 14618. All seed contributions should also be sent to this *new* address.

Doretta Klaber's book *Rock Garden Plants*—In Interchange in the July *Bulletin,* incorrect information was given regarding the publisher of the new edition of this book. The publisher is Joseph H. Reiner, Vice-President, The Bonanza Books, 419 Park Ave., New York 16, N. Y.

Meconopsis—In answer to Mrs. Shirlee Hutmire's (Takoma Park, Md.) inquiry in the July *Bulletin,* Mrs. Alice Hills Baylor, Sky Hook Farm, Johnson, Vermont, writes, "My garden records show that *Meconopsis baileyi, M. sherriffii M. gracilipes,* and *M. betonicifolia* were germinated in the spring of 1956. The seedlings were planted out in the fall in several places. They were lovely plants—but no flowers. I kept transplanting with no good results until 1960. One plant had been placed in a bed prepared for primroses where the clay-base soil had been heavily enriched with humus. There is an underground drain from the upper garden which keeps the area moist at all times. The exposure is southwest, so the plant had sun

until late afternoon. I had by luck found the right place, and now I have these exquisite blue flowers. I hope Mrs. Hutmire can find the same conditions and bring her plants into bloom."

Phlox 'Chattahoochee'—Mr. Henry Fuller, 41 Sherwood Rd., Easton, Conn., asks about this plant's habitat and wishes to know if it is presently procurable. Reference to ARGS *Bulletin,* Vol. 4 No. 2, dated March-April, 1946, reveals that the plant asked about is *Phlox divaricata* 'Chattahoochee' according to Dr. Edgar T. Wherry in his article, "Rock Garden Phloxes." In writing about *Phlox divaricata,* Dr. Wherry had this to say, "From the colonies of var. *laphami* in western Florida, Mrs. J. Norman Henry has selected a striking color-form, in which the lobes are deep lavender, and the eye intense red-purple; this has been named hort. var. Chattahoochee, after the river valley where it is native. In spite of its southern origin, it seems entirely hardy at least as far north as latitude 41 degrees."

Moneses (Pyrola) uniflora—While in Switzerland this summer, Maj. Gen. D. M. Murray-Lyon collected *Moneses uniflora,* among other plants, and later brought it back to Scotland, and since the editor's list of ten favorite plants, appearing in the July *Bulletin,* contained this plant, the General asked how it is treated in Seattle gardens. *Moneses uniflora,* though a native of both the Olympic and Cascade mountains in Washington, is seldom seen in local gardens. Given the right combination of moisture, shade, and a soil that is mostly coniferous duff and half-rotted wood, and with a topping of growing moss, this plant, beautiful and chaste, with a wild and lingering fragrance, may bring joy to some lucky gardener's heart—unless some early-morning, moss-scratching bird tears it loose to lie exposed and to die in the first rays of the rising sun or the dry warmth they generate. This is what happened in the editor's garden. Anyone who can give our Scottish friend more specific directions should do so at once.

Dodecatheon! How to pronounce it!—Dr. Wherry, our Editor Emeritus, wants all of us, now that our floral emblem is officially *Dodecatheon,* to be able to pronounce it correctly. Just what is correct? He writes, "While all those consulted indicated that the accent should be on the 'a', an unexpected discrepancy turned up; prior to 1950 there was agreement that the 'a' should be 'grave', the pronunciation thus 'dodec a theon', but in Gray's Manual, by M. L. Fernald, page 1139, it was marked as 'acute', yielding 'dodec ath eon'. Whether this represents a real change in ruling, or merely a compositor's error overlooked in proofreading is not manifest." Perhaps some of our members who are students of the classics may care to discuss this matter in future *Bulletins.*

Study Groups—Mr. T. S. Shinn, 11 Rosewood Ave., Asheville, N. C., in writing of the native shrubs of North Carolina, tells us, "There are quite a number of shrubs which are relatively unknown to the general public, but which are attractive from the standpoint of bloom as well as autumn coloring. Many of these are as unavailable as they are unknown. It is for this reason that I am trying to lead an adult group in the propagation of these plants." Should there be other study groups scattered throughout the country, or abroad, where our members are busy increasing their knowledge of plants and their growing, it might be well to give them a bit of publicity in the hope that other groups might be encouraged to organize. Such groups, if they exist, should send word concerning themselves to the editor. One such group has been continuously active in Seattle for the past twelve years and is still active. This group has for its project the Ericaceae and what the ladies who make up the group have accomplished with this family will some day

make exciting reading. Pehaps in the *Bulletin!*

Success in California's Central Valley—Mrs. D. S. Croxton, 142 McKiernan Drive, Folsom, Cal., sent in some fine pictures which should have accompanied Part II of her article, "Rock Gardening in California" which appeared in the July issue, but arrived too late to be used. The pictures were of plants blooming in her garden this spring and show well-planted pans as evidence that Mrs. Croxton is having much success in growing choice plants under hard climatic conditions. The plants shown included *Draba mollissima, D.* sp. (from Beartooth Pass), *Saxifraga elizabethae, S. schleicheri,* and *S. media.*

A notable gathering—In Southern Oregon, in Portland, in Western Washington, and in Montana, far western members were privileged to meet H. Lincoln Foster, our newly elected president, and Mrs. Foster, and our President Emeritus Harold Epstein and Mrs. Epstein. Sharing with them the adventures of plant collecting, camping, mountain climbing, and field trips resulted in a much closer relationship within the Society between the East and the West. There is much evidence of an interesting intermingling of members throughout the nation and seemingly great distances are proving no obstacle. Much of this intermingling is unheralded and unrecorded, but it goes on, much to the benefit of our Society and its members, and to the enrichment of our nation's culture.

WHY NOT ROCK GARDENING IN THE SOUTH?

ROBERT M. SENIOR, *Cincinnati, Ohio*

The general impression seems to be that rock gardening can be engaged in only in the northern part of the United States where cold winters enable mountain plants to undergo a resting period. True it is that most of these plants growing in the north would perish in a southern clime. But why could not a Southerner engage in rock gardening by collecting an endless number of charming, low-growing plants endemic to his section of the country? This article is a plea that more people in the South should attempt this delightful form of gardening.

If you insist that this is not true rock gardening, I have no objection to calling it by any other name you may see fit. Be assured you can have a garden that would not only give you pleasure, but would also attract many visitors. In fact, if there are such gardens today in the South, I would be tempted to visit some of them.

There seems to be a rather widespread impression in the North that a satisfactory rock garden must necessarily contain a large amount of rock, but I believe this is not at all essential: I have seen pictures in English magazines where the amount of rock work was inconsiderable. Occasionally a rock was placed to set off some plants to better advantage.

If you live in a perfectly flat country, it might enhance interest in your garden if you first engaged in some spade work, making a miniature hill here, a tiny valley there. It might be monotonous to a visitor to see your entire garden at a glance. Better to introduce an element of surprise by offering a variety of views, with different floral displays.

The Southerner would have an additional advantage over the Northern gardener in that he could well have flowers blooming the greater part of the year. In most sections of the North, the main rock garden display covers the spring and early summer months. But in the South, one could if he chose, specialize in a winter and spring garden. I well remember one winter spent on the west coast of Florida, when we were surprised at the number of flowers that we found

in full bloom. Among them I remember such low-growing plants as the tiny white *Houstonia rotundifolia,* the prostrate *Jacquemontia reclinata,* the holly-leaved *Rhacoma ilicifolia,* the ubiquitous yellow-flowered *Helianthus debilis,* as well as violas, sisyrinchiums, viornas, linarias, and polygalas. Moreover, if one should have a damp place in his garden, the blue and yellow butterworts, *Pinguicula pumila* and *P. lutea,* would be a delightful sight, and probably to these could be added some native members of the *Orchid* family.

Possibly, as a Southern gardener, you might want some low-growing shrubs as a background to your garden. If your soil is not alkaline, you might consider such plants as the tar flower, *Befaria racemosa,* or one of the low-growing huckleberries, *Vaccinium nitidum.* If on the other hand, your soil has a neutral or alkaline reaction, I should think that some low-growing shrubs could be found growing in your section of the country, or, if you chose to go further afield, you could secure some of the low-growing evergreens, such as junipers or yews which, if necessary, could always be trimmed to the proper height.

It might be objected that some of the above mentioned plants would not thrive in southern Texas, but on the other hand, some delightful Texas flowers probably would not succeed in the south-eastern states. To mention a few flowers native to Texas, one could include *Allium nuttallii, Cooperia drummondii, Zephyranthes texana, Nemastylis acuta,* sisyrinchiums, abronias, hypoxis, gilias and violas. Though the beautiful *Eustoma russelianum* might be considered too tall for the garden which I have in mind, nevertheless, I should be sorely tempted to include it. The native *Phlox drummondii* is an annual, and widespread in certain parts of Texas, but I should be inclined to give it a place in the garden.

Perhaps there are some Southern gardens such as I have in mind, and if so, possibly our readers would inform us where they can be found.

WELCOME! NEW MEMBERS

Mrs. Lucien Alexander, 11848 S. E. Rhone, Portland, Oregon.
Mrs. Dorothy F. Altman, 495 Rockrimmon Road, Stamford, Conn.
Mrs. Donald Angerman, 1908 Westview Drive, North Vancouver, B. C. Canada.
Mr. and Mrs. James C. Blanchard, Horizons, Valley Road, N. Y.
Mrs. Stephen Chelminski, Poverty Hollow, R.F.D. 1, Redding, Conn.
Mr. Sheldon H. Cohen, 1612 Mulvane, Topeka, Kansas 66604.
Mr. L. P. Crocker, 3355 Jacksonville Hy., Medford, Oregon.
Mr. Richard E. Devor, 2405 Avenue E, Scottsbluff, Nebraska.
Mrs. Leo Dietz, 3232 Russet Road, Alderwood Manor, Washington.
Mrs. Irene Elkins, 916 Westchester, Grosse Point Park 30, Michigan.
Miss Edith B. Filion, 9 Farragut Road, Swampscott, Mass.
Mrs. Herbert Gottlieb, 328 W. Engelwood Ave., Teaneck, New Jersey 02666
Mrs. Lawrence Green, 84 Maple Hill Road, Huntington, L.I., N. Y. 11743
Mrs. C. Dwight Granger, Warren, Mass.
Mrs. Jennie W. Haynes, 57 Deepdale Drive, Manhasset, N. Y.
Mr. Otto E. Holmdahl, 711 Broadway East, Seattle, Washington.
Mr. and Mrs. House Jameson, Box 456, Newtown, Conn.
Mr. Erling Johannesson, Mörk, Svinesund, Sweden.
Miss Mary G. Kenney, 2460 Glendon Road, University Heights, Ohio.
Mr. Wilbert J. Levy, 9 Sugar Toms Road, East Norwich, L.I., N. Y.
Mrs. Stanley M. Loomis, High Meadow Road, Weston, Conn.
Mr. Samuel H. Luck, 311 Somerset Road, Baltimore 10, Md.
Mr. Hardin A. McAdoo, 309 West Mermod, Carlsbad, New Mexico 88220
Mrs. Gloria McLarty, 15 Spruce St., No. Tarrytown, N. Y.

Mr. Bennie L. Madison, Jr., 227 Urban Avenue, Westbury, N. Y.
Mr. and Mrs. Albert W. Marshall, 12827 Shorecrest Drive, S.W., Seattle, Washington 98146.
Mr. Sam S. Maxson, 1610 Bryant Avenue, Walla Walla, Washington 99362
Mrs. Ursula D. Metcalf, Rt. #1, Norwood, Missouri 65717
Miss Mae Moller, Rt. 2, Cook, Nebraska 68329
Mrs. Joseph F. Napierala, 4125 North 44th St., Omaha 11, Nebraska.
Mr. Russell F. Peterson, Tan Vat Road, Locust, New Jersey.
Mr. Mangum A. Pickett, 2628 Chapel Hill Road, Durham, N. C. 27707
Mrs. James C. Proctor, 215 King Street, Englewood, New Jersey 07631
Mr. and Mrs. Fred Read, 388 Forest Avenue, Paramus, New Jersey.
Mr. Ed Rezek, 109 Slabey Ave., Malverne, L.I., N. Y.
Mr. Neil Sandow, 1633 East 14th St., Brooklyn, N. Y.
Mrs. Henry Seeba, Box 26, Cook, Nebraska 68239
Mrs. Patricia Slayton, 110 Rose Circle, Reno, Nevada.
Mr. Carling H. Stedman, 8401 Southwest 68th St., Miami, Florida 33143
Mrs. Lillian Vandenberg, 5420 No. Iroquois, Milwaukee 7, Wisconsin.
Mrs. Anthony Van der Werff, Jr., 67 Grassy Sprain Road, Yonkers, N. Y.
Miss Margaret J. West, Box 160, Indianola, Washington 98342
Mr. and Mrs. John C. Wister, Arthur Hoyt Scott Horticultural Foundation, Swarthmore College, Swarthmore, Pennsylvania 19081
Mr. David Wurster, 10 Berkeley Road, Westport, Conn.

MIDWEST REPORTS ITS FIRST MEETING

It was a day that will be long remembered—Saturday, May 9, 1964. Omaha had little snow this past winter during the days when tiny treasures needed a blanket covering. Indeed, there was a lack of moisture as winter approached and the year 1963 waved goodbye. February, 1964, came through with many "too warm" days. April rushed in like a jet plane bringing cyclonic winds with it. Early wild flowers and tiny rock garden jewels didn't have a chance. They were often blown to shreds before they could be enjoyed.

But the Omaha group never gave up. They went right on planning for their first American Rock Garden Society meeting on May 9. Announcements were made and over 150 invitations mailed out. The gardens that were to be visited were groomed—over and over each day. The first three days of the final week brought pouring rains, followed by high winds that quickly dried the soil. By this time some 70 persons had indicated that they would attend this first meeting.

Thursday, May 7, was a beautiful but warm day and everyone rushed to pick up the last stick and pull the last weed. Gardens were eyed with pride. Little was it realized that the real clean-up was just ahead. On Friday, May 8, tornado winds arrived, battering the Omaha-Council Bluffs area, causing property damage and many injuries, as dusty winds blew in from Kansas. Gusts of wind up to 65 miles an hour blew trees over, snapped power and telephone wires, sent trash containers bouncing down the streets like tumbleweeds. Blown down was a 110-foot radio tower, a car was picked up and lifted over a four-foot wall, roof shingles flew before the wind.

Long before the storm was over, the new clean-up had started. Several gardeners were menaced by falling branches as they worked in their gardens. A long distance call came in telling that the chartered bus from Cook, Nebraska, had broken down and 28 people would not be able to attend the meeting. They were informed that the meeting would be held as the Omaha group had not given up, and to come, as many as could in private cars. That the gardens might

be ready next morning for the visitors, many worked far into the dark hours.

Saturday, May 9, was a beautiful day with the sun shining. Trials and tribulations were soon forgotten as committees arrived at their posts. Mrs. John Geissler and Mrs. Fred K. Smith looked after the registrations and handed out the badges. It was still chilly and Mrs. Ramona Klopping greeted all with plenty of hot coffee. Those who brought plants were guided to a table in Mrs. Leddy's back yard where Mrs. Bryan Klopping and Mrs. F. C. Ahlman were ready to receive and sell them. It was a lively sale from which more than $25.00 was realized. There is little doubt that had it not been for the storm more plants would have been brought to the meeting.

Acting as official guides in the garden were Mrs. Violet Cooley and Mrs. Floyd Armstrong. They were assisted by other members of the Omaha Hemerocallis Society, sponsors of this first meeting. It was a quiet morning with the birds singing in what seemed a joyous greeting to the new Midwest region of the American Rock Garden Society.

By ten o'clock the count showed some 40 people registered. A short meeting was called to order. Mrs. Lillian M. Leddy, chairman of the new region, explained the purpose of the meeting, told how the Midwest region would function, and urged all present to join the American Rock Garden Society. Printed lists of the gardens to be visited were passed out with a list of nurseries and general information on rock garden plants. The date for next year's meeting was discussed and it was suggested that it should be some time between May 1 and May 15, depending on the season. Other plans for the coming year were made known. Much will depend on how gardeners interested in rock garden plants react to the national society affiliation. The meeting adjourned, and at 10:30 A.M. the cars started for the second garden, that of Mrs. Bryan Klopping.

Other gardens on the official tour list were those of Mrs. Floyd Armstrong, Mrs. Violet Cooley, Mrs. John Geissler, Mrs. Walter Asche, Mrs. Fred K. Smith, the Misses Helen and Alice Horsfall, and Mrs. E. E. Zimmerman, all of Omaha. The gardens were beautiful regardless of the many storms. Many good plants were seen, such as *Epimedium, Anthyllis, Anthemis aizoon, Mazus reptans, Jasione perennis, Potentilla aurea, Alchemilla, Astilbe chinensis pumila, Geranium renardii, Antennaria dioica, Dianthus, Helleborus, Dicentra eximia.* There were also many sempervivums, many kinds of sedums, thyme, primroses, and many ferns. Many unique and eye-appealing garden settings and pools were enjoyed. Countless garden notes were taken.

To those who came to this first meeting—a big 'thank you'. To those who stayed at home—plan to come next year!

CRUCIFERAE – THE CROSS-BEARERS

SHIRLEE HUTMIRE, *Takoma Park, Maryland*

Farrer calls the Cruciferae "that vast family of weeds and vegetables." That it is, but it also includes some of the easiest, loveliest, and earliest flowers for the rock garden. Here in Maryland, in the upper south, most do very well in spite of hot summers and changeable winters.

The crucifers are very easy to recognize. They have four petals in the form of a cross and six stamens; the four inner ones long, the two outer ones short. The papery seed pods are also distinct, and can be short and rounded as in *Alyssum,* or thin and long as in *Erysimum.* They are a very large family of some 350 genera and 2,500 species, and among these are some very fine rock garden plants.

Drabas start the season, the earliest being *Draba aizoon* and *D. polytricha.* The latter is in bloom as I write on the tenth of February, and the buds of the former are showing color. *D. polytricha,* which needs a vertical crevice to keep it safe from winter wet, forms a little clump of fuzzy gray rosettes with golden flowers close upon it. It blooms with the *Crocus chrysanthus* varieties 'Blue Giant' and 'Snow Bunting', and brings a touch of spring though ice and snow are yet to come. *Draba aizoon* is entirely different with larger, dark green, spiny rosettes and flowers of a greenish-gold on stems which keep on elongating as the flowers open.

Thlaspi limosellaefolium is another early bloomer, with heads of soft rosy lavender close upon the dark green tufts of foliage. It is a small dainty plant, worthy of a choice position away from rampant growers.

An even lovelier shade of lavender is flaunted by *Erysimum linifolium* from early spring until December. It is a small evergreen shrub with dark green, narrow, toothed leaves and spikes of purest cool lilac. The spikes elongate and flop this way and that as the flowers open. It is in bloom for nine months of the year here if given a sunny sheltered position. *Erysimum allionii* is only biennial, but where else is to be found its gorgeous shade of orange? I like to let it seed around with *Verbascum phoeniceum* where their 18-inch to two-foot heights look appropriate, and where the lilac and purple and orange can make a startling combination.

In *Iberis* is found the purest white I know. Some of the smaller forms such as *I. saxatilis* and *I.* 'Little Gem' are really good, and *I.* 'Christmas Snow' will bloom again in fall and on into winter. *Iberis gibraltarica* has heads of lilac to purple, often with the inner florets paling to white. It varies from seed, and is hardy here but not long-lived. *Iberis taurica* has lilac buds, but fades to white as the flowers open. It is a small plant with leaves of a grayer green than the others.

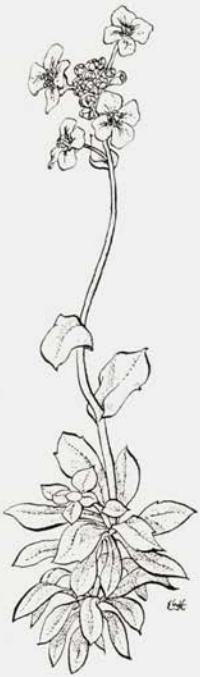
Arabis albida and *A. alpina* are well-known largish plants with white or light pink flowers. *Arabis pumila* is a miniature of these with dark green leaves instead of gray ones. It has fine white flowers.

Aethionema cordifolium is one of the numerous aethionemas which can be grown in the rock garden. It as well *A. pulchellum, A. stylosum,* and *A. schistosum* are lovely little shrubs with pale pink flowers over bluish foliage—a color combination for a baby's nursery. *A. grandiflorum* is larger and has flowers of deeper pink. *A. 'Warley Rose'* is a small shrub with the deepest pink of all, but it is not long-lived here as are the others.

If *Schivereckia bornmuelleri* had a name to match its dainty charm, it would be better known. Gray-green rosettes make a slowly spreading mat, and in spring sprays of white crosses rise up on thin leafy stems. The whole plant is only about three inches high and needs a position where it will not be swamped by rampant neighbors.

Alyssum brings the gold of spring to the garden. *Alyssum saxatile* and the lovelier, paler *A. s. citrinum* will cover large areas with color if you can spare them the room they require. There is a group of alyssums which are low-growing, trailing plants with flowers of purest gold over oval gray leaves. These are *A. moellendorfianum, A. ovirense, A. montanum, A. repens,* and *A. wulfenianum.* At our old home there was an ugly dry wall of broken pieces of concrete. I put seedlings of these alyssums into the spaces between the blocks, pushed soil in around their roots, and they soon covered the wall. The foliage is evergreen, and when they bloom, the wall is a mass of gold.

Alyssum (Ptilotrichum) spinosum is a gray-leaved little shrub with white flowers. There is a pink form, but those I have raised from seed are of a washy



Schivereckia bornmuelleri

Thlaspi limosellaefolium Edward W. Hutmire

pale shade. I have seedlings from Mr. Archibald's collections which should bloom this spring, and they are supposed to be of a very good pink. I'm keeping my fingers crossed about these!

One of the best features of all these crucifers is their evergreen foliage. In a climate where spring-like days may come between arctic winter spells, they bring interest at a dull season. The smallest of these plants make good cover for bulbs, protecting them from dirt splashes. The larger ones can cover the earth between rocks with blue, gray, and green of all shades at all seasons. Truly, foliage is as important as bloom in the overall picture of the garden.

Crucifers are extremely easy to raise from seed, and they do not seem to object to being transplanted. The seed need not be frozen or kept in the dark, and it usually germinates promptly. Many are said to like lime, but our soil here is acid and they don't seem to mind. Self-sown aethionemas came up and thrived in a heather bed here! If you have very acid soil, put a handfull of crushed egg shells in the hole when planting. The egg shells stay put, and acid-lovers can be grown next to lime-lovers.

There are many more cross flowers to be grown, but these are some I have liked and found easy and quite dependable. I'm looking forward to seeing some bloom in the spring that are new to me. I shall keep on hunting for new ones. Let's not turn up our noses at the family of "weeds and vegetables", but enjoy the variety of lovely foliage and the flowers that the Cruciferae make available to us.

FATHER DAVID'S LOBELIA

BERNARD HARKNESS, *Rochester, N. Y.*

Two references, *Hortus Second* and Booth's *An Encyclopedia of Annual and Biennial Garden Plants,* list *Lobelia davidii* as an annual. Since in other respects, their descriptions fit material grown from seed from the Montreal Botanic Garden, I beg to differ with that classification. Seeds sown in February, in the greenhouse, had every opportunity to flower during 1962, but they all remained rosettes and all came through the winter in an outside bed to send up stems and began flowering in August of 1963. I would consider *Lobelia davidii* a hardy biennial as to flowering habit in this area. Whether it is monocarpic or not remains to be seen.

The flower stem is very leafy, bottom leaves are six inches long, the first flowers at about twenty inches on the two to three foot stem are subtended by a three and one half inch leaf. Hence, the flowering portion of the stem is rather dense but the inch long flowers are displayed reasonably well because of their coloring, 10P 5/10, strong reddish-purple, by the Nickerson Fan. The tubular bud splits on top clear to the base, releasing a claw-like blue anther-tube from which the white fringes of the stigma project. The opened lower lip has cupped edges and there are two narrow violet wings which project on either side of the anther-tube terminating in an S-shape; over all, the picture of an insect looking at you.

Though our American lobelias have had some status on the fringes of medicinal usage, *Lobelia davidii* is not included by Hu or Roi in their records of plants used in Chinese medicine. Nor is it mentioned by Wang among the prominent flowering plants of forest and grassland in China.

Lacking Franchet's *Plantae Davidiana,* I cannot state the area in China of its origin. Because of the difficulty in securing seeds from the far reaches of that country, this lobelia should be cherished and maintained in collections.

NOTES FROM THE NORTHWEST

SALLIE D. ALLEN, *Seattle, Washington*

Many of us feel that the enthusiasm of the Northwestern Regional Group and its success is due largely to the inspiration and guidance of our members who are professionals in botany, horticulture, or a combination of both, associated with the Arboretum, the University of Washington Botany Dept., and the several fine nurseries in and near Seattle. These people give freely of their time to individuals who wish to learn, and collectively to the group by way of interesting programs, enriching our lives by sharing with us their vast amount of knowledge and experience. We felt very fortunate to have had two programs this spring presented to us by professional members.

BOTANICAL PERPLEXITIES:—Many a rock gardener attempts to grow, identify, and learn all he can about native plant material by pouring over regional floras, acquainting himself with technical terms, eventually becoming involved in the fascinating science of botany. This self-educated enthusiast, not having had the advantage of the formal classroom, expects to find a standard set of rules to go by. His early attempts at identification are the easiest because, in his ignorance, he accepts and is satisfied with the first answer he finds. As he becomes more involved, acquires more knowledge (and more books) he is confronted by differences of opinion between the experts. He hears terms such as

"lumpers" and "splitters" and he wonders how he, the amateur, can draw conclusions when the experts cannot agree. He becomes confused, discouraged, and critical.

Although it did not specifically solve the problem, the lecture by Dr. C. Leo Hitchcock (Dept. of Botany, University of Washington) did give us a better understanding of why the problem exists, and of some of the other perplexities that face the botanists. Hopefully, through this understanding, we are less confused, discouraged, and surely less critical. The most important thing to keep in mind is that botany is not an exact science because it is dealing with living entities. Since it does deal with *living* entities, the rules are not indisputable; there always have been and always will be exceptions. A set of rules or standards have been set up to organize a systematic classification, to facilitate the study of this vast plant kingdom. The rules can only serve the purpose of a means to an end, not the end itself.

Dr. Hitchcock discussed "lumpers" and "splitters" indicating the reasons for the lack of agreement between taxonomists and admitting that there was no one correct approach. A plant growing in the mountains of Washington will have a certain set of characteristics of a species. The same species growing in Wyoming or Northern British Columbia may possess certain other or conflicting characteristics important enough to the "splitter" to give the plant a separate specific rank. The "lumper" would consider it a separate geographic race which some taxonomist would call a subspecies or variety. Both have valid arguments to support their stand. Although he would be considered a "lumper", Dr. Hitchcock said that one must have an open mind, weighing the importance of the evidence.

In giving us some botanical background, Dr. Hitchcock explained the generally accepted theories of the evolution of plants, pointing out variation within plant families themselves. The most primitive flower is the most complete one; the one that has many separate petals, many stamens, sepals, pistils—*(Magnolia)*. The more advanced development in flowers are those with reduction, fusion, and loss of various parts—*(Orchid)*. The genera within plant families, generally speaking, have similar flower characteristics and have evolved at about the same time. Using the above criteria, there are some apparent exceptions, the family Ericaceae an excellent example. Dr. Hitchcock showed us many large drawings to illustrate the diversities that can occur within a plant family, in which is found flowers both primitive *(Ledum* with separate petals) and more advanced *(Cassiope* with fused petals).

These are but a few of the problems confronting the taxonomist, and they can only be lightly touched upon in these brief notes. Perhaps we now can better appreciate the difficulties that must arise in compiling a regional flora such as *"Vascular Plants of the Pacific Northwest* by C. Leo Hitchcock, Arthur Cronquist, Marion Ownbey, and J. W. Thompson—five volumes published in reverse order by the University of Washington Press. All but Vol. I are now available.

SOUTHWEST MOUNTAIN FLORA:—Mr. and Mrs. Carl S. English, Jr. have spent thirty years exploring the wilds of the Northwest, collecting what they felt was desirable native flora. They have worked with it, propagated it and introduced it into cultivation through their fine Seattle nursery, thus providing us with some of our most valuable plant material. In recent years they have become intensely interested in the mountain flora of the Southwest.

Mr. and Mrs. English obviously went to a great deal of time and effort to bring us the excellent program entitled "Wildlife Atmosphere of the Southwest." The lecture was by Mr. English, illustrated by beautiful slides taken by Mrs.

English. On a sizable table were displayed many specimens of the thrilling flora to be found especially in the mountains of Arizona and New Mexico. In his lecture, Mr. English opened the door for us to a whole new area of thought, study, and plant material. He said that although this flora would not be adaptable to gardens in the populated areas of the Southwest, he feels that coming from high elevations there, it should be perfectly hardy on the Pacific Coast, or similar climates.

Of great interest to everyone was a flat of seedling *Mahonia haematocarpa,* the new leaves dark copper in contrast to the blue-gray of the previous season's growth, giving us an inkling of the character and beauty of a mature specimen. This species is too large when fully grown (attains six to eight feet in its native habitat) to be considered for most rock gardens, however, it would indeed be a magnificent addition to other areas of a garden, where it can be grown as a specimen shrub or as a group planting.

Mr. English told us that there are many desirable species of *Talinum* suitable for the rock garden, all with the characteristic small succulent leaves. This genus has a wide distribution in nature; *T. okanoganense* from arid areas in Washington, for instance, and from New Mexico a still undetermined species with bright cerise flowers.

There were a number of exceptionally interesting small ferns displayed, among them *Bommaria hispida,* with mottled triangular-shaped fronds, rounded at each point of the triangle. It forms attractive clumps, three inches in height, unusual in that the blade grows almost at right angles to the stipe and parallel to the ground. *Notholaena sinuata,* in form and habit of growth, resembles *Asplenium Trichomanes,* only it is larger, ten to twelve inches, and the color is a lovely blue with a frosty edge to the deep wavy margins of the pinnae.

Mr. and Mrs. English are still experimenting with these and many other plants, including shrubs and trees of the Southwest, in the hope of determining their suitability for Northwest gardens. The horticultural requirements for these plants are full sun and rocky, well-drained soil.

GARDEN TOURS:—Undaunted by cold and threatening rain, members of the Northwestern Group gathered to tour four gardens carefully selected for their dissimilarities as well as their location, all within close proximity in the Magnolia Bluff area of Seattle. Each garden contained a wealth of interesting and unusual plant material, the cataloging of which would be of little benefit to the reader. It was interesting, however, to note that the character of each garden well illustrated a different point of view in gardening.

The Alton DuFlon garden clearly indicates the artistic influence, where design, flowing lines and accents are understood and utilized to advantage. It can be best described by saying that each small section can be compared to a beautifully decorated room, complete within itself, where color, texture, and form are blended into interesting associations of plant material.

The feeling of the garden of Mr. and Mrs. First Johnson is that of maturity, of one completed, where species rhododendrons of considerable age could be seen showing ultimate size and habit of specimen plants. There was extensive use of native ground covers lending a natural, wild atmosphere to this garden where it would seem the landscape goal had been achieved.

The David Methenys have a charming, informal, collector's garden. Mrs. Metheny obviously loves heather as shown by her 500 to 600 plants of 125 species, varieties, and forms comprising one of the largest non-commercial heather collections in our area. They gently drift down a sunny hillside to an orchard where many intriguing shade loving plants and shrubs thrive.

Fresh enthusiasm is evident in the point of view of the William Rourke garden, showing much talent and originality in the development of this young garden. Starting from the street, a dry stream bed flows down a gentle grade through well planted natural rock work to the house. The progression is noted around the house and on down the steepening slope to the bluff edge. Work is still in progress in this area which faces an extensive marine view. Artificial rock work has been here well constructed and planted most effectively.

While at the Rourke home, members were invited next door to see still another gardening point of view. Arranged beautifully on tables in the open was Mrs. Horace Raphael's lovely Bonsai collection, reflecting her intense interest in and talent for this artistic gardening form.

A TALENTED MEMBER:—We congratulate George Schenk on the publication of his book, *How to Plan, Establish and Maintain Rock Gardens,* profusely illustrated by Don Normark. (This is a new Sunset Garden Book, Lane Book Company, Menlo Park, Calif., $1.95).

PRESIDENTIAL PROSE

H. LINCOLN FOSTER, *Falls Village, Conn.*

I have just returned from a month's trip (July) into the mountain country of the Far West and in the Rockies. Day after day, under sunny skies, and sometimes clouds, there was a constant kaleidoscope of vivid experiences—new places, new people, new plants. At the moment I feel somewhat overwhelmed. It will take time to sort out the sensations, to digest the impressions, and organize the new information. When the color slides have been projected and the plants pictured identified, and the sketchy field-notes reviewed, some order may be evolved. One thing I am certain of is that I shall not revise my present conclusions.

First of all, I have been confirmed in my conviction that the members of the American Rock Garden Society are a wonderful fraternity—warm in friendship, generous in hospitality, and inexhaustible in sharing their knowledge and their plants.

I have also been impressed, again and again, with the wealth of American plant material wonderfully suited to the rock gardens of the world. Yet many of the fine plants I saw growing in the wild are not available through any ordinary commercial channels.

To be sure, our genial hosts in the Siskiyous, Boyd Kline and Lawrence Crocker, are scouting the mountains for the best of the natives in their finest forms, and are taming them in their own wonderful nursery gardens. In a limited way, while they both carry on full-time jobs, they are making these plants available. I wish it were possible to assure them that if they make this enterprise a way of living, the horticultural world, especially the members of the ARGS, would leap at the chance to acquire the elusive rarities, and pay handsomely for them. But I am not sure! It is not because the plants are either inferior to, or more difficult than, the ordinary run of plants we grow. Quite otherwise.

If only you could have been with us in those special spots in the Siskiyous. I shall not describe them in detail now, nor name them. Suffice to say that in one place, after a stiff descent over snow drifts, we dropped into a flowering meadow. Steep, rocky cliffs on three sides and outcropping benches made a magnified rock garden of literally hundreds of acres. There, by thousands upon thousands were lewisias in full bloom, both *Lewisia cotyledon* and *L. leana.* We focused on special color forms and the natural hybrids between the two species. The rare pure white forms of both species were there in number, probably in the usual propor-

tions, but because of the absolute prodigality of plants, the whites seemed not rare. Certain particular outcrops carried many plants of the natural hybrids. Where in the world do these grow in cultivation?

It is not alone their rarity that makes them desirable for our gardens. They are intrinsically stunning plants with the ineffable character that marks them as born members of the elect among the alpines of the world. There they are, remote and safe, flourishing as fodder for deer.

On another day we were on the far-away peaks of the Bitter Root Mountains in Montana. After a long, rough jeep ride, there was a stiff climb over the block talus to a lofty bench of Lolo Peak; another, but utterly different rock garden on the grand scale. In the dry scree of broken granite, wind-swept and fog-bathed, were the last pink flowers of *Douglasia montana* on thousands of hard foliage mounds, a few remaining heavenly blue blooms on the myriad silky tuffets of *Eritrichium elongatum* (as nanum as in the Alps), and a small-leaved Dryas, a tiny green mossy Arenaria, a short-stemmed Draba, *Saxifraga bronchialis,* a lovely dwarf Erigeron, and many others which I hope my pictures and a few collected plants may eventually permit me to identify.

My questions are not purely rhetorical. The ARGS is made up of people who want these plants, yet are forced to furnish their gardens, or to be content to do so, with lesser (or, at least, more familiar) alpines.

Will our membership support devoted collectors and growers who will make these plants available to us?

SEQUEL TO *PYXIDANTHERA BREVIFOLIA*

LEONARD J. UTTAL, *Madison Heights, Va.*

In reporting on the rare and fascinating endemic flowering moss of North Carolina, *Pyxidanthera brevifolia,* in the July *Bulletin,* I warned I was too briefly acquainted with the species to qualify as an expert on it. Subsequent events proved my caution well founded.

After reporting that the species thrived for over six weeks after transplanting to my garden, shortly thereafter, with the first flash of aestival heat and dryness, when I was out of town, my two sods appeared to die. After they failed to revive upon copious water and shading, I exhumed the remains in an attempt to determine the cause of my failure. I learned little except that the sods had remained tight, and there was no evidence of new root growth; yet I could not assuredly say all tissue was dead; some of the wood might have passed for half-alive. In making this examination I had to sacrifice my plants; they were in no condition to replace after all this handling.

In the meantime, I was visited by Mr. Neil Haas, a member from Connecticut and a gentleman with considerable knowledge and empathy for native plants. I directed Mr. Haas to a natural station of the species and he was able to visit it at another period of the season than the late winter visit of mine. Mr. Haas' impressions are very illuminating, and because they contain a possible key to the understanding and culture of this plant, I pass it on.

Mr. Haas writes me that at the site individual clumps grow in full sun and in partial shade. He says, "in the full sun the plants had the same general aspect as . . . yours (mine) . . . perhaps the plant goes dormant in hot dry weather . . . and revives . . . under moisture. I noted vigorous growth in spots that had a good covering of the longleaf pine needles . . . only an estimated 25% was exposed. Other green growth was found in the shaded areas around the base of scrub oaks." Mr. Haas also reports that this Pyxie seemed to be absent from the more open habitats in the area.

Thus it seems that I was perhaps premature in digging up my apparently dead plants; perhaps they were just dormant! Someday I hope to replace my stock of this plant and take Mr. Haas' observations into account. Significantly, I had read no account in the literature of this species which mentioned dormancy.

It would seem, from Mr. Haas' observations, that the species should be planted in partial shade and be well-mulched, with pine needles preferably, or oak leaves.

As a result of Mr. Haas' visit to the site, three reputable rock gardeners now have plants, men who have been successful with the other Pyxie, *P. barbulata*. From this community of interest we are sure to amplify our knowledge of this plant.

(Editor's Note)—Recently information was received that Mr. Haas, upon his return from securing plants, or sods, as Mr. Uttal called them, of *Pyxidanthera brevifolia*, had given plants to several ARGS members in the vicinity of New York, and that each was to use his own particular horticultural skill in an earnest attempt to find what it is that will make this little-understood plant happy away from its North Carolina home. We may expect reports from time to time from such gentlemen as Richard Langfelder, Neil Haas, Henry Fuller, H. Lincoln Foster, and Harold Epstein, and with such a battery of ardent and knowledgable men at work on the problem, there can be little doubt that *P. brevifolia* will someday grace our gardens with its early-spring blossoms. To quote Mr. Uttal—In a letter of July 9, 1964, he wrote, "I am content that the Pyxie-moss is in the hands of more expert growers than I so that there is now an excellent chance of carrying on this gem. The next step is to learn how to propagate it vegetatively, since seeding seems out of the question."

IMPOSTERS IN THE SEED LISTS*

J. P. ZOLLINGER, *Kingston, New York*

A few days ago I began digging up a large, solid patch of *Dianthus deltoides albus* which was threatening to overrun a mound especially built to accommodate some of the choicer saxatile species. In this campaign of extermination I discovered the label under which this weediest of pinks had been supplied by one of the seed exchanges. The label read *Androsace pyrenaica*.

Experiences like this generally fall into that category of psychological crises which for a moment leave one torn between the urge to laugh and the urge to wail. To a psychologist they might be welcome material for a study of those mysterious border regions between comedy and tragedy. From the mere horticultural amateur they are more likely to evoke maledictions colorful enough to compete with the gaudiest May rock garden.

Consider the antecedents of such an eruption. You have sown your seeds in January or early February with all the care with which you are capable, and in zero weather dug them in under two or three feet of snow. You anxiously waited for their day of germination and watched the seedlings grow as if they were your children. You potted and repotted them, even sent out a RUSH order for another thousand 2¼ inch and 3-inch pots—which you would never have needed had you suspected what lurked under some of the labels.

Many an evening you turned yourself into a bookworm in order to find out which location in the rock garden would answer the needs of your various nurslings, and you devoted hours to setting them out in the garden. You carried can after can of water to them during the heat of summer, even laboriously saved kitchen waste water (i.e., your wife did that) in times of drought, and hauled heavy buckets of water two or three times a day over distances up to two hun-

dred feet, And then, after a few months, in the following spring, or after two or three summers, you discover that you have wasted time, money, and energy on many vegetable changelings. At considerable expense (if you value your time) you have added a few ounces to your compost heap.

Others (Drs. Worth and Kruckeberg and M. Ruffier-Lanche) have expressed their suspicion, in recent *Bulletins,* that some contributors to the seed exchanges are not as scrupulous, or not as informed, as one might wish them to be. But such sporadic hints seem to have had little effect. It seems to me that the matter needs to be brought out into the open and given a full hearing. Perhaps, if enough of us voice our feelings, the three organizations here concerned will in the end be in a better position to live up to their names instead of being, in part, mere compost exchanges.

It would be useful now if I had kept complete records of all the mislabeled seeds I have raised. Who has? However, the following tabulation of cases I actually kept notes about or distinctly remember will perhaps convey the idea that the seed exchanges—much more than the moving of large rocks, or the depredations of wild life—may conceivably be contributory factors in the etiology of rock gardeners' ulcers and cardio-vascular disorders:

LABEL	RESULT
1. *Achillea ageratifolia*	Annual mallow
2. *Androsace pyrenaica*	*Dianthus deltoides albus*
3. *Campanula collina*	*C. rapunculoides*
4. *C. elatines garganica*	A tall, gawky something
5. *Chrysanthemum mawii*	A plain white daisy
6. *Dianthus alpinus*	*Silene alpestris*
7. *Erigeron aurantiacus*	A lilac erigeron
8. *Gentiana farreri*	*Bellis perennis*
9. *G. hexa-farreri*	A *Campanula garganica* form
10. *G. kurroo*	*G. cruciata* hybrid
11. *G. sino-ornata*	*G. septemfida*
12. *Loiseleuria procumbens*	*Polygonum aviculare*
13. *Lychnis lagascae*	A weedy annual lychnis
14. *Meconopsis quintuplinervia*	Unidentified species
15. *Onosma tauricum*	A thistle
16. *Silene hookeri*	*Lychnis coronaria* hybrid?
17. *Thlaspi rotundifolium*	Something with lanceolate leaves

Who wouldn't be tempted to pun about the seedy side of the seed exchanges? Yet we can't do without them! Particular attention should be paid to cases 3, 12, 13, and 15, in which weeds, which every careful gardener shuns like the pest, were foisted on me. Case 13 has imposed a South Vietnamese war of my own, and if I don't seem to have lost as much face as has Washington, it is only because I have kept the matter a strict secret these five years. Case 3 is similar, the only difference being that the ineradicable weed had sneaked in from the roadside long before a well-meaning rock gardener sent me more of it.

Case 12 represents the climax of these horticultural misadventures. How can any gardener in his right mind send out seed of the all-prevading weed *Polygonum aviculare,* loiterer of waste places, and pretend it is the enchanting *Loiseleuria procumbens,* princess of the Alps and the Scottish Highlands—except as a practical joke? Fortunately, I recognized the imposter for what it was before admitting it to the rock garden. And let me assure you, it was not a chance weed coming up in a pot where the true seed failed to germinate. I had a uniform

crop of about sixty plants in fifteen pots, tended with greater love than anything before or after, until I saw the light. The only explanation for this case that suggests itself to me is that the donor of the weed had himself had too many experiences like mine, and before letting his membership expire, tried somehow to take his revenge.

Now there is, of course, the possibility that in this seed gamble bad luck persistently favors me, as it does certain people betting on horses. The laws of statistical probability assure me that if I keep up the gamble for fifty or a hundred years the score will eventually even out; at my age that holds out little comfort. It is my belief, though, that with some concerted effort the three major rock garden societies could reduce the incidents in question to a minimum. The seventeen cited above can roughly be attributed to three catagories of causes: A—Simple mishaps in the gathering, cleaning, and packaging of seeds (a moment's absent-mindedness, a gust of wind whisking away the paper slips with the names and these returned to the wrong seed lots, etc.). B—Lack of proper information (including being too lazy somehow to ascertain the correct name of a plant). C—Premeditated mischief (probably extremely rare, so rare, maybe, I should be proud to have encountered it).

At least, in categories B and C an ethical question is involved. I, therefore, will conclude this diatribe with the suggestion (for what it is worth) that an international committee or an individual seed exchange director compose a Decalogue for seed donors, henceforth to be published in every July and October *Bulletin* and every October *Journal*. Somewhere I read that among all creditors nurserymen are those experiencing the least trouble in the collection of bills. That is a hopeful sign. As rock gardeners we, too, should profit by resorting to the moral appeal.

I realize that this might cut the seed lists down to half their usual lengths, surely to the rejoicing of the seed exchange volunteers. But, if at the same time, the reliability and quality of the lists would wax inversely to their lengths, the rest of us would rejoice even more. Have you ever seen the left-overs of a seed exchange? I have on two occasions. You could have planted a hundred acres with them—a model rock garden of what a rock garden should not be like. That, at least, was my impression, though I may be wrong.

*AGS *Bulletin* and SRGC *Journal* please copy.

OMNIUM-GATHERUM

This is the time of the year when seeds are on the minds of most gardeners. There are seeds to be harvested; seeds to be prepared and sent to the Seed Exchanges; a different batch of seeds to be requested when the seed lists come in. In this issue of the *Bulletin* you have undoubtedly read Mr. J. P. Zollinger's article in which he recounts his sad experiences with certain seeds he received from various Seed Exchanges. His words have, no doubt, brought to mind like experiences of your own, and, of course, you are in sympathy with any idea that may lead to improvement.

Since some may construe Mr. Zollinger's article to be a criticism of seed handling through the Seed Exchanges, Mr. Bernard Harkness, Director of our own Society's Seed Exchange has been given an opportunity to comment. He has done so as follows under the heading of "Abandon Neither Hope nor the Seed Exchange:"

"As the present Director of the American Rock Garden Society Seed Exchange, I wish to state that Mr. Zollinger is a little hard on the efforts of a society of amateurs in prescribing standards of perfection which do not obtain among the seed exchanges of professionals, those of botanical gardens. Nor do I

think for one moment that ill will has ever been directed to our Society by any contributor to the Seed Exchange. I hope that no hand will be stayed in the seed in-gathering this fall, and that our list will again number its usual 100 plus contributors.

"To elaborate a bit, may I cite one case history? Some years ago a contribution came in labelled *Roscoea humeana.* I recognized the seed to be that of *Tragopogon.* Correspondence elicited the fact of lavender flowers and that it had been received from an American seedsman under the Roscoea name. The A.R.G.S. Seed Exchange listing was *Tragopogan porrifolius.* Soon thereafter I requested seed of *Roscoea humeana* from the seed list of an English university botanic garden. I was a bit luckier as I did get *Roscoea purpurea.* If some promising seed pods mature, it will be listed correctly in our '65 Exchange list. Obviously, such time consuming efforts can be carried out with but few of the seeds sent in although all obvious mistakes will always be corrected.

"I have not previously reported on a project I worked out with *Aethionema.* Some 20 spp. were requested from a wide range of botanic gardens. From this lot (germination was generally good) I raised but two perennial species, *Ae. grandiflorum* and *Ae. pulchellum* and an annual species which I should consider worthless as an ornamental. I can now differentiate between seed of the annual and perennial species, and I shall list the annual as *Ae. arabicum,* though it appears under many names. However, it will be difficult to pass along such unimportant skills as seed directors change about.

"The Penstemon Society is able to certify to a degree of accuracy of materials in its Penstemon Seed Exchange. It would be impossible for any one person to know accurately the wide range of the A.R.G.S. list. We are fortunate to have one member who is an expert on anemones and I have had her help with Anemone problems. If there are any other members who could pass on the accuracy of names within any other genus by a seed sample, I would be glad to make use of their knowledge.

"Nor are all name changes well advised as was proven last year when I accepted *Hortus II* and renamed *Eryngium yuccifolium* to *E. aquaticum* when any of several other available references would have shown this to be an error.

"I shall be as happy as the next one with any improvements that can be made in our Seed Exchange along the lines of Mr. Zollinger's criticisms, but I do not expect them to be more than gradual over a long period of time. What I have called the professional seed exchanges are under fire, too, as witness these words from a critical quartet in *Taxon,* April 1964: 'Regrettably, many of the seed lists distributed today fail to justify the expense involved, let alone meet the modern requirements of accuracy, efficiency, and horticultural value.' "

Mr. Zollinger requested the Editor to comment on this same problem in this column, which he does forthwith.

In Mr. J. P. Zollinger's article, "Imposters in the Seed Lists," appearing in this *Bulletin,* you will perhaps find his lament echoed in your own experiences. Such mislabeling of seeds sent to or from the Seed Exchanges result, many times, in frustration, disappointment, and loss of time; and mislabeling may cause some erstwhile eager gardener to lose interest. If faulty labeling is to be substantially minimized, the causes must first be factually determined, and then steps taken for their elimination, as far as human frailties will permit.

Consider for a moment the long chain of events that must take place from the time seeds are harvested until they appear in someone's garden as seedlings of a recognizable species. Errors in nomenclature can creep in anywhere along this long route. There are three major areas of responsibility where spurious plant identification, as exhibited on labels, can be substituted for correct nomenclature.

These areas are: 1—The donor, 2—the Seed Exchange, and 3—the recipient. The error may even antedate the donor's acquisition of the plant from which seed is being harvested, and as a result the donor, in good faith, passes on the error and it persists until some more knowledgeable gardener detects it.

Every case of misnaming of seed sent to the Seed Exchange, if and when detected, would have to be investigated individually if place and cause of the error is to be determined and responsibility fixed. Who has the time to do this investigating? It must be remembered that all gardeners who are donors, all Seed Exchange volunteers, and all recipients of seeds are not horticultural experts—few of them are. Seemingly the only means of curing this misnomer situation is, in some miraculous fashion, to make experts of all these people. After that, carelessness would have to be rendered non-existent, and mishaps outlawed, including chance hybridization, momentarily undetected. Only then could we have a reasonable assurance that when one planted seeds of *Seedum seedorum* one would not reap *Seedum weedorum.*

It seems that Mr. Zollinger must have been enjoying a bit of facetiousness when he suggested that malice might be the reason for purposely sending misnamed seeds to the exchanges. Nevertheless, the matter is serious, and it is well that he has raised the question of how to bring us relief. Mr. Zollinger's manuscript had this note at its beginning, "An article on this topic was submitted to our former editor, and then recanted. But the subject has proven to be hardily perennial, nay, haunting. So I present it here in a new form."

Discussion of this problem and its solution will be welcomed by the editor. We know what the problem is and we know many of the causes. What we need is the further education of our members and a code for the handling of seed for the guidance of all personnel concerned with the various functions necessary to operate a Seed Exchange. The sower of the seeds, providing the seeds are viable and have reached him in properly and legibly labeled packets, can proceed with confidence, and the results will depend upon his ability as a gardener, and, of course, the carefulness with which he handles the seeds after receiving them. There is a great task ahead for all of us. Your comments and suggestions, please!

Still on the subject of the Seed Exchange—If you are one of the members who have been in the habit of sending notes, either to Mr. Harkness or the editor, concerning seeds of special, rare or unusual plants sent to the Exchange; notes which have, in the past, appeared in the April *Bulletin* each year, will you please make an effort to send your notes to Mr. Harkness *with the seeds you are contributing?* By doing this, your notes will, this year, appear as a supplement to the seed list itself and will reach the members with the January *Bulletin* and can be used to advantage when the seeds are planted. Notes appearing in the April number are received by the planter too late to be of benefit to him.

Mr. Harkness has changed his address and asks that all seed contributions and notes, if any, be mailed to him at 385 Hollywood Ave., Rochester, New York 14618.

Now a few moments with our "Favorite Native Plants List" or as Mr. Leonard J. Uttal, Madison Heights, Va. thinks more appropriate, "Favored Native Plants List." His comments are interesting. "Enclosed are two lists of mine," he writes, "representing two sections I have lived in. Note that I prefer the term 'ten favored plants' rather than 'ten favorite plants.' It is next to impossible to limit a list to ten favorites, as you sense; the excluded cry out in righteous indignation. But ten favored—ah, that is of the moment, and permits infidelity, or the right to abandon one for a new favorite. In gardening, a certain

amount of infidelity is really necessary. This does not mean I favor it in general human endeavor!"

Lists appearing below are from scattered parts of the country, as is proper. Miss Elizabeth Lawrence, 348 Ridgewood Ave., Charlotte, N. C. 28209, lists natives from North Carolina; Mr. Stephen F. Hamblin, Newtown Road, Marstons Mills, Mass. 02648, states that all plants on his list are growing, or have grown, happily in his garden and are all native New Englanders. One of Mr. Uttal's lists covers natives from the Virginia-Carolina area, and his other, surprisingly enough, Florida.

Miss Lawrence (North Carolina)

Lilium catesbaei
L. grayi
L. superbum
L. carolinianum
Gentiana autumnalis
*Shortia galacifolia**
*Iris cristata**
I. verna
Lupinus diffusus
*Hymenocallis occidentalis**

Mr. Utall (Va., and Carolinas)

Cuthbertia graminea
Scutellaria ovata
Geum radiatum
Hypericum aspalathoides
Viola walteri
Gentiana autumnalis
Tiarella wherryi
Arenaria caroliniana
Houstonia serphyllifolia
Dicentra eximia

Mr. Hamblin (New England)

Aquilegia canadensis nana
Aster linariifolius
Campanula rotundifolia
Chrysopsis falcata
Hepatica acutifolia
Iris prismatica
Rhexia virginica
Silene acaulis
Solidago cutleri
Tiarella cordifolia

Mr. Uttal (Florida)

Scutellaria multiglandulosa
Dyschoriste oblongifolia
Salvia coccinea
Nama corymbosum
Pterocaulon undulatum
Hymenocallis palmeri
Jacquemontia reclinata
Ruellia heteromorpha
Pycnothymus rigidus
Heliotropium leavenworthia

*Only ones she can grow in her own garden.

Do not let anything you read in this *Bulletin* discourage you from gathering seeds this fall and sending them early to the Seed Exchange; but let's be as careful as possible so that the excellence of our whole seed exchange operation can be maintained—even improved.

BACK VOLUMES OF THE BULLETIN

We have for sale an accumulation of back volumes and individual numbers of the BULLETIN. The available material is listed below.

VOLUME 1 Individual numbers 2, 4, 5, & 6
VOLUME 2 Individual numbers 2, 3, 4, 5, & 6
VOLUME 3 Individual numbers 1, 2, 3, & 6
VOLUME 4 Individual numbers 1, 3, & 5
VOLUME 5 Individual number 6
VOLUME 6 Individual numbers 4 & 5
VOLUME 7 Individual numbers 1, 2, 4, & 6
VOLUME 8 Individual numbers 3, 4, 5, & 6
VOLUME 9 (6 issues) $5.00
Individual numbers 1, 2, 3, 4, 5, & 6
VOLUMES 10, 11 and 12 (4 issues) $3.50 each
Individual numbers 1, 2, 3, & 4
VOLUME 13 Individual numbers 3 & 4
VOLUME 14 Individual numbers 2, 3, & 4
VOLUME 15 Individual numbers 2, 3, & 4
VOLUME 16 Individual numbers 3 & 4
VOLUME 17 Individual number 4
VOLUME 18 Individual numbers 2, 3, & 4
VOLUME 19 Individual numbers 1, 2, & 4
VOLUME 20 Individual numbers 2 & 4
VOLUME 21 Individual numbers 3 & 4

All individual numbers are one dollar each.

A large accumulation of certain numbers permits us to offer ten different numbers, the Society's selection, for $5.00. (Order the "Bargain Package.")

Postage will be paid by the Society.

Members desiring issues containing articles referred to in the index by volume and page number may obtain the issue, if available, by referring to volume and page number in ordering. Order from the Secretary. *Please make checks payable to* —

American Rock Garden Society

Ridge Farms Road **Norwalk, Conn.**