BULLETIN of the AMERICAN ROCK GARDEN SOCIETY

VOL. 25	July, 1967	No. 3
ANNUAL MEETING A	AND AWARD PRESENTATION	73
A PENNSYLVANIA G	ARDEN IN SUMMER—Doretta Klaber	79
	XIFRAGA KABSCHIAS	80
"BIRDS OF ICELAND	TOUR NO. 1"—Nickolas Nickou	81
	ANTS WITHOUT A ROCK GARDEN	88
	AVORITE CAMPANULADS	90
TWO DELIGHTFUL C	AMPANULAS—Robert M. Senior	92
EASY METHODS OF	PROPAGATION—Richard Langfelder	93
NOTES FROM THE N	NORTHWEST—Elizabeth Peterson	95
NOMENCLATURE W	ITHIN KALMIOPSIS—Roy Davidson	99
A. R. G. S. SECRETAR	RIAL CHANGE	103
OMNIUM-GATHERUN	M	104

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.	06031
Secretary	RICH	ARD W. R	EDFIELD,	Box 2	6, Closter	r, N. J.	07624
Treasurer P	LEX D). REID, 2	60 Boule	vard, l	Mountain	Lakes	N. J.

Vice-Presidents

Term Expires 1968

Term Expires 1970

JOHN P. OSBORNE

BURR B. BRONSON Term Expires 1969

MRS. HARRY HAYWARD F. O. PEARCE BRIAN O. MULLIGAN RICHARD LANGFELDER MRS. LEE ARMIGER

Directors

BERNARD HARKNESS

DERIVARD III

LEE H. RADEN

MRS. SALLIE D. ALLEN JEROME A. LUKINS

WALTER A. KOLAGA

HENRY R. FULLER CLAUDE A. BARR

Director of Seed Exchange LAWRENCE CROCKER 3355 Jacksonville Hy., Medford, Oregon 97501

Director of Slide Collection MRS. RONALD S. GRAY 64 North Street, North Reading, Massachusetts 01864

REGIONAL CHAIRMEN

Northwestern	JOSEPH A. WITT, 16516 25th Ave. N.E., Seattle, Wash. 98155
Western	F. O. PEARCE, 54 Charles Hill Road, Orinda, Calif. 94563
Midwestern	MRS. LILLIAN M. LEDDY, Box 612A, R.D. 3, Mena, Arkansas 71953
Tri-State	MRS. MADALENE MODIC, R.D. 1, Box 118, Sewickley, Pa. 15143
Potomac	RALPH W. BENNETT, 5607 N. 22nd St., Arlington, Va. 22205
Delaware Valley	LEE H. RADEN, Chester Springs, Pa. 19425
North Atlantic	HENRY R. FULLER, 41 Sherwood Rr., Easton, Conn. 06425
New England L.	MRS. ROBERT EMERSON, Box 64, Somersworth, N. H. 03878

Published quarterly 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. The subscription price per year is \$4.00. The office of publication is located at Closter, New Jersey 07624. Address communications regarding membership, dues, and other matters relating to the Society to Richard W. Redfield, Box 26, Closter, N. J. 07624. Address manuscripts and other matters relating to the Bulletin to Albert M. Sutton, 9608 26th Ave., N.W., Seattle, Washington 98107. Secondclass postage paid at Closter, New Jersey.

BULLETIN

of the

AMERICAN ROCK GARDEN SOCIETY

Albert M. Sutton, Editor

\mathbf{V}	OL.	25
¥.	UL.	40

July, 1967

No. 3

ANNUAL MEETING AND AWARD PRESENTATION

Saturday, May 6, 1967, was a full day for more than 150 members of the Society who came together at Longwood Gardens, Kennett Square, Penn. from all corners of the country for the thirty-third Annual Meeting of the American Rock Garden Society. The climax of the occasion was the Award Dinner in the Ball Room of Longwood, in the very heart of the great indoor gardens.

Mr. Lee M. Raden, Chairman of the Delaware Valley Region, sponsors of the meeting, acted as master of ceremonies with quick wit and unbounded enthusiasm. He introduced those at the head table including two past Award winners, Dr. Edgar T. Wherry and Claude Barr; the Executive Secretary of the Pennsylvania Horticultural Society, Mrs. Ernesta Ballard; and the Director of Longwood Gardens, Dr. Russell J. Seibert; in addition to the officers of the Society, and the Citation readers. The only Award winner present and the principal speaker of the evening was Mrs. Doretta Klaber in the position of honor.

After appropriate and warm words of welcome from Mr. Raden, President Lincoln Foster, and Dr. Seibert, Mr. Raden read a cable from Czechoslovakia which ran, "Please accept best wishes for the full success of the Annual Meeting of the ARGS. Kindly transfer our cordial regards to all participants. Signed — Your ARGS Members in Czechoslovakia."

This deeply appreciated message was followed by the presentation of a gift to retiring Secretary Lawrence Hochheimer by Lincoln Foster on behalf of the Society in recognition of his devoted service to ARGS.

Mr. Bernard Harkness, Chairman of the Awards Committee, read the Citation of the Award to Mrs. Lester Rowntree, of Carmel, Calif., which had been written by Mr. Ray Williams.

Mr. Claude A. Barr, former Award winner and a Director of the Society, who had made his third successive trip east to the Annual Meeting from South Dakota, read the Citation for Frank H. Rose, of Missoula, Montana, which had been written by another Award winner, Dr. Carl R. Worth. Mrs. Foster read a letter written by Frank Rose in which he said, "Say 'Thank you' to the Society and make it as warm as they will accept, and extend an invitation to its members to stop in Missoula and try out my rocking-chair."

Mr. Richard W. Redfield, the newly elected Secretary of the ARGS, read the Citation for Mrs. Grace Dowbridge, of Springvale, Maine, which had been composed by Mrs. Virginia Howie. Mrs. Foster read the following message from Mrs. Dowbridge:

"Greetings from Maine! Mr. Foster has kindly invited me to send my greetings to this group of fellow rock gardeners, together with my heartfelt THANK YOU to the Award Committee. The news that I was to receive one of the new Society Awards was probably the most exciting thing that has ever happened to me, garden-wise. I feel convinced that the Committee must have picked my name out of a hat, since there are so many better qualified members yet to be so honored. It surely is a great honor, and I shall always treasure it. Thank you!

"It would have been an added pleasure to be here in person but it seemed impossible to spend the necessary time away from the garden, this very late and cold season. Our garden clean-up work is still being done up to, and around, patches of winter snow, as I write in late April.

"May I wish all of you a wonderful garden year for 1967, and a cordial invitation to visit our garden at any time you may be in Maine."

Mrs. Gertrude Wister, Assistant Director of the Arthur Hoyt Scott Horticultural Foundation of Swarthmore, and the author of the Citation, presented the ARGS Award to Doretta Klaber.

In her acknowledgement of the Award, Mrs. Klaber gave a charming, personal account of her experiences as a landscape architect, botanical artist, and author of books on various phases of gardening. The emphasis of her remarks, woven among reminiscences of her horticultural adventures, was this: "Whatever your surroundings, let them be your guide for any planting you make. The garden is after all a natural extension of your home and living quarters, and should be a place to house the plants you love, a place to rest and relax in."

The presentations of the Awards were made as follows:

LESTER ROWNTREE

Lester Rowntree was born some eighty-seven years ago in the North of England, and brought to America by her parents while still a school girl. She was christened Gertrude Ellen Lester, but the name was destined not to last. It disappeared during her school years, when she was called by her surname by both classmates and faculty. This met with her approval and has persisted throughout the years, with the exception of her immediate family and some of her closest friends who call her Nellie, or even Nell.

One of her most outstanding attributes is her ability to inspire enthusiasm. By her books and magazine articles, and by her lectures and public appearances, and by her distribution of seed, she made the growing of California native plants a possibility to countless gardeners throughout the world.

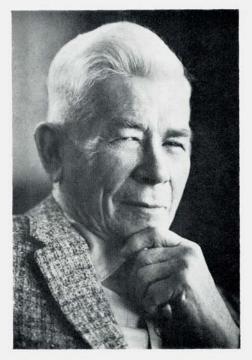
To have one of her old seed catalogues is to have a treasure, for few of them are in existence today. One of the most treasured experiences of all is to have visited her at her home and amazing garden in Carmel Highlands. This garden, built on a steep mountain side of decomposed granite overlooking the Pacific, has had its ups and downs through the years. At times, from forced neglect while away collecting the seeds that helped to make her famous throughout the gardening world, her garden suffered, as it did from the inroads of rodents which are the bane of gardens in wild places, and from torrential winter rains that sometimes covered much of it with rocks and mud from the steep mountain side above, and even from brush fires which on one occasion ravaged it. It was then that the manuscript and notes of her last book, ready for publication, were burned.

As one might expect, this garden over the years has had an ever-changing face, but always constant in that it so surely reflected the chaparral-covered hills of California. Even with the addition of plants from the South African veldt and the Mediterranean maquis, some from the Mexican and Chilean highlands, and other places, it only seemed to accentuate the native flora in which she is so intensely interested.

Her most outstanding contributions to horticultural literature are *Hardy Californians*, published by the Macmillian Company in 1936, and *Flowering Shrubs of California*, published by the Stanford University Press in 1939. Both volumes are profusely illustrated with full page reproductions of photographs taken by herself. The text is no dry chronicle of what botanical specimens were to be found growing here or there, but a living account of the journeyings of a student of nature, a lover of adventure, and writer with the rare talent that takes the reader along with her on the often extended collecting trips through the hills and mountains of California.

This American Rock Garden Society citation is presented to you, Lester Rowntree, for a lifetime of truly constructive horticultural work.

FRANK H. ROSE



Ingvard Eide

One of the few surviving native plant collectors, Frank Hubert Rose has long been known to rock gardeners and nurserymen for his lengthy and comprehensive lists of plants and seed of the choicest species of the northern Rocky Mountains. He has published very little, but in correspondence has generously passed on the knowledge gleaned from detailed exploration and observation of plants in their native stations.

Born in Kansas, he spent his early days in that state and in Oklahoma. Then, after a brief experience in the field of education, where he became a superintendent of schools, he found that wild country had a greater appeal, and became a forest ranger. In Colorado he made his first acquaintance with alpine plants, and developed it further as warden of the National Bison Range.

During the depression years, finding himself unemployed, Frank Rose decided to capitalize on his experience, and established his firm, "Native Evergreens," which ever since has been a prime source for the plants of western Montana, northern Idaho, and northwestern Wyoming. By jeep and on foot he has explored this region minutely, and has distributed his finds to many enthusiasts.

A very moderate conservationist, Mr. Rose seems not at all alarmed by the damage done to native flora by the inroads of civilization; for, he says, one can always find a scarce plant in some other station if one searches long enough.

In appreciation of his tireless work in making available many of our choicest native plants, and in passing on the knowledge he has so painstakingly acquired, we are most happy to present Frank Rose with the American Rock Garden Society Award.

GRACE F. DOWBRIDGE



"I remember picking wild strawberries for breakfast . . . and bouquets of dandelions and fringed gentians for Mother . . ." These are the first recollections of Grace Dowbridge, born Grace Farrington in 1903 in Portland, Maine.

When she married, on the day after graduation from High School, her new home was a 100 acre farm just outside of Portland; and here she started her first wild flower garden. An account of this garden, "One Square Mile of Wild-flowers," appeared in the old *Gardener's Chronicle*.

Betty Hayward was one of her new neighbors, so Grace's enthusiasm for growing things soon expanded to include alpines and rock gardening. The ARGS was especially active in New England, and Grace, with other members of the New England Region and the local Maine Unit, studied and learned together; visiting and swapping ideas. They enjoyed many collecting expeditions to mountains in New Hampshire and Vermont with the late James Mitchell. Visits to The Garden in the Woods, and talks with Will Curtis and Dick Stiles further spurred her strong interest in gardening with native materials.

When the Round Robins became suddenly very popular, Grace took an active part in these and her circle of friends expanded to include the whole country. One small Penstemon Round Robin grew to become the present American Penstemon Society, and Grace served as Secretary for fifteen years. She is still a director of one Robin group.

For several years a Portland newspaper carried a series of wild flower articles and columns on gardening and house plants written by Grace. She worked also with the Park Department as a landscape gardener, contributing her knowledge of perennials and bulbs to supplement the plantings of trees and shrubs. But while carrying on these projects, interesting and important as they were, Grace came to realize that usually her very best gardening days were spent in other people's gardens, and she resolved to make her own garden work her main theme in life.

We must agree that a more worthwhile "theme in life" could not be chosen, for Grace's knowledge and experience and observations made from plants growing in her own garden have added greatly to our appreciation of gardening in New England. Her friendliness and enthusiasm have encouraged plant lovers throughout the country. We are fortunate to have such a person in our Society, and are very happy that we can show our appreciation and respect with this award.

DORETTA KLABER

Doretta Klaber began life as a city child, but among her earliest memories are those of flowers—not florist flowers, but dandelions and buttercups in vacant lots, and wild flowers sold on city streets.

This early love of flowers and a talent for drawing were combined in the work of a lifetime. A period at art school preceded marriage to a young architect, Eugene Henry Klaber. After a few years, with two young children, Mrs. Klaber went to Cornell for a summer course in landscape architecture. Thereafter, while her husband was designing houses in the Chicago suburbs, she was designing and building rock gardens.

Residential architecture withered in the depression, so when her husband went into the public housing field, Mrs. Klaber got a job in a nursery where she became the landscape designer. Later, she did free-lance garden design.

After an interval in the city during World War II, the Klabers bought an old farm on a rocky hillside near Quakertown, Pennsylvania, which they called Cloud Hill. Here Mrs. Klaber's love for little plants found full expression, and here for nearly twenty years she maintained a nursery of small treasures. Here she has written her books, out of the richness of experience of many years in gardening in several quite different regions of the United States.

Mrs. Klaber's books are three so far, and a fourth is simmering. Their values are manifold. They are written by one who has grown her own plants, many rare and difficult, from seed, and cared for them herself. They incorporate,

American Rock Garden Society



Doretta Klaber

in addition to her own experience, gleanings, duly explained and acknowledged, from the experiences of others. They enumerate triumphs, pitfalls, disappointments, impart something of botanical relationship, and suggest ways of using the plants; all in a pleasant, easy style, and accompanied by her own drawings and water colors. The books, for which we give our hearty thanks, are: *Rock Garden Plants*—New Ways to Use them Around Your Home (1959), Gentians for Your Garden (1964), and Primroses and Spring (1965). We await with pleasure the appearance of the fourth one, which will be on wild violets.

The American Rock Garden Society presents with gratitude this citation to Doretta Klaber.

.

BOOKS ON DIANTHUS AND CAMPANULA—The recent request in Interchange by Mrs. William McL. Ittmann in the April Bulletin brings forth this answer from Dr. Worth: "Of books in English, there are two each on Dianthus and Campanula, at least three of them out of print. It may be that *Campanulas*, by H. Clifford Crook, is still available. This is a most exhaustive study with cultural notes and very many photographs of varying quality. Two books by L. H. Bailey, *The Garden of Pinks* and *The Garden of Bellflowers*, are more technical, and the former deals with few rock garden species. The Bellflower book is less complete than the one by Mr. Crook, and lacks cultural details, but does include selected members of several related genera. A small book on Dianthus by Walter Ingwersen I do not have, nor do I have sufficient recollection of its contents to know whether it may be worth the effort to procure it."

A PENNSYLVANIA GARDEN IN SUMMER

DORETTA KLABER, Quakertown, Pa.

JULY—In spite of more years of experience than I like to admit, I still despair of my garden in July. Things either dry up, or rot from a combination of moisture and heat, or are eaten by rabbits, bugs, groundhogs, or worms, or are covered with various diseases, or smothered in weeds. Is it worth while to try to garden at all?

Then I am reminded that one always feels this way in July, and I go out and look at the gentian bed where great blue trumpets stare up, or cultivate my seedling beds and find that, although many of the precious little plants have succumbed to one or more of the above mentioned causes, there are still hundreds more looking very happy indeed, or, as I pull up violets by the handful (a serious weed at this season), I remember the delight they gave in the spring, and that their children will give next spring, and I cheer up a bit.

We gardeners are up extra early these days and are out cultivating and weeding before it gets too hot. It is always surprising how quickly the plants respond to a little attention! Then, with a clear conscience, we can sit in a shaded spot, with a cool drink, or a book, or a pleasant friend, and mark time while this month burns itself out. Or, perhaps we dream, or make plans for another year.

AUGUST—The gift of seeing the world around us is not given to all. Some people will deny this, but they really do not see the sky and clouds, the hills and trees and flowers. What they see is someone's farm, whether the corn is doing well or ill, or a newly painted house or barn, or things in shop windows, or a crowded roadway.

Those who really see the world go through various stages. The child sees color first and eagerly picks a bunch of violets or dandelions. Later, one begins to appreciate less obvious beauty such as a woodland brook, a bank of ferns. Still later one sees the shapes of trees and bushes, rocks and hills, the shadow of clouds on a mountain, the quiet reflection in a still pool.

Then, if one is a gardener, one wants to transfer some of this beauty to one's own surroundings, and probably again it is the color of flowers that first intrigues one. Then again, the feeling for design and pattern, form, and light and shade gradually grows upon one; the foliage of plants comes to mean almost as much as the flowers; rocks and trees and shrubs have their place and meaning in the picture.

It is well, in August, that all this is so. The flowers are only beginning to recover from the trials of the past month. As August advances we and the plants take heart again. There is usually a second flowering of some early plants, and the cooler nights bring forth the flowers of late blooming plants. But, if the garden has come of age, there is much of interest and beauty about us, whether there are many flowers to set it off, or not.

SEPTEMBER—As we gardeners work outside these lovely autumn days we realize that it is of spring we are thinking, and for which we are planning as we put in new perennials, replant portions of our garden, and most especially as we plant bulbs.

Bulbs are interesting in themselves, with their different shapes, sizes, and colors, their glossy or rough coats. One never gets over one's amazement at the

amount of beauty hidden in even the smallest of them. There are bulbs for bloom in every month of the year, but the little bulbs of the world hold a special place in our hearts, for some come so early and say to us that winter is almost over. Even their names are encouraging—Winter Aconite—Snow-drop—Snow-flake— Glory-of-the-Snow. Their bright flowers add much to border or woodland, as underplanting around shrubs, or by greeting us as we go in or out of our homes.

September is a busy month for gardeners, but there is not the urgency of early spring, and we can take time out to enjoy the late flowers, the turning of the leaves, and the rich beauty of the countryside. There is new growth and bloom all about us. One would almost think that spring had come again, as this year's seedings, as well as older plants, make lusty new growth.

The woods which were a haze of gold in the spring, as the spicebush bloomed, are golden again with their leaves. Other shrubs and trees are beginning to tune up for the great October symphony. As we work in our gardens in September, we do so with hope and confidence in the future. We know that a garden is never finished, which is one of its joys and blessings.

A LITTLE ABOUT SAXIFRAGA KABSCHIAS

FRANT. HOLENKA, Praha-Hostivar, Czechoslovakia

Growing miniature plants is getting more popular among rock gardeners in Czechoslovakia, and I think that it is Saxifraga plants of the Kabschia and Engleria sections that are leading the long list of such small treasures.

Kabschias are represented in our country only by *Saxifraga caesia* which can be found growing wild on limestone formations of the Belansky or Lower Tatras at altitudes of 800 m and up. Englerias do not appear here in the wild at all. Very rarely can be found a natural hybrid between *S. caesia* and *S. aizoides* (Section Xanthizoon).

Some of our Kabschia collectors grow up to 150 species, hybrids or varieties of these plants (including Englerias). Such large collections are, of course, not common, but they nevertheless exist. The serious problem of our Kabschia collectors is the correct nomenclature of their plants. Unfortunately modern literature on Kabschias seems missing; only the old monograph by Engler and Irmscher (1916) is available. This is, no doubt, a work of importance but rather out-ofdate today. In it are described Sundermann's hybrids, but the newer ones (Prichard's, etc.) are missing as are descriptions of the plants discovered later in the Himalayas.

Most of our Kabschia and Engleria collectors grow successfully the following plants:

a-White flowering: SS. apiculata alba, assimilis, burseriana and its varieties, marginata and var., scardica and var.

b-Yellow flowering: SS. apiculata, boydii, borisii, caucasia and var., 'Elizabethae,' 'Eudoxiana', ferdinandi-coburgii, 'Haagii', 'Pungens', sancta, and stronggrowing species called "pseudo-".

c-Red and pink flowering: SS. 'Amitie', arco-valleyi, 'Bellisante', 'Clarkei', 'Cranbourne,' 'Delia', 'Edithiae', 'Irvingii', 'Kellereri', 'Kewensis', 'Landaueri', 'Mrs. G. Prichard', porophylla, 'Rubella', 'Stuartii', 'Suendermannii', 'Valeria Keevil', etc.

Still desired are not only all the novelties but also the older well-tried plants such as SS. lilacina, grisebachii 'Wisley var.', stribrnyi, 'Riverslea', 'Valerie Finnis', etc. Our milder climate is very suitable for growing Saxifraga Kabschia and Engleria. We plant them preferably on the northeastern or northwestern slopes in a well-drained place in a mixture of 1/3 leaf mould, 1/3 river sand, and 1/3 limestone gravel (pea-sized), and they seem to enjoy it very much and grow into really lovely, healthy plants. Only *S. lilacina* is planted in a lime-free mixture; slate gravel being substituted for lime gravel. Tufa stone is also excellent for Kabschias and Englerias, their cushions are then still more compact, more floriferous and the calcium gives the rosettes a healthy gray-green colour.

The centers of the larger and older cushions of Kabschias should be occasionally covered with a little of the planting soil mixture with the addition of a bit of hormone rooting powder. The plant is then better protected against scorching. Some Kabschias are rather sensitive to the long-lasting summer moisture. This was a recent experience here as the summer of 1966 was extremely wet and cold. Most affected were these plants: *SS. marginata* and var., *stribrnyi* and its 'Wisley Var.', *thessalica* and all its hybrids.

For the better studying of Saxifraga Kabschias it is necessary to grow all the plants in the same soil mixture. Only in this way can we then see the small differences in our plants. Soil can influence the growth, color of rosettes, and shades of flowers.

Cuttings can be taken in the spring, or better yet in September to November. It is very easy. More exciting is the propagation from seeds because then we may find that each of our seedlings, even those raised from seed of one species, is a little different. This is a result of a natural crossing of our plants as most of them flower at the same time. The seedlings start flowering when 3-5 years old and are more vigorous than the cuttings.

Saxifraga Kabschias and Englerias are ideal plants for the smallest alpine garden or trough, and I love them, not only for their early and free flowering, but also for their all-year-round noble beauty.

"BIRDS OF ICELAND TOUR NO. 1"

NICKOLAS NICKOU, Branford, Conn.

It was with some trepidation that my wife, Doris, and I signed up for a two week tour labeled "Birds of Iceland Tour No. 1." We've never been tour enthusiasts and what little experience we've had with such groups has rarely been pleasant or satisfying. Generally, we like to study an area and explore it on our own, but Iceland seemed a bit too formidable for such self-sufficiency. The thought of fitting into a planned itinerary with every move controlled was a bit worrisome, but we decided to take the plunge.

The tour was to be of two weeks duration and was to run from June 11, to June 26, 1966. Tour No. 2 started one month later.

Most of the references in the descriptive brochure were about the interesting bird life in Iceland, but there were enough remarks about the plants to whet our appetites and make going with a group worthwhile. The group was twenty in number—eighteen women and two men. Fortunately, the guide was a man so we males weren't too badly outnumbered.

We left New York via Icelandic Airlines and eight hours later found ourselves landing on a dark, barren, unimpressive landscape overcast by a brooding, black sky with a touch of windblown rain in the air. The bus trip into Reykjavik was no more reassuring. Barren was the only possible description of everything in sight—the dry cinder cones, the extensive, plantless lava fields and the black, threatening sky. As we entered Reykjavik, one portion of the sky opened up. It was a clear, pale, bluish-green sky which immediately changed our attitudes. All colors in this light glowed, particularly the greens. We had apparently experienced a common phenomenon in Iceland—its changeability—particularly as far as weather is concerned. A common response when one asks about the weather is, "Wait a minute." The changes can be rapid, striking, and pleasant, but all too frequently, miserable.

Iceland is a very large island with a continental feel. The mountains and glaciers and steep cliffs are reassuringly substantial. It is in the North Atlantic, its northern tip barely touching the Arctic Circle. Greenland is 180 miles to the west with Norway 600 miles to the east and Scotland somewhat closer to the southeast. In size it is approximately 300 miles from east to west and 200 miles from north to south. The climate is tempered considerably by the Gulf Stream, but the waters off the northern coast are quite frigid due to the East Greenland current.

The entire makeup of the island is volcanic—some of it basaltic and the rest of various volcanic materials such as ash and extensive sandy-gravelly-materials deposited by glacial and water action. In short, Iceland seemed a potentially miserable place to look for plants.

The next day, after having met our guide, Arni Waag, we started by bus to take a four day circle tour of the southwest. First we visited Thingvellir which is now a National Park and the site of the open-air National Assembly, or Althing, first established in the year 960, and the forerunner of the Icelandic Parliament. It was an impressive location looking over the largest lake in Iceland—Thingvallavatn. Except for scattered patches of *Vaccinium myrtillus*, *V. uliginosum*, and *Empetrum nigrum*, our short visit was chiefly for its scenic and historical interest.

As we drove toward Laugarvatn, we passed a number of plunging mountain streams in which an occasional harlequin duck was seen. These dandies seem to love the roughest water and apparently even the young can safely manage under these seemingly dangerous conditions.

Shortly after getting established in our rooms and enjoying a typical Icelandic meal starting with cauliflower soup and a main course of lamb, we went out at about 8:00 P.M. to find the sun still high in the sky. Three of us headed up a steep ravine toward a mountain which hung above the road. We walked through a forest of birch, *Betula pubescens*, which consisted of trees about six to eight feet tall. These were to be the tallest trees we were to see until we visited a much larger forest of several hundred acres in the north of Iceland with some trees as much as thirty feet in height.

Under the birches were numerous plants of Orchis maculata containing flower buds, but none were found in bloom. Higher still, and as the birches rapidly became reduced in size to a foot or two, we saw Pinguicula vulgaris, Sedum acre, and Bartsia alpina in full bloom with its striking flowers subtended by upper leaves of the same color.

Fording the small stream in the ravine, we started up a scree type of slope and really made our first good haul. Here we saw Loiseleuria procumbens for the first time, Dryas octopetala in full bloom, Calluna vulgaris still in wintry aspect holding only last year's dried flowers, Arctostaphylos uva-ursi in bloom, and Empetrum nigrum. A very dwarf birch, Betula nana, was also in evidence hugging the ground and bearing tiny, perfectly round, but toothed leaves. Crawling among the rocks and never more than half an inch high and bearing numerous catkins was Salix herbacea. Taller still and very attractive was Salix lanata with its silvery, furry leaves and prominent catkins.

We threaded our way down the slopes after savoring the view and arrived back at the hotel about 10:30 P.M. with the sun still bright. It took us several



Icelandic scree slope with dwarf Betula in foreground

Dr. Nickolas Nickou

days to become accustomed to the length of the day and to fall asleep and awaken at the usual time. At 2:00 A.M. the sun was already high and bright pouring through the window.

The next day was spent traversing a good bit of the unique landscape. We were never out of sight of the magnificent mountains and almost always Hekla dominated the horizon. This is the volcano which has so many times poured lava and ash over the countryside and resulted in considerable loss of life. It last erupted in 1947. We visited Geysir, a thermal area which has given its name to all similar phenomena on earth, particularly those in our own Yellowstone, and in New Zealand. After the caretaker primed one of the pools with a mixture of soap and other mysterious ingredients we were favored with a fair eruption.

Our destination was the town of Vik at the southern tip of the island, an area dominated by Myrdalsjokull, a glacier about 30 miles in diameter. The approach to the coast was guarded by a steep escarpment over which poured numerous impressive waterfalls. One of them had the descriptive name of He-who-lives-in-the-Gorge. After crossing many miles of a sterile glacio-alluvial outwash plain, we ascended a more mountainous area then went steeply down to the tiny fishing village of Vik. Some of us were assigned rooms in private homes while the remainder occupied the small hotel. The meals as usual featured soup and lamb.

The next morning the group walked out of the bleak volcanic sand flats to look for the nest of the great Skua. After a bit of searching we found one with a single egg attended by a belligerent female. If one person approached she would attack violently, but as the entire group came up she sailed off about twenty yards and waited for us to leave. The nests are found by local egg collectors by looking for patches of *Honkenya peploides*. It seems this plant is found in scattered patches on the flats and is frequently associated with the nests which are merely scoeped-out saucers for holding the eggs. This plant and *Cochlearia officinalis*, the common scurvy grass, are also found on many of the bird cliffs, associated with the higher and more inaccessible nests and nourished, I'm sure, by the guano patches about the nesting areas. Nearer to the cliffs, but still in the same sterile black sand and gravel, were a number of other interesting species of plants—particularly *Silene maritima*, *Plantago maritima*, *Cakile maritima*, an Equisetum and the very attractive *Mertensia maritima*. The latter is a prostrate, glaucous, spreading perennial with beautiful, but smallish, myosotis-blue flowers. I wondered if it had ever been grown as an ornamental. It is *Cakile maritima*, I believe, which is the first higher plant to establish itself on the newly formed volcanic island of Surtsey.

To the west of Vik are some rather impressive cliffs about which swarmed thousands of puffins. They nested in burrows dug in the sod covering the huge boulders making up the talus slope. They could be approached quite closely, but as it got darker they became restless and flew around us like enormous bumble-bees with parrot-like beaks. This is an area of considerable rainfall and in the deeper soil pockets grew large clumps of tropical-appearing *Archangelica officinalis* accompanied by *Cardamine pratensis*, *Matricaria maritima*, *Geranium silvaticum*, *Galium verum*, *G. pumilum*, *Rumex acetosa*, and *Oxyria digyna*. On the thinner layers of soil covering the boulders (some of which were the size of houses) the number of species increased considerably. Here were found *Sedum acre*, *S. roseum*, *Draba incana*, *Arenaria norvegica*, *Saxifraga caespitosa*, *S. stellaris*, *Cardaminopsis petraea*, *Thymus arcticus*, *Botrychium lunaria*, *Alchemilla alpina*, *A vestita*, *Galium verum* and *G. pumilum*. On still dryer rocks with practically no soil at all and in tiny cracks grew *Woodsia ilvensis*.

High above the talus soared the steep cliffs which housed innumerable fulmars whose constant squawking mixed with the whirring of the fast flying puffins. The fulmars nest on the most precipitous of cliffs. Every ledge, indentation, and crack is a potential homesite. This bird glides and banks on stiff wings and is one of the tube-nosed swimmers, a family which includes the albatrosses and petrels. Despite the sheerness of the cliffs, scattered plants of *Sedum roseum* adorned them in a most entrancing way, and I thought that it would make a fine ornamental. It was planted commonly in Reykjavik gardens in very little soil and in boxes on the balconies of some apartments.

The cliff face was quite moist and all projections dripped constantly, even on the brooding fulmars themselves. Of interest is that on the ceilings of some of the indentations in which the birds nested there grew lush colonies of *Cystopteris fragilis*, but never on the exposed cliff face. The fulmar is thought to be one of the most numerous birds on earth and they certainly heavily populated all the steeper cliffs facing the sea or the fjords. On one of these cliffs along a fjord, about five hundred feet above the water, we saw a white-tailed eagle on its nest. The numbers of these impressive birds have been reduced by the persecution and carelessness of the local sheep farmers, but by education and enlightenment it is hoped that the number of breeding pairs can be increased.

After returning to Reykjavik for an overnight stay, we started the next morning to explore the west and north coasts. Our first destination was the Snaefells Peninsula with its massive glacier-crowned volcano at the very tip. On the way there we visited a whaling station where the men were cutting up the carcass of a Sei whale. The whales are caught in the seas between Iceland and Greenland and towed to this location for processing. They are not processed at sea in factory ships.

On the slopes above the fjord, there was a carpeting of *Dryas octopetala*, *Empetrum nigrum* and *Salix herbacea*. Also there was a scattering of the higher growing but still prostrate *Salix glauca* and *S. lanata*. Here and there in crushed stone was to be found Saxifraga oppositifolia, S. caespitosa, and the dainty Thalictrum alpinum with its fine, feathery leaves and quaintly inconspicuous flowers rising half a foot above the other greenery. Further on, the moist undulating terrain was covered with prostrate Betula nana, which rarely rose more than several inches above the ground. Scattered in this carpet were the taller Iceland birches, B. pubescens, which once clothed all of Iceland but which were indiscriminately cut and with extensive cropping by sheep were never able to become sizeable again. There are still several "forests" of birch comprising no more than several hundred acres of twenty to thirty-foot trees, but the rest of the land is essentially treeless.

Along the southern shore of the Snaefells Peninsula, we visited the bird cliffs and stacks, the latter being enormous free-standing columnar volcanic structures. Here we saw numerous guillemots, gulls, and the unique razorbill. Every available nesting site was taken. On the rocks grew *Armeria maritima*, *Cochlearia officinalis*, and where there was more soil, the silvery *Potentilla anserina*. Not too far from this area and in from the sea was a place well known to botanists for its treasures, particularly ferns. It's a weird location with irregular, partially eroded lava stacks at the base of which there was moist, rich soil. On this were numerous plants of *Pinguicula vulgaris* in full bloom—a colorful sight indeed. The rocks were covered with saxifrages, particularly *Saxifraga nivalis*.

After leaving the south coast, we started over a pass toward the town of Stykkisholmur. The shoulders of the road were brightened by blossoming *Dryas* octopetala and Silene acaulis. We stopped at the high point of the pass to study some beautiful male snow buntings in breeding plumage which is something we never see in the United States. They were pure white with a little black and most appealing with their wonderful song. I hiked up a cinder cone while the others looked for nesting purple sandpipers, and discovered my first *Ranunculus glacialis*. It was accompanied by the now common Loiseleuria, Oxyria, *Veronica fruticans*, and *Saxifraga hypnoides*.

Back to the bus we went for the twisting, turning route down to the north coast of the peninsula which we could see in the distance, but again a call from some one who saw a pretty yellow flower prompted our patient driver to stop. We poured out to find scattered plants of *Papaver radicatum* growing on a slope of rubble with no evidence of soil. Needless to say, it was a beautiful sight and the film companies profited. I found one plant of *Cardamine bellidifolia* nestled between two large rocks and the guide said it was rather rare.

On the way to Myvatn through Akureyri we found Saxifraga oppositifolia in the higher elevations along with Pyrola rotundifolia, Draba cineria, Sagina sp., and Juniperus communis. Lower down we found Trientalis europaea, and in the drainage ditches, Menyanthes trifoliata in full bloom. Myvatn is a lake in northern Iceland which is famous for its thousands of breeding waterfowl and for its midges. The latter don't sting but they are very bothersome, when in large numbers, just by their presence on every inch of exposed epidermis, and up every sleeve and pant leg.

The marshes were dotted with the cottony tops of Eriophorum. Under the clumps of birches were numerous plants of *Habenaria hyperborea* and *Coeloglossum viride* while in more open locations, even in the sand of the roadside we found *Corallorhiza trifida*. It is always a thrill to find orchids growing wild, and they were here in profusion. Where some soil had accumulated between the eroded volcanic stacks, we made some new finds; *Rubus saxatilis, Paris quadrifolia, To-fieldia pusilla, Viola tricolor,* and *V. canina. Paris quadrifolia* resembles our trilliums, but has four leaves. The diminutive Tofieldia is the only other Liliaceous plant in Iceland.



Sedum roseum on Icelandic cliff facing the sea

Dr. Nickolas Nickou

While in the labyrinth of volcanic stacks, we found a nest of the Icelandic gyrfalcon with four young, and a nest of the merlin, one of the smallest peregrineous hawks. The gyrfalcon is the national bird of Iceland, and has the typical exciting flight of a falcon. Several days later we watched the nuptial display of one pair high over some cliffs facing the polar sea and it was quite spectacular.

Needless to say, there were many more sights to describe, but as this is directed more towards plants, the interesting geology, history and ornithology must just be presumed. A whole article could be written about the botanical garden in Akureyri where the curator has attempted to grow all of the native species of both Iceland and Greenland.

A two-day excursion to the Westman Islands by plane was very profitable. In addition to seeing the active volcano which followed the now quiescent Surtse, we visited a wealthy Icelandic fishing community. Herring have given the population paved streets, fine houses, and a better than average income. In the bowl of an enormus extinct volcano, we found *Rhinanthus minor*, *Matricaria maritima*, and some alchemillas. High on the ridges, while studying and photographing the erupting volcano, we found *Lathyrus maritima*, along with *Plantago maritima*, *Armeria maritima*, and Archangelica. About every three to five minutes the volcano would explode, sending up clouds of steam and ash which would drift rapidly downwind, dropping the ash into the sea.

On the last day of our stay, we flew to the east coast of Greenland, and visited an Eskimo village on the island of Kulusuk. The sight was spectacular. We flew over the pack ice and looked down on large icebergs. It was a mountainous, glacial wonderland. The sky was blue and photography was the order of the day. Right beside the air strip grew *Ranunculus glacialis* and many of the other plants we had seen at higher elevations in Iceland. Here I saw *Lychnis alpina* for the first time, an unidentified pink pedicularis, and an old friend from Mt. Washington, *Diapensia lapponica*, in dinner plate-sized patches. One eye-

catching mass of Saxifraga oppositifolia used up many a roll of film; the Eskimos and their children and the drum dances took up the rest. The greatest thrill, however, was to see *Diapensia lapponica* in Greenland growing slightly above sea level, whereas my last encounter with it was at six thousand feet up on Mt. Washington.

This was my first exposure to the Arctic, Alpine, and "Glacial relict" association. Oxyria digyna I have seen in the western mountains as an alpine plant, I have seen it on Mt. Washington, and now in Iceland.

Most of the group effort was devoted to birding, but this would make another story. We saw almost all of the seventy-six species which breed in Iceland. Our guide was a well-known bird expert and had escorted groups before. Fortunately, he was very well acquainted with the plants, and with a useful key to Icelandic plants even the questionable ones revealed their identities.

Iceland is not only a naturalist's paradise, but it is the home of a unique people who have preserved and kept alive the ancient tongue of the Vikings. They are friendly, generally intelligent, and very natural as a whole, showing little or no "tourist" influence. They are a literary people and cherish scholarship, and despite the fact that they are out of the international mainstream, they are remarkably stylish in their dress and aware of world events. All in all, our contacts were pleasant and at times refreshing. Our leader, Arni Waag, was particularly intelligent and well informed, and literally "made" the trip for us.



Papaver radicatum

Dr. Nickolas Nickou

.

Summer is here again as you read this, so let's toss aside all the worrisome aspects of everyday life and find our way into the hills to become one with Nature again for a little while.

GROWING ROCK PLANTS WITHOUT A ROCK GARDEN

ANNA SHEETS, Reidsville, N. C.

True alpine gardeners dismiss folks like me with a sniff and get on with the serious business of building their screes and matching the veins of their rocks and I have great admiration for these who seek to have and maintain a proper rock garden. But what of the thousands who yearn for the endearing small perennials that seem to have a charm the larger plants lack, yet do not have the place, time, nor energy to build or care for a rock garden, dry wall, or terraced bank? Miniature plants have a special fascination for women (maybe it's the mother instinct), but many of us have to garden the way we *can*, not the way we'd *like*.

For twenty-five years I've grown some of the common rock plants and many miniature bulbs. Small daffodils in particular have been a hobby that combined well with the dwarf perennials that I loved. Then several years ago I began to add some of the unusual rock plants and found that they grew as easily as Phlox subulata and Iberis. When we built our house on a wooded lot of a half acre, I had a place to grow some of the wild flowers that I had wanted, and more and more I found that the small native plants of eastern United States could be used in sun as well as shade. The true alpine plants did not interest me much, probably because I had not had the chance to visit the outstanding gardens. However, reading books on rock gardens made me interested in the plants mentioned and three years ago I set out on the trail of them. I sent for catalogs of as many nurseries as I could find listing rock plants. Among them was Sky-Cleft Gardens of Vermont and I sent my first order that spring. Out of twenty some varieties that first spring all but two came through the summer in fine style. Since then every spring and fall I've added another twenty to my collection. Now I grow over 150 rock or alpine plants and about 100 wild flowers.

All of these without a "rock garden." Some are used as edging plants, some in informal curved beds among the miniature daffodils, and some on a low bank under the rail fence. Rocks *are* used—as stepping stones and as a low wall along a slope above the wild flower area, but not as part of the garden plan. Two long perennial beds dominate my garden and here on each side of a wide grass path are the little gems from the mountains and fields of many countries. Three different situations are provided. On one side the ground slopes gently to the south and here the sun lovers are located. At the west end shade from a tall tree creates in the afternoon a cool, moist spot for special needs. The opposite side of the path faces north and the plants that like it cooler get enough shade from taller perennials back of them. A few plants have to be moved across the path after a trial, but nearly everything will grow in one of these exposures. Some alpines *want* to hug a rock, so for these I provide a stone as a part of the planting.

Problems have been the same ones met by all who ever made a garden, but I will skip the bugs, rodents, and dogs and only mention the big three: *Soil, Climate,* and *Water.*

SOIL:

Most of the experts I've read tell us to make the planting soil of humus, loam, and grit (gravel, chips, sand, etc.). Our basic soil is a lifeless yellow clay, as poor as Job's turkey. For a dozen years I'd been adding humus and food to the beds, but it is far from ideal alpine texture. When I decided to take the foot along the front edges of the beds for bulbs and rock plants, I knew I would have to improve the drainage while at the same time keep the water-holding capacity of the clay. Humus would be the answer. We keep perpetual compost piles of oak leaves in all stages of decay. Using the oldest, now rich leaf mold, I mixed it with coarse river sand that we hauled from the sandbars. The topsoil was scrapped aside and four inches of clay removed, to be replaced with the loamcompost-sand mixture, making the soil I needed in the planting area to a depth of six inches. This has worked quite well with a top-dressing of the sand-compost in spring and when needed to fill holes. Notice that I said "coarse" sand. It contained small pebbles. Local builder's sand is too fine, but chicken grit, or stone chips might do if I had to buy it. Mr. Foster's description of planting alpines with a collar of stone chips ("Keep Cool" in the *Hand Book*) is the ideal way, but when one has no rock garden, substitutes may do. The general appearance when walking along the path is of perennial beds with unusual and extremely interesting edging plants; always a conversation starter, I might add!

CLIMATE:

Problem number two is one of which it has been said, "That's something you can't do anything about." Too true! There is some consolation in knowing that I am not alone for I notice that as far as New York others complain of the sudden changes in temperature that are murder to little bare plants. Mulching is not the answer here for under it during the warm, damp spells of winter the new growth starts, only to be killed when the next freeze comes. As this is written (November 28), many plants have new growth, some are in bloom, and hardly any are dormant yet. Any day now a drop to twenty degrees may come overnight. A November as warm as this is fine for people but death on plants. Our three months of snow and sleet will be broken at intervals by the warm, damp spells when it gets near eighty and the ground actually steams. The heaving of small or newly set plants is terrific and that is when the collar of stone chips might save them. Alternate freezing and thawing has not killed my alpines yet for most are extra hardy and I try to watch and to press them back in place before the roots dry out, but it does weaken and retard them.

WATER:

I suppose the problem of summer heat and drought should come under problem number three. The part that water plays in the growing of rock plants in the East has not been stressed. Of course, the many books from the British Isles do not, for it is not a problem with the gardeners there. I take it that the same is true of our Northwest. Even New England is blessed with cooler nights and the morning dew that our western North Carolina gardeners enjoy. We who garden on the lower levels between the mountains and the sea are caught between lack of rainfall, long periods of summer heat and high water bills when the only moisture must be supplied from city water with a hose. Water is not the simple answer; it may be when the trouble starts, but water applied when the soil is hot enough to cook the plant is fatal, so always we must decide which is the lesser of two evils. Shall we water and rot the plant or leave them to die a natural death by drying up? Mulching for coolness helps some plants but kills others. Roots under a rock is the best way and is why I use them with certain small and rare plants. Of course, this only proves that the proper place to grow rock plants is in a rock garden. There are many drought-resistant rock plants that take a month without water in their stride because of a deep root system, though. In a later article I would like to list the plants that have been a success here through two trying summers.

My native woodland flowers have felt at home for they were planted in

similar soil and shade from which they came. Many were bought from Wildflower nurseries in the mountains and these had to adjust to our heat, but even *Epigea repens* and *Shortia galacifolia* are thriving. Water is the only problem where the plantings are on the far reaches of the property, but a few pots of water go a long way under shade and a heavy mulch. The woods are made up of pine and mixed hardwood; maple, oak, dogwood, and sourwood. Planting areas were prepared by digging out the larger roots and working in leaf mold. A native stand of *Cypripedium acaule* covered the back of the lot and assured me that other acid lovers would be at home here. Native shrubs have also been aded where evergreens were needed.

NOTES ON SOME FAVORITE CAMPANULADS

WILLIAM RAWSON, Los Gatos, California

Some years before my rock garden was made, I developed a special love for the Campanula family. In fact, my desire to grow the small mountain members of the family was a major reason for the construction of a rock garden. Now, my small rock garden contains more members of this family, and the Pink family than any other. The pinks are numerous because they do well in our warm and rainless summers.

I like to divide the Campanulaceae into four sections. First, there are plants whose flowers resemble bells; i.e. most Campanulas, Codonopsis, Adenophora, Owstrowskia, and Symphyandra. Second, the plants whose flowers are starshaped; *Campanula garganica* and its like, Cyananthus, Edraianthus, Platycodon, and Wahlenbergia. Third, there are the genera whose flowers are in heads which somewhat resemble Scabiosa. These are Diosphaera, Jasione, Phyteuma, and Trachelium. This leaves Michauxia left over as a separate section because of its dart-like flowers. The family has enough variety among its members to maintain my interest over several years. There are two good introductory books on the Campanulads; L. H. Bailey's *The Garden of Bellflowers*, and H. C. Crook's *Campanulas and Bellflowers in Cultivation*. Most of the Campanulaceae are easy plants to grow with the exception of a few Alpine species. The predominant season of bloom is summer, though there is hardly a time between April and November when my garden does not have some species in flower. In this article, I have set down some notes on a few of my favorites.

THE LITTLE WAHLENBERGIAS. There are three small Wahlenbergias generally found in plant and seed lists and I have had plants under the names of all three. They are WW. albo-marginata, saxicola and tasmanica. There is some confusion over the nomenclature of these plants. Perhaps some of our members from Australia and New Zealand can shed light on the matter. W. albo-marginata came as a bonus in a seed pan of Cortusa matthiolii. I was glad to have both. I recognized the Wahlenbergia when the pale blue, starry bells appeared. The dark green leaves are in rosettes from which the flowers ascend on 3-6" stalks. W. tasmanica is a root-spreader in my garden and will invade other plants in a short time. The rosettes are small and the leaves are narrow and pointed. It is said to be a variable plant in color, but my plants have always been a good "Campanula Blue" with no washed-out colors. The plant began to die out in the center and so pieces were dug from the perimeter and set in the central vacancy. Frequent division seems to be advisable to keep this plant in good health. A plant I had under the name of W. saxicola was similar but of a miffy temperament and has

American Rock Garden Society

since died out. Mr. H. C. Crook regards these last two species as synonymous.

THE GIANT BELLFLOWER. Owstrowski magnifica is not a rock garden plant since it grows as tall as five or six feet. However, like the large Meconopsis, this monotypic Campanulad seems to fascinate rock gardeners. Two years ago, I came under its charm and, in a fit of madness, imported some tubers from England. My madness was noted on both sides of the Atlantic since the English nursery informed me that the cost of importing the tubers would far exceed the cost of the plants. The tubers arrived, however, sterilized and fumigated, and were planted out in sandy loam. They grew on and began to show promise. One day they disappeared unexpectedly, the victim of the tuber-loving pocket gopher. Still persistant. I was lucky to get some more tubers from a U.S. source and planted these in a gopher-proof chimney flue with rocks in the bottom. The tile flue was sunk in the garden much as some gardeners bury baths and sinks in their gardens. Now the plants are growing well and are in bud, so I anticipate some of the large silky flowers. Owstrowskia goes dormant early, in late June in my garden, and should be kept dry from then on. Mr. Clifford Crook's last words on this plant are appropriate: "Perfectly hardy and soundly perennial, it is a plant with which all lovers of the unusual should persist."

THE DOUBTFUL DIOSPHAERA. While most of the Campanulaceae are showy, some are not. Such a one is *Diosphaera dubia*. It has, of course, two or three other names under the genus Trachelium (*T. rumelianum* in *Hortus II*). The many small tubular flowers are gathered in a cluster much as in the related genus Jasione. The blue flower clusters are on prostrate 9" stems. The plant looks well when grown so that the stems can hang down over a rock, or in a crevice in a dry wall. *Diosphaera dubia* is not a root-spreader, but increases in size each year. Propagation by cuttings is the best way although seed germinates well, but is hard to collect. Last year, a 3" pot sown with the seed in the chaff produced a few seedlings. The seed is almost impossible to clean without the aid of a microscope. The plant is a native of Greece and is easy to grow. I give it afternoon sun in a gritty soil. It flowers in late summer.

TWO CAMPANULAS. Campanula kemulariae is a favorite of mine, but littleknown. It is similar to the better-known C. raddeana. Unlike the latter, C. kemulariae is a prostrate plant and is very suitable for a dry wall garden. It spreads quite rapidly by roots, so plenty of room is required. I find myself weeding it out of a patch of sedum or from a clump of Saxifraga aizoon. The flowers and leaves are of the same shape as C. raddeana but of a lighter color in both instances. Its low habit of growth makes it more suitable for a small rock garden than its darker cousin.

Campanula pilosa ranks very high among the rock garden campanulas. It grows wild in Japan and across the Bering Strait into Alaska. It makes a mat of rosettes which send forth large bells on 3" stems. The large flowers have caused some gardeners to refer to it as "the Japanese *Campanula allionii.*" There are forms called "elegantissima' and "superba" with different shaped bells. My plant was originally placed in shade in a peaty soil near an Asiatic gentian. The bells were narrow and dark purple. I moved the plant to a more open position near *Gentiana clusii (acaulis)* with the result that the flowers were more open-bell shaped and of a lighter and bluer shade. The species requires good drainage, and scree treatment is recommended, although it does well in my raised rock garden in a gritty soil.

TWO DELIGHTFUL CAMPANULAS

ROBERT M. SENIOR, Cincinnati, Ohio

Two Campanulas that are distinctive and particularly desirable for pot culture are *C. formanekiana* and *C. mirabilis*. Both of them are highly attractive with large bell-shaped flowers on stems that seldom attain a height of eighteen inches. Both have been highly praised by experts. Clarence Elliott, writing about *C. formanekiana* called it "an exquisite species from Greece, like a refined, smaller, snow white Canterbury Bell." Occasionally it is said to have pale pink flowers, but our plants always have had white flowers. Louise Wilder, in one of her books mentions *C. mirabilis* as "a veritable fountain of lovely, large, pale blue bells on a branching stem about one foot high."

It might be imagined that two such lovely plants that are easily raised from seed would be widely cultivated, but such is not the case, and for two reasons: like the Canterbury Bell, both are monocarpic, and often fail to bloom even in the second year after germination. Indeed, last fall we had three plants of C. *mirabilis* in our little alpine house; two of them bloomed the third year, and the third, although looking perfectly healthy, with firm, glossy rosette leaves, failed to throw up any flowering stems. I doubt whether we ever waited four years for any campanula to bloom.

The second reason why these plants are seldom seen is that they are not reliably hardy. It is not so much the cold of winter that affects them, but rather the snow, ice, and cold rains that play havoc with them. It is true that once we pulled *C. mirabilis* through a winter, nestled between two rocks on sloping ground, where it could shed the cold winter rains. On the other hand only last year, a plant that we had lodged in a similar position was unable to survive. In an alpine house, or even in a closed coldframe, they could be raised successfully.

This year, with some young plants of C. *mirabilis*, we intend to spray the leaves with giberellen in the hope of bringing them more speedily into bloom. I understand that the use of this chemical has hastened the bloom of Canterbury Bells, so possibly we might have similar success with C. *mirabilis*.

In our alpine house, *C. formanekiana* usually blooms in June, but *C. mirabilis*, last year, did not start blooming till the end of September; actually on November fifteenth, though some blooms had faded, we counted twenty flowers on an upright stem that were still in perfect condition. So, in an alpine house, or even in a coldframe, I urge you to try growing this plant. It will require patience on your part, but when it blooms you will feel amply rewarded. You will probably rank it among the finest low-growing campanulas that you have ever raised.

.

DOUGLASIA LAEVIGATA AS GROWN IN SCOTLAND—Mrs. Ralsey S. Peterson, Seattle, Wash., wishes information concerning the culture of this plant and others from the Cascade Mountains. She writes, "In view of the entrancing article by Kathleen S. Hall in the January *Bulletin* in which she remarked on her success with Cascade Mountain plants, we here in the Northwest, living within sight of the Cascades, would like very much to know how she handles them, especially *Douglasia laevigata* with which we here do not always succeed too well." Mrs. Peterson requests that there be more written and published about this particular plant, especially that Mrs. Hall gives us the benefit of her experience, possibly by submitting another article dealing more fully with the cultural aspects.

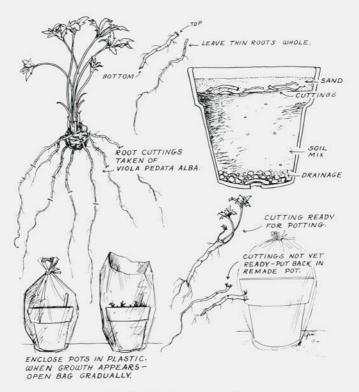
EASY METHODS OF PROPAGATION

RICHARD LANGFELDER, Chappaqua, New York

The use of root cuttings is a means of propagation seldom used, which is surprising since it is easier, faster, and more foolproof than sowing seeds. Watching the tiny plants appear from little bits of stems is equally as fascinating as the miracle of germinating seeds. In the past ten years I have used root cuttings to increase *Daphne*, *Gentiana prophyrio*, *Viola pedata alba*, and many more with splendid results.

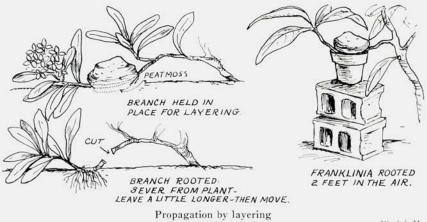
Almost any plant with fleshy roots may be propagated by root cuttings. Large roots are cut into $1\frac{1}{2}$ " to 2" pieces, while the thinner roots are best left much longer. Sometimes the entire root is used.

To prepare the pot; put in at least 1" of drainage, and then the right soil mix to within about $1\frac{1}{2}$ " of the rim of the pot. The right soil mix is the mixture you will want to use for growing that specific plant. Firm the soil, scatter the roots horizontally over the surface, and cover with about $\frac{1}{2}$ " sand. Stand the pot in water, and after moisture reaches the surface, drain and place either in a plastic bag with the top tied tightly, or fasten a plastic bag tightly over the top of the pot. The pot should then be placed in the shade at a temperature of about 50-65 degrees.



Propagation by root cuttings

Virginia Howie



Virginia Howie

Within four weeks the young plants should start to appear. When this happens, open the bag slowly and put it in a strong light. After a few days, when you see the plants growing strongly, and more are emerging, the bag can be removed.

The pot should now be placed in the same situation in which the particular plant is used to growing—either sun or part shade; deep shade is seldom used. Do not let the pot or plants dry out. More and more plants will emerge and, as soon as you can see the plants growing strongly (like good seedlings), it is time to transplant.

Never dig the plants out with a knife or trowel. Shake out the contents of the pot for examination. Transplant all those that are ready, and if the remaining roots still look good, the pot can be remade for another round. Don't be impatient; sometimes it takes a long time, but eventually they will come. It took from October 15 to the next July before my *Gentiana prophyrio* emerged, and even in September more plants were still coming.

All the cuttings should be cut straight across the upper part (the part which is nearest to the crown), the lower part should be cut on a slant. In this way you always know which is up and which is down.

Strong root cuttings may be handled a bit differently. In this case $\frac{1}{2}$ " of sand is pressed onto the desired soil mix and the cuttings are inserted so that the upper part is just below the sand surface. This alternative procedure is seldom used, however, and you should do very well without it.

Probably the best results are obtained in winter and early spring, but I set root cuttings all year round with very good results.

Cuttings from variegated plants will not come true, but will revert to the green status. Daphne cutting, I just stick in. *Gentiana porphyrio:* thick roots are cut into $1\frac{1}{2}$ " to 2" lengths; thinner roots to be used whole.

Viola pedata alba: I think this method is easier than that mentioned in the Bulletin of October, 1965 ("sliced carrot method") and with no risk to the plant at all. I dig up the plant, shake off the soil, and collect at leisure the roots most suitable for cuttings. The plant is then replanted, watered well, and shaded until I see that it has started to grow again. I haven't lost a plant by this method yet. This is very imporant as my Viola pedata alba are the pure white type so difficult to find. An alternative to disturbing the entire plant would be to dig around the "carrot" and remove a few roots for cuttings.

Following is a list of plants recommended for root cutting propagation: Anemone japonica, pulsatillas, mertensias, Morisia monatha, Phlox subulata, P. paniculata, and others; ilex, azaleas, polygonums, saponarias, senecios, Arnebia echioides, some campanulas, alpine geraniums, Primula denticulata, anchusas, eryngiums, Dicentra spectabilis, Dodecatheon meadia, gypsophilas, hypericums, paeonias, etc.

There is another type of propagation but little used, probably because it is so easy, and that is layering. Almost any plant can be layered.

Bend a branch to the ground, with peat over and under it and a rock, wire, or pin to hold it down. After it is rooted, which may take weeks—or years, just cut the branch from the plant, leave it for a little while longer, then dig it up and plant or pot it.

If a branch is up too high to be bent to the ground, a pot filled with one half peat and one half sand can be brought up to the branch for layering there. I layeded a Franklinia tree two feet up in the air with a pot propped on cement blocks.

NOTES FROM THE NORTHWEST

ELIZABETH PETERSON, Seattle, Washington

HEATHERS, SCOTLAND AND GREECE—Closer strands were woven into our fabric of friendship with bonnie Scotland because Mrs. David Metheny, our heather-loving authority, wanted to see IT in ITS native habitat. We saw it, too, via her slides of rolling hills on which *Erica cinerea* and *E. vagans*, and *Calluna vulgaris*, of pale pink to deep rose and fuchsia hues intermingled, startlingly embellished with the yellow of gorse. In our country of instant housing and equally instant demolishment, to see a picture of the house where Dr. Metheny was born in Edinburgh, and the park where he took his first pram ride was also a delight.

Heather, usually recommended here as an easy-maintenance plant for gardens, was shown by these slides to be of use in other placement: in rock crevices, or to cover large rock walls, and if the Callunas seed around enough, placed in garden paths and kept mowed.

From Scotland to Greece was a quick jump to learn that the Grecians are now replanting the face of the Acropolis with conifers, primarily with the beautiful, cathedral spire-like cypress. There, too, *Erica arborea*, not too hardy, but a fragrant white spring bloomer, was in its glory as was the autumnflowering (to us) *Erica multiflora*, which is much like *E. vagans*, but of more upright form and more compact, in a deep shade flushed with orchid, a color difficult to describe but to be ever admired. It is said that this species blooms also red or rosy pink, and differs from *E. vagans* in that its bells have exserted stamens.

In one local garden *E. arborea* is massed behind rhododendrons (it can grow to twenty feet tall—in Africa to thirty feet), and is covered with bloom as if by snow. This is not for most of us, however we do have the numerous forms of *Erica carnea*, *E. multiflora*, and *E vagans* (hardy to New York) to play with; and REMEMBER: peaty soil, drainage, and do not cut back until after spring frosts because they may split the stems and allow infection to enter. As for the colors of heather, the subject is a difficult one to place on paper in order to convey the desirability of a particular plant. One can say "pale pink" or "deep rose" for various species so many times that the words become meaningless. It would be wonderful if some artist, or paint mixer, were to come up with a publication of universal terms by which one could express the variation in colors of everything from rainbows to bees—at a reasonable cost, of course.

NEVER-NEVER LAND, AND EASIER—When we are presented with a collection of the miniature shrubs of Mrs. Rodney B. Allen and Mrs. Pendleton Miller we feel as if we have been visited by faeries: the world's and New Zealand's smallest conifer, for instance, *Dacrydium laxifolium*, of the Podocarpus family, whose orange-brown, thread-thin branches barely hang over its small pot. Reported as being five inches in diameter after five years, we expect another ten years to go by before we see much change. The juvenile leaves are awl-like and open, then mature to overlap others on the branch. It produces eventually a fleshy red fruit surrounding a brown nut in the fall, very like a yew, and orange male cones in the spring. This magnificent twig has not come face to face with the harsh realities of life outside its nest, being the sole specimen of its owner, however it forms alpine and subalpine scrub in New Zealand which indicates that it may be hardy.

Also in Never-Never Land is a huskier, more spreading occupant, *Kelseya* uniflora, which has a lamentable reputation for intractability in gardens. Native on Montana, Idaho, and Wyoming limestone substrata, it is allied to Petrophytum, but differs in its densely imbricated leaves which are evergreen, leathery, and entire, one-eighth inch long. Its slightly revolute, white flower petals, numerous red stamens protruding above the flower, and habit of molding closely over large rocks make it a keenly desired acquisition. However, growing some 10,-000 feet in the vastness of the Rockies, it is not easily collected, and if it is being grown successfully anywhere in this country, we would like to know about it. The English evidently cultivate it, and perhaps they can tell us how.

While on the subject of rock-drapers, another good rock garden subject is *Rhododendron forrestii* v. *repens*, of the Neriiflorum series, whose flowers are a good scarlet without the dried blood effect of so many new hybrids. A Himalayan, it reaches little more than twelve inches in height, creeps well and has the merit of dark green leaves in dense growth. Its hardiness is rated to minus five degrees. The low rhododendrons want the usual peat-leaf mold soil and can take more sun, but still want a bit of shade at high noon. Cuttings just after flowering are a good source of propagating material, and, being creepers, the plants can produce some layers.

A photographer's joy in bloom and in fruit, and also more amenable to cultivation is *Gaultheria adenothrix*, from Japan. It stats about six inches high, has thick, ovate, shining green leaves and grows in a loose peat soil in partial shade. The dark red of its calyx and pedicels, terminating in nodding free-flowering white bells, and several fat, bright red berries are satisfying to the eye. Pre-flowering cuttings are recommended as the best method of propagation.

Mrs. Miller grows her rare shrubs closely in layers of leaf mold, rotted wood, and rock, with roots intermingling. With this sort of mixture, she is philosophical about moles, believing they aerate the soil.

The carpet on which the faeries tread is Mrs. Allen's prostrate Salix canadensis, an uncommon arctic alpine of the Cascade Mountains, whose pointed, entire, grass-green leaves are no more than one-half inch long, and whose catkins are less than that. This tidbit will require more investigating, and good eyesight to find it. We have been paying so much attention to other plants, it might be time to hear more from members about the genus Salix. They are known to make satisfactory cuttings, are a bit slow from seed, and should not be put in too rich soil at the risk of losing sight of the catkins.

Of her beautiful cassiopes, Mrs. Allen says many hybrids are stronger than

the species and flower at an early age. It is to be hoped she will have an article on them soon.

OKLAHOMA-Because there was not enough room for both bodies and plants in the U. of W. Arboretum clubhouse, we held a picnic plant sale outdoors on a weekend, which practice appears to create opportunities for out-of-Seattleites to come to the sale, some from as far away as Spokane and Union Gap. Union Gap! What pictures of lewisias, penstemons, and rattlesnakes that brings to mind. An innovation was a pre-sale. Members who were anxious to acquire some special plant they had taken a fancy to during the noontime review of the plants offered (no selling until 1:15 p.m.), and were willing to pay double the ticketed price were given the opportunity to scramble for them before the regular sale started. The rules allowed but one plant per person and only three minutes in which to grab it-in case two or more members got their hands on the same plant, it went to the one who bid the highest. Practically the entire membership present lined up on one side or the other of the treasure laden tables and awaited the signal. If you have seen films of the Oklahoma Land Grab you will have some idea of this pre-sale. Lined up six feet from the tables, then released toward them at the crack of some weird outerspace gun wielded by our hosts, Dr. and Mrs. Arthur W. Kruckeberg-chaos resulted, a hilarious bargain sale in reverse.

Out of the wild melee came some plants meriting attention. For beginning rock gardeners who want a plant to DO something the first year and for connoisseurs who appreciate subtle foliage there are the antennarias, of which A. *aprica* comes to mind. It is a native of western South Dakota, forming individual rosettes and producing pink involucral bracts, which it kindly does here in the middle of the winter. The subject at the sale, however, was A. *dimorpha*, another Pussytoe which makes a nice roundish mat of gray, with more or less spatulate leaves one quarter inch long and beige-green tinted white involucral bracts. It does not seem to be as rosetted as some and is a native of the British Columbia to California sagebrush zones. Conversation among antennaria possessors elicited the information that A. *dimorpha* mats hump out of the ground in spots, and a recommendation was made that they be given an occasional top-dressing. All, no doubt, know by now that these are satisfactory sun and sandy soil loves, to make mats by themselves, or to be used as bulb cover. One species or another can be found throughout the states.

A plant of *Cytisus hirsutus demissus*, of the Leguminosae, presented its pretty fur for inspection; a broom which grows three inches high. Its tiny, oblanceolate, trifoliate, pale green leaves on opposite petioles and its bright yellow pea flowers, axillary in the racemes, make it a pleasing sight in May and June. That they come from southeastern Europe is an indication that these plants require sun, sandy soil and good drainage. Their hardiness is not yet clearly defined, but they would probably require protection if temperatures dipped below zero. These are plants that do not like to be disturbed when once established, and can be propagated from small cuttings in June.

Another bright yellow is the crucifer flower of *Morisia monantha* whose petals are lightly veined with green. This is a small bun of shining, deep green three-inch leaves, opposite on the stem, which blooms for a lengthy period in spring. Like the iceberg there is more to this plant than appears to the eye. Its tap root may be twelve inches long, a source of its best method of propagating: one-inch long cuttings, taking no more than two-thirds of the root system when the plant is lifted in summer. Another trick is to pot the plant and nip off cuttings as the root escapes through the bottom. Seed can also be gathered, and this mono-



The rush to buy for double the ticketed price

Harold Miller

typic species has a curious habit of thrusting its seed pods into the ground, a habit which in hard soil can raise it out of its home. This habit shows that a porous soil and dressing can be useful. Coming from Corsica and Sardinia, this plant is another gem for sunny exposure and gritty soil; in fact, rich soil will make it become leafy at the expense of the flowers. It is wise, however, not to give morisias a sunburn at mid-day.

FOLIAGE COMES INTO ITS OWN—Through the infinite courtesy of the Pacific Science Center of Seattle, a plant—not a flower—show was held the last two days of April in a large theatre. This was not a theatre as one usually pictures it. The vast room, oval in shape, with a very high domed ceiling, had neither stage nor rows upon rows of seats. The floor was level and fully carpeted. This carpet made it necessary to depart from the usual rock garden and landscape development used in so many shows. In this entirely empty room very large circular tables were spaced irregularly, but with consummate artistry, and along the curving sides rectangular tables were placed end to end. On these tables the nearly five hundred plants, mostly in red clay pots, were distributed, again with subtle artistry. In the center of each round table was a taller plant for accent and to set the tone for the other plants assembled there. The result was a temple of spaciousness and of quiet beauty.

Every plant was available for close inspection as an individual plant. No plant labels were in evidence, but in front of every plant, flat on the table, was a small placard of an unobtrusive color on which were uniform and completely legible legends. On them the plant's family, genus, species, common name, natural habitat and other gossipy information was given for those who were interested.

It had been hoped to have ecological groupings of such as hydrophytes (in a bog), xerophytes (in a desert scene), or limited exposure mesophytes (in woodland glade and alpine scree), however, late plant arrivals at the theatre precluded this arrangement which should certainly be used in any future show for its informative value and pictorial harmony. One medicinal and savory herb table was assembled at the last moment, fronted by a large basket of clippings through which one was invited to run one's hands and sniff.

The enthusiasm with which the display was received was evidenced by the great number of visitors who took notes; numerous young couples, several student types, and not a few retirees. We have now some of each as new members in our Society.

Late bloom proved the all-enduring merit of foliage which could be inspected and appreciated without the competition of billowing masses of lively flowers. A Menziesia purpurea, although it did manage to produce wine and purple bells pendant from its branches, showed what a beautiful horizontal branch line it has, in the manner of an eastern dogwood; an Ophiopogon 'Arabicum' (Lily-Turf) lay flat on a pan, extending black grass-like leaves from a central tuber. There was a Sequoia sempervirens v. prostrata looking like a flat yew from a distance, whose one-half inch lanceolate needles gave an effect of light gray-green one moment, olive gray-green the next. If one goes in for the striking, a white, furleaved Helichrysum welwitschii can be underplanted with a red-leaved sedum.

A sagebrush zone native, *Erigeron poliospermus*, with nice lavender daisies, was of added interest for the freshly washed look of its desert-gray foliage. A center of vertical interest was maintained by a *Juniperus communis suecica 'Nana'*, perhaps four feet tall, of dense, impenetrable conical form, looking as if it had been clipped annually which, happily, is not the case; it grew that way. Not the last thought brought away from the show was the use of low Japanese-type pans filled with sempervivums, sedums, saxifrages and others, for creating interest on patios and to relieve the fierce, overriding expanse of concrete.

NOMENCLATURE WITHIN KALMIOPSIS

Roy DAVIDSON, Seattle, Washington

The state of confusion regarding the correct application of cultivar names of *Kalmiopsis*, voiced both here and abroad, has led to a perusal of the original circumstances of their application in an effort to clarify the unfortunate situation. Such terms as "var. M. le Piniec," "Umpqua River (or Valley) form," and "le Piniec form," are in common usage though never having been properly defined, it has been revealed, all really mean nothing.

This plant, originally named *Rhododendron leachianum* by Henderson (*Rhodora*, 1931) was redescribed by Rehder (*Journal of the Arnold Arboretum*, V. 13, 1932) as *Kalmiopsis* (an allusion to its great resemblance to *Kalmia*) *leachiana*, to commemorate its discoverers, Mr. and Mrs. John Leach, of Portland, Oregon. Their find, in 1930, and the subsequent introduction into the garden shortly thereafter (about 1933) attracted considerable attention in both botanical and horticultural circles the world around. Certainly, both its differences from *Kalmia* and particularly from *Rhododendron*, as well as the habitat, unique from either, sets it quite apart, and there is no argument that *Kalmiopsis* does not constitute a genus of its own, monotypic and restricted to endemic distribution. The later name *Rhodothamnus leachianus* Copeland (*American Midland Naturalist*, 1943) has not met with much acceptance.

Governmental agencies set aside, as the Kalmiopsis Wild Area, a large tract within the drainage of the Chetco River basin of southwestern Oregon, thought to contain the sole habitat of this new plant, the area the Leaches had traversed in their explorations. (Recently this has been enlarged to become part of the Big Craggies Botanical Area, a nature preserve for all forms of wildlife). Some later discoveries increased the known range of *Kalmiopsis* to include several tributaries of the Illinois River, that being a major branch of the Rogue River system and just immediately to the north of the Chetco, yet all these various stations are quite within Curry County and, in fact, scarcely separated.

About thirty years following the Leaches original discovery, Marcel le Piniec, then of Jacksonville, Oregon, made the discovery of a further disjunct colony, this one nearly a hundred miles to the northeast and on the drainage of the North Umpqua River, in Douglas County, Oregon. Several nearby stations have been reported, again only scarcely separated and constituting a scattered colony on a single enormous serpentine formation, at various exposures and elevations. The first publication of this colony appeared as a note from Mrs. A. C. U. Berry, of Portland, Oregon, in the *Bulletin of the Alpine Garden Society* (V. 28 No. 1 p. 23 March 1960) with photograph, and referred to the plant as *Kalmiopsis leachiana* var. *M. le Piniec*.

To quote a personal letter from Mrs. Berry (autumn, 1965) describing the trek to the colony, "We went to meet Mr. le Piniec and he took us up the Umpqua—way up; it was quite a climb, and the Kalmiopsis grew in shade, in sunshine and some just scrambling over the rock faces, roots so embedded that only one plant could be pried out intact—we divided it three ways. Mine grew well and was illustrated in the Alpine Society *Bulletin*. It had seeds—they were already forming when the plant was taken—so I sent them to the Scottish Rock Garden seed exchange, calling it var. *M. le Piniec*, hoping for his sake that the name would "hold" to commemorate his find. Plants [propagated vegetatively later] were sent to the Royal Botanic Garden in Edinburgh and to [others] in Scotland and in England."

Clearly, this name as applied referred to the clone as the horticultural "variety" and was not intended to designate a botanical variety as the Douglas County plants, either of the station or in total. The plant in Mrs. Berry's garden, now grown to considerable size, and the propagations from it sent to Edinburgh are properly the "type" for the name, and seedlings grown from it cannot correctly bear the clone name 'M. le Piniec.' There is an error in the report, following Mrs. Berry's note, to the effect that the plant occurs on the Rogue River; it was, of course, the North Umpqua. *Kalmiopsis* is not a protected plant there, and has been ravaged by indiscriminate collectors who cannot be satisfied with anything less than a boxful.

The nursery firm of Saxton & Wilson, Maplewood, Oregon, is apparently responsible for the designation "Umpqua River form;" there is no evidence that all of their propagations were from a single clone, and therefore the name applies correctly to a "forma," whose members may vary somewhat among themselves. No "type" is designated. This fine nursery, no longer in existence, has supplied many plants of *Kalmiopsis* to gardens.

As far as can be ascertained, the use of the name "le Piniec form" is an erroneous interpretation of the clonal name 'M. le Piniec' and should not be used since it has no meaning.

Since taxonomists find no critical differences by which to segregate the Umpqua plants from those of Curry County, there is a need for a horticultural description to define "Umpqua River form." Nurserymen experienced considerable difficulty in the propagation of the Leaches' Curry County find and in the growing of the propagules to mature plants, as reported by the late C. I. Sersonous (*Bulletin American Rhododendron Society*, V. 7 p. 186, Oct. 1953). By contrast, the Umpqua plants seem to root readily from cuttings and to be easily grown. Improved techniques and the wider understanding and use of rooting hormones, to say nothing of knowledge gained from the earlier failures, could account, at least in part, for this "apparent difference."

Plants in the wild on the Umpqua are reported as being "more stoloniferous" in habit, as well as given to natural layerage of branches, and are thereby more readily propagated by division, as was practiced at the time Mrs. Berry's plant was collected. Whether or not there is a degree of difference in this respect is open to question, yet the fact remains that division has been practiced on the three named clones from the Umpqua colony.

There is probably a wider variation in the amount of pigmentation of the corolla among the Umpqua plants. Those from Curry County in gardens are almost of a non-varying strident rose-purple, a color described by Farrer, in speaking of some other plant, as "a ferocious aniline red-mauve, most terrible and breath-taking to look upon in the sun!" A personal investigation into two or three reported stations for the Umpqua *Kalmiopsis* has yielded the knowledge of a good percentage of pleasing pastel "pink" plants to be found there.

Beyond these observations, it is not possible to write a description of "Umpqua River form" which would serve to characterize that entity as distinguishable from the "Curry County form." However, in an attempt to clarify the horticultural nomenclature, it is suggested that the following apply:

Kalmiopsis leachiana "Curry County form"—to include all plants of Curry County, both in the Chetco drainage and the adjacent Illinois tributaries, all propagations, seed and seedlings originating from same, this being the "original" Leach find and conforming to Rehder's description. As far as known, no individual clone has ever been selected from this form for special designation, although the fine plant at the University of Washington Arboretum is a splendid example, for which a name might be found a convenience.

Kalmiopsis leachiana "Umpqua River form"—to include all the plants, propagations, seed and seedlings from the colony on the North Umpqua River in Douglas County, and other stations there as they may subsequently be found. There is probably greater variability within the individuals of this form, in corolla pigmentation; also, it is seemingly of easier propagation and gives a better garden plant. Three, at least, individual plants have been selected for clonal designation from the Umpqua.

Kalmiopsis leachiana 'M. le Piniec' as designated by Mrs. Berry; the type, in her Portland, Oregon, garden, and at the Royal Botanic Garden, Edinburgh. A collected plant, this was not selected for any specific quality other than its vigor and well-being, and the ease with which it could be taken. It may appear therefore to be identical with many other *Kalmiopsis*. Should it be found that quite different plants are going by this name, it must be recognized that seedlings grown from it cannot properly bear the name, and should be known as "Umpqua River form", possibly "le Piniec seedlings."

The *Bulletin* of the American Rock Garden Society (V. 22 No. 2, p. 49, April 1964) reports two further clones selected in May, 1963 from the Umpqua River stations:

Kalmiopsis leachiana 'Barbara Cook'—corolla to almost an inch across, colored palest Amaranth Rose (HCC 530, between 1 and 2) with a distinct ring of bright Rhodamine Pink (HCC 527, full intensity) connective to the bases of the pallid filiments, each of which bears a chocolate-purple anther. This was a tall,

open plant rather in the shade of high Douglas fir in serpentine detritus. It was divided at the base on collection.

Kalmiopsis leachiana 'Ted Grieg'—corolla of only average size, or about fiveeighths inch across, colored brilliant Persian Rose (HCC 628/1) of unique intense effect due to the heightened reddish pigmentation of the calyx (ordinarily only rather livid or bronzed); the depressed cup of the corolla a sharp contrast in pallid leaf-green; the stamens the usual purple. This represents the nearest to "red" yet seen in Kalmiopsis. It grew as a low-sprawled plant rooting into the moss of the serpentine on which it reposed; it was basally divisible on collection, having layered freely.

Mr. Brian O. Mulligan, Director of the University of Washington Arboretum, Seattle, Wash., (letter of 1 Nov. 1965, copy to hand), reviewed for Mr. Scase, Director of the Wisley Gardens, the *Kalmiopsis* growing in the arboretum, and told of a 25 year old plant two feet tall from the Chetco, a 12 year old propagation from it grown almost as large, and a plant of "Umpqua River form" from Saxton and Wilson, grown but 8-9 inches in five years' time. Mr. Mulligan expressed a preference for the Chetco plant, citing its vigor, free-flowering habit, and the more pleasing rose color, stating that, by contrast, those of the Umpqua plants were paler with a rather dull hue. The incident of this inferior plant from the Umpqua in a public collection is unfortunate, particularly since so many really fine clones are to be found. Since their plant from the Chetco is a splendid example of the "Curry County form," perhaps in time it will prove worthy of a clonal name.

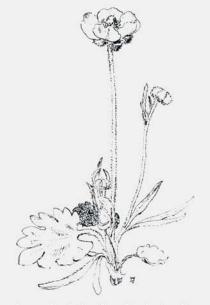
Boyd Kline and Lawrence Crocker, both of Medford, Oregon, have found it opportune to visit both the Curry County and Umpqua River colonies and to make field observations and, in addition, garden observations of material collected. Mr. Kline says (personal letter, Sept. 1966), "The two *Kalmiopsis* are quite distinctly different. In nature the Curry County form grows in thick moss . . . full sun . . . procumbent . . . in long stringy stems, but in cultivation it grows upright to about two feet, even three feet . . . bears darker flowers than the Umpqua form. Both seem difficult to grow for some people. I have trouble with the Curry County form, but the other is doing beautifully. Perhaps that is the best reason I have for preferring the Umpqua form; it is more compact, just as floriferous, is low and spreading . . . a much better garden plant."

It is to be hoped that these notes and observations will help to bring some surety to the terms used when horticulturists discuss *Kalmiopsis leachiana*.

.

A PRETTY WEED—"The article and quotes on the weedy return of the helleborine orchis in the January *Bulletin* of the ARGS moves me to call your attention to my article in *Leaflets of Western Botany* Vol. 10, No. 15, pp. 299-300 (Sept. 1966). In it I reported the weedy occurrence of this orchis in San Mateo Co., Marin Co., San Francisco, and Piedmont in the S.F. area in California. It may be weedy, but it is a pretty weed." This note was sent in by John Thomas Howell, of the California Academy of Sciences.

RANUNCULUS CARDIOPHYLLUS—In the January Bulletin, Vaclav Plestil, of Turnov, Czechoslovakia, wrote of Ranunculus altaicus and R. cardiophyllus. Having become better acquainted with this buttercup from Canada, he writes in a recent letter, "I like very much this small plant. It is very decorative in the alpine garden. I am sending you a line drawing of it."



Ranunculus cardiophyllus in a Czechoslovakian garden

Vaclav Plestil

A. R. G. S. SECRETARIAL CHANGE

At the annual meeting of the ARGS on May 6, Richard W. Redfield of Closter, New Jersey, was elected Secretary to complete the unexpired term of Lawrence Hochheimer, of Norwalk, Conn.

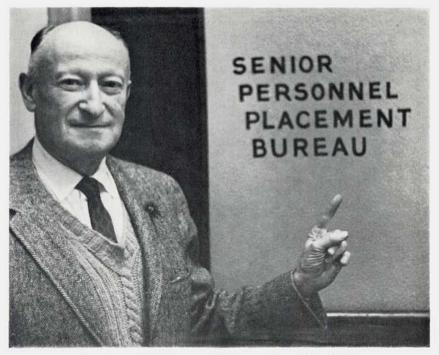
Mr. Hochheimer, who has served with distinction since the retirement of the long-time and beloved Secretary, Edgar L. Totten in 1964, wrote to the President of the Society on March 11, 1967, as follows:

"As I think you know, I have become increasingly involved in work in the Norwalk community, work which I think is important and which has great personal interest for me.... The pressure on my time is such that, with great regret, I must discontinue my secretarial duties with the American Rock Garden Society."

Mr. Hochheimer is actively involved as a member of the Personnel Committee of the Human Relations Commission, is on the Executive Board of the Citizen's Action Committee, on the Housing Committee, and is the President of the Senior Personnel Placement Bureau.

While engaged in these varied activities, Mr. Hochheimer found time to carry on the routine chores of Secretary for a growing ARGS. During his tenure, the membership of the Society grew about 50%. This entailed an ever increasing amount of record keeping, correspondence, and *Bulletin* mailing activities. In addition, Larry sought out new advertisers for the *Bulletin*, increasing the advertising by more than 100%. The members sincerely appreciate his devoted services to the ARGS.

Our new Secretary, Mr. Richard W. Redfield, takes on his duties with a background of long familiarity with the affairs of the ARGS and an intense interest in rock gardening. He has been a member of the Society for many years,



Lawrence Hochheimer-Retiring Secretary of the ARGS

and though he has not been active in its administration, he has been a regular attendant at its affairs.

Dick Redfield has a rich background of botanical and horticultural knowledge, founded on years of exploration in all types of ecology in the United States. While exploring the flora from the deep Southwest to Alaska, and from Canada to Florida in the East, Dick has made an outstanding collection of photographs. He is a Trust Officer in the Citizens National Bank in Englewood, N. J. He is active in several conservation organizations, and is President of the Tappen Zee Chapter of the American Rhododendron Society.

We warmly welcome Dick Redfield as our new Secretary of the American Rock Garden Society, and all of us will be happy to know him better.

OMNIUM-GATHERUM

Your attention is called to the Questionnaire on the last page of the 1965-66 Index that accompanied the April *Bulletin*. Perhaps you overlooked it, or decided that it was not worth bothering with. That is, 1270 of you out of a possible 1280 (estimated membership) refrained from answering the Questionnaire. Yes, ten members did answer it in the month that has elapsed since the April *Bulletin* reached you, and all ten desired that there be no discontinuance of the publishing of the Index every two years. Ten answered—1270 did not bother. Since 99% of our members are not interested enough in the Index to go to the trouble of filling out the Questionnaire and returning it to the editor, as requested, it must be assumed that the Index is not useful to them and that there is no jusification for the expenditure of the time, labor, and money that its preparation and publication entails.

Should the disinterest of the members be confirmed during the next few months by continuing apathy in this matter, it is possible that the Committee on Publications of the ARGS will be forced to recommend to the officers of the Society that the publication of these Indexes be discontinued. You can prevent this, however, if enough of you who find the Index useful to you will fill in and mail the Questionnaire. Do it now!

An up-to-date Membership List also accompanied the April *Bulletin*. It has been noticed that the names of some members, both new and old, were omitted in error. This is unfortunate. If your name was one of those omitted, or if there is any mistake in the listing of your name or address, please notify the Secretary, Mr. Richard W. Redfield, Box 26, Closter, N.J. 07624, at once. Certainly, should you fail to receive your *Bulletin* regularly, he should be notified.

With the continuing growth of the Society's membership and the increasing complexities of the duties of the Secretary, it is essential that each of us do his part in making our new Secretary's work easier for him. Please, in all your communications to him; applications for membership, payment of dues, letters, etc., make sure that your name and address is perfectly legible. Type or print both so that there can be no mistake. Beautiful handwriting and distinctive signatures notwithstanding, they are sometimes illegible to a harried and hurried secretary.



THIS SPACE IS AVAILABLE

FOR

YOUR ADVERTISEMENT

RATE

\$15.00 PER YEAR

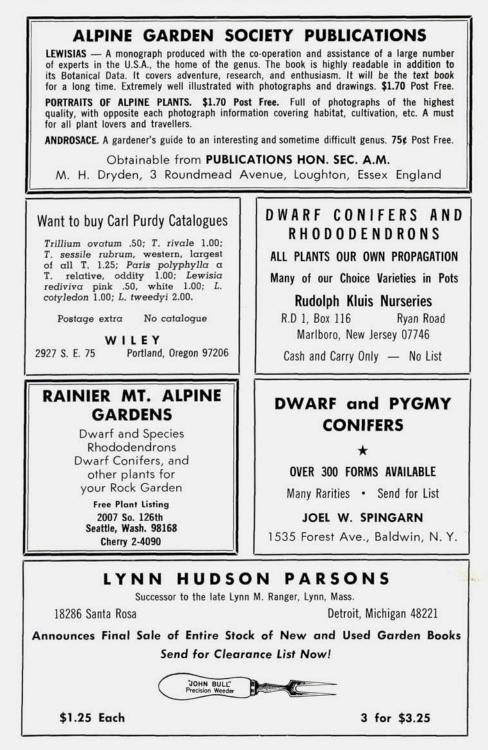
SISKIYOU RARE PLANT NURSERY

522 FRANQUEITE STREET, MEDFORD, OREGON 97501

SELECTED PLANTS FROM AROUND THE WORLD

to whet the gourmet appetite of any green thumb WESTERN NATIVES, ALPINES, ROCK PLANTS, BULBS and FERNS

Catalog 50¢ Refunded first order



Will you part with any of these old Bulletins of the American Rock Garden Society? I am trying to complete my set. Write quoting price. Thank you.

Vol. 2; No. 1, 2	Vol. 15; No. 1
Vol. 3; No. 4	Vol. 16; No. 1, 2
Vol. 4; No. 2, 4, 5, 6	Vol. 17; No. 1, 3, 4
Vol. 5; No. 1, 2, 3, 4	Vol. 19, No. 2, 3
Vol. 6; No. 1, 2, 3, 6	Vol. 20; No. 1
Vol. 7; No. 3, 5	Vol. 21; No. 1, 2, 4
Vol. 8; No. 1, 2	Vol. 22; No. 4
Vol. 13; No. 1, 2	Vol. 23; No. 3

LUCILLE TOMOFF 9283 N. Martindale Detroit, Mich. 48204

READ'S NURSERY

Growers of

Rock Garden Plants

ALPINES — DWARF CONIFERS

(Cash and Carry Only)

388 FOREST AVENUE PARAMUS NEW JERSEY

LILACS

ROCK GARDEN PLANTS

Price List Available

A L E X A N D E R ' S BLUEBERRY NURSERIES

1234 Wareham Street, Route 4 MIDDLEBORO, MASSACHUSETTS 02346

Mountain Valley Nursery Valley Road JEFFERSON, NEW HAMPSHIRE

Choice Rock Garden Plants Alpine Plants Ground Covers Primulas Perennials

25 Cents (Stamps) for Informative Catalog DONALD J. LENNOX

HEATH and HEATHER

Over 90 Varieties

Descriptive List on Request

THE CAPE COD NURSERIES H. V. LAWRENCE, INC.

Falmouth

Massachusetts

SKY HOOK FARM

PRIMULAS

Johnson Vermont

PRIMULA ABSCHASICA

Giant Polyanthus Doubles Species Auriculas Giant Acaulis Candelabras Julianas

All Vermont Hardy . List on Request

Oliver

NURSERIES 1159 BRONSON RD., FAIRFIELD, CONN. specialists in

Azaleas Rhododendrons Pines Rock Garden Evergreens

Now Offering A Mail Order Service Catalog On Request formerly Oliver & Simson Nurseries of Scarsdale, N. Y.

HOLLY HILL Rare Plants

R.D. 4, Straight Path, Huntington, N.Y. 11743

LARGE SELECTION OF HEATHS AND HEATHERS

Lists Available

VISITORS ARE ALWAYS WELCOME

Tremendous variety of dwarf conifers, unusual evergreen shrubs, hollies, and modern hemerocallis at nursery only. 750 Varieties of Alpines, Rock Plants, Ground Covers, Perennials, and Wild Flowers.
900 Varieties of Seed of Alpine, Rock Plants, Perennials, Primulas, and Wild Flowers. Catalog 25 Cents

American Perennial Gardens D-6975 Dover St., Garden City, Mich. 48135

GOODWILL GARDEN

Specializing in Rare Alpines and Rock Garden Plants

List Includes

Primula Marginata • Asiatic Gentians Primula Rubra • Meconopsis Varieties NEW LIST will be issued in Early Autumn

Write for Free Folder to Betty Jane Hayward Route No. 1 Scarborough, Maine 04074

To delight the hearts of keen gardeners we specialize in Rare Gentians, Hardy Lewisias Choice Androsaces and Scarce Ramondas

> Growers of Choice Alpine and Rock Plants

KATHELEN GARDENS

DURHAM, NEW HAMPSHIRE

Descriptive Catalogue

Grower of Rock Plants, Herbs, Perennials and Band Grown ANNUALS in Separate Colors All Plants for Sale at Nursery Only SAMUEL F. BRIDGE, JR. 437 NORTH STREET GREENWICH, CONNECTICUT MAYFAIR NURSERIES

R. D. No. 2

Nichols, New York

DWARF CONIFERS DWARF SHRUBS HEATHERS

RARE PLANTS and SHRUBS

Dwarf slow growing conifers that stay dwarf and other shrubs all suitable for Bonsai culture.

Large collection of Alpines as well as unusual plants are listed in our catalogue.

ALPENGLOW GARDENS

13328 Trans-Canada Highway North Surrey, B. C., Canada

Colorful

SEMPERVIVUMS

10 Varieties (labeled) Prepaid \$5.00 Over 100 Different Varieties

MacPherson Gardens

2920 Starr Ave. Oregon, Ohio 43616

A List of 1966 GREAT PLAINS SEEDS

with short descriptions and per packet prices, is available for the asking.

THIS WILL BE OUR ONLY CATALOG FOR 1967

CLAUDE A. BARR

PRAIRIE GEM RANCH

Smithwick, South Dakota 57782

THE **ALPINE** GARDEN SOCIETY

THE QUARTERLY BULLETIN

known in 27 Countries throughout the World. for its illustrations and technical standard.

ANNUAL SEED DISTRIBUTION LIST, with preferential treatment for overseas members, of some 2,000 varieties, including new introductions otherwise unobtgingble

ANNUAL SUBSCRIPTION \$5.60

Payable to the Secretary:

E. M. Upward, 58, Denison House, 296, Vauxhall Bridge Rd., London S. W. 1

- Send for fully descriptive folder -



invites you to join The Club's twice yearly JOURNALS—illustrated in colour and black and white—are described in the most flattering terms by rock and alpine gardening authorities in many lands outside Scotland. The yearly SEED DISTRIBUTION contains much seed

unobtainable elsewhere.

The full annual subscription is £1 (\$3). Further Information from

MRS. BOYD-HARVEY, Boonslie, Dirleton, East Lothian, Scotland (Honorary Secretary) Subscriptions payable to R. H. D. ORR, C.A., 30 Alva Street, Edinburgh, 2 (Subscription Secretary)

THE ARBORETUM BULLETIN

A Journal of Horticultural Information Distributed quarterly to members of the University of Washington Arboretum Foundation. For Information - write . . .

ARBORETUM FOUNDATION, SEATTLE 5, WASHINGTON

AMERICAN PRIMROSE SOCIETY

offers

Quarterly publications beautifully illustrated, an international seed exchange of around 600 varieties of rock and alpine plants including 100 different primulas, and a culture chart to assist in the growing of species primula.

U. S. A. \$3.50 per year.

Mrs. Lawrence G. Tait, Trea. 14015 84th Ave. N. E. Bothell, Wash,

THE AMERICAN PENSTEMON SOCIETY

Cordially invites you to join its growing list of enthusiastic members. If you are interested in Penstemons, you will be interested in the activities of the society.

Write to the Secretary,

MRS. E. A. BOYRIE

614 N.W. Macleay, Portland 10, Oregon for Full Particulars

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 & 6
VOLUME	2	Individual	number 5
VOLUME	7	Individual	number 4
VOLUME	8	Individual	numbers, 3, 4 & 5
VOLUME	9	Individual	numbers 1, 3, 5 & 6
VOLUME	10	Individual	numbers 2, 3 & 4
VOLUME	11	Individual	numbers 1, 2, 3 & 4
VOLUME	12	Individual	numbers 1, 2, 3 & 4
VOLUME	13	Individual	numbers 3 & 4
VOLUME	14	Individual	numbers 2, 3 & 4
VOLUME	15	Individual	numbers 3 & 4
VOLUME	18	Individual	numbers 2 & 4
VOLUME	19	Individual	number 4
VOLUME	20	Individual	number 2
VOLUME	21	Individual	number 3
VOLUME	22	Individual	number 3
VOLUME	23	Individual	numbers 1, 2 & 4
VOLUME	24	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

Box 26

Closter, N. J. 07624