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AMERICAN
ROCK GARDEN SOCIETY
BULLETIN

Albert M. Sutton, Editor

VOL. 29 OCTOBER, 1971 No. 4

YAKU ISLAND: THE ENVIRONMENT AND A FEW OF THE PLANTS*

FRANK DOLESHY, *Seattle, Wash.*

Because of the well-known plants introduced from Yakushima, at the south tip of Japan, rock gardeners have reason to inquire about the climate and other environmental aspects of this island. "35 days of rain per month," it is said, but Mrs. Doleshy and I tended to discount these tales after a brief visit in good weather during the fall of 1965. In the spring of 1970, however, we camped on the high mountain ridge of the island for ten days, and our impressions have changed; we are more inclined to agree with the dean of Yakushima mountain climbers, who recommends two suits of the highest quality rain gear.

Plant growers naturally try to equate the Yaku environment with something familiar in their own country, but nothing very much like it can be found in America. Many ARGS members are aware that the climate of Japan resembles that of the U. S. Atlantic seaboard. But the interesting Yaku plants are largely from the mountains, and, to match the climate there, it would be necessary to move a mountain not quite 6500 feet tall (e.g., Mt. Washington, from New Hampshire's White Mountains, or Snoqualmie Mtn., from Washington's Cascade Mountains) to a point in the Gulf Stream off Jacksonville, Florida, and then adjust the tract of the main hurricanes, or typhoons, to hit the new island squarely.

From the point of view of a plant, climate is a combination of elements: rainfall, temperature, wind, and such subtle things as the relationship between day length and seasonal temperature changes. Lack of rainfall is hardly a major factor on Yakushima, yet the drainage of the thin, granite-derived mountain soil is so rapid that there can be only a few areas of excessive soil moisture, and we have seen evidence of temporary shortage.

Some idea of temperature range can perhaps be obtained from the following fragments of data:

Coastal shelf—Sugar cane and citrus country; even contains a true mangrove swamp.

Below 1000 feet—Subtropical vegetation includes a rich assortment of ferns.

Approximately 1000-1400 feet—Thickets of tree ferns, 10-20 feet tall;

also the zone where several cool-temperature plants appear to reach their lower limit.

Village of Kosugi-dani, 2035 feet—Can here find many of the trees and large shrubs which grow on the highest ridges.

Hana-no-ego ("Flowering Swamp"), 5250 feet—3/16″ of ice on ponds at 8:00 AM on a clear morning, October 19th.

1970 camp site, 5500 feet—During the May 20-30 interval, three very wet days, three fair, and five mixed, with some rain. But 12 rainless days were reported on almost the same dates in 1969. Temperatures during storms (with the thermometer bulb wet or dry) from 56 to 62 degrees F. During fair weather, morning temperatures usually in the high 40's, rising into the 60's by late afternoon.

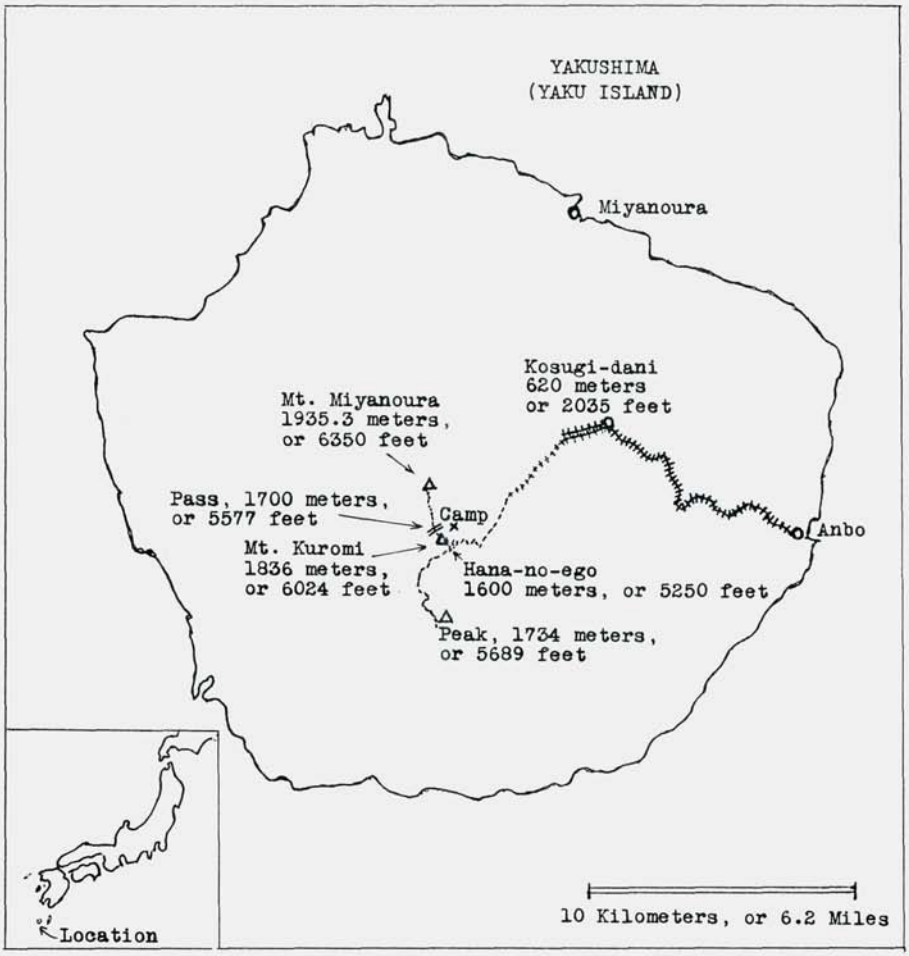
Ridges above camp, 5800-6000 feet—Winter snow said to accumulate to depths of 7-10 feet and remain on the ground from November to March.

These observations convey the impression of ocean-moderated temperatures, as would be expected, and the vertical ranges of some plants are very wide. For example, the well-known *Rhododendron metternichii* var. *yakushimanum* is found very close to the 6350 foot summit of Mt. Miyanoura, the highest peak, and it is said to occur as low as 1970 feet. Also, in cultivation, it not only survives among the sugar fields on the coast of Yakushima, but also does well in the eastern U. S., exposed to winter temperatures lower than any to be expected on Yakushima. Thus the natural limits of distribution, for this plant and doubtless for many of the others, seem little affected by temperatures.

Turning from rainfall and temperature to the wind, this seems to be the environmental factor which sets the limits of the high-elevation plant communities. Without strong winds, the mountains would probably be tree-covered practically to the summits, with much-reduced opportunities for Rhododendron, Pieris and other shrubs. Yet, on exposed ridges, these plants are close to their limits of tolerance and either very compact or, in some cases (probably where previous shelter was lost), have long, stringy, half-dead stems with the last one or two leaves apparently about to blow off. In extreme sites, as at the top of the pass just above our camp, near-level areas are kept bare by the frequent pounding of the wind and wind-borne water, and neither soil nor lichens are seen on the granite. However, a slight dip, not deep enough to shelter a standing person, will break the airflow enough to make conditions tolerable for the plants, and Rhododendron, Pieris, Cornus, dwarf Alnus, Buxus, Juniperus, etc. will be as lush as if cultivated—but not very tall.

At highest elevations, especially near the summit of Miyanoura, the dwarf alpine *Sasa* (Bamboo) probably helps set the distribution limits by vigorously occupying areas of deeper soil, as found on a rounded summit. But this plant, also, seems unable to survive in the real wind tunnels and gives way to a low turf.

Our 1970 visit was timed to see the blooming of the *Rhododendron metternichii* var. *yakushimanum,* certainly one of the grand sights of the world (and perhaps a little more enjoyable if one ignores the long Latin name and uses an abbreviated Japanese name, Yaku-shakunage, as we always do). The "normal" blooming date is said to be May 25th, but, when we arrived, the island residents warned that the cold winter had held things back,



and that we might not see flowers. However, the buds broke quickly, and May 26th could probably be called the top day for 1970, indicating that there is substantial response to day length. Yet this cannot be the sole factor, because the May 25th day length on Yakushima is about 13 hours 53 minutes, and this length is attained in Seattle about April 19th and in Portland, Oregon about April 22nd, with no flowers yet open on cultivated specimens of this plant.

Our choice of dates was fortunate, since we arrived while still able to see good flowers on a high-elevation Azalea of the 3-leaved or "Reticulatum" tribe. This has proved remarkably difficult to identify but is surely either *Rhododendron reticulatum* or *R. nudipes,* probably the latter. Plants of great age are small trees of attractive shape up to 12 feet tall, with trunks 7 inches or more in diameter. A sturdy, upright habit is seen even when they are growing on the exposed slope of a main peak, where the Juniper and the evergreen Rhododendrons are reduced to knee-high ground cover. The flowers vary from lilac to vivid purple, but it is actually the leaves which are most

striking; on some specimens the plum color of Copper Beech leaves, with the added feature of golden hairs.

Another Azalea we hardly hoped to see in bloom was *Rhododendron tashiroi.* En route to Yakushima, when we called on Mr. Kunishige at the Kurume Horticultural Research Station, he showed us a plant of this species with one flower, growing under careful shelter and security. The beautiful, smooth-edged flower could perhaps be described as an ivory pink, and we were delighted to catch up with the flowering season while hiking up the trail to our Yakushima camp. Large plants, to 15 feet tall, were covered with the graceful flowers. These, we think, tend to be darker pink at lower elevations, and some of those near camp (blooming just as we left on May 30th) were nearly white, with delicate pink and cream shadings.

While at Kosugi-dani, on our way up, we walked along a river gorge before dinner and saw a wonderful natural flower garden of still another Azalea, the rich-colored Yaku variant of *Rhododendron kaempferi* (syn., *R. yakuinsulare*). Within this gorge, the plant grows from the high mountains nearly to the sea. Mostly it is found among rocks below flood level, and we only saw one wild plant actually growing above the rim of the gorge.

Outside the Azalea group, *Rhododendron keiskei* is found rather commonly on Yakushima, and the plants on the Mt. Kuromi summit are considered the probable source of a strain which remains compact in cultivation. On these the yellow flowers were at their best, and beautiful indeed, but this stand had perhaps suffered from over collection. Therefore we searched for the same strain on a peak about three kilometers to the south and were happy to find plants which seemed identical, growing in the cracks of a near-vertical granite wall, about 12 feet up from the base (which required improvising a ladder from pieces of Juniper wood which had dropped from the top). The existence of a dwarf cultivar of this species in Japan seems well established, but the only so-called dwarf Yaku form we have acquired in the U. S. is less compact than some of our own collections of this species from other parts of Japan.

Turning from Rhododendrons, a number of the other plants are familiar enough in cultivation, but hardly with the same appearance as on Yakushima. *Trochodendron aralioides* is often grown as a shrub in America. On Yakushima it seems to be in an optimum habitat at 5000-5500 foot elevations and grows as a branched or multi-trunked tree, with trunks three feet in diameter. While we were there, the great, flattened canopies of these trees were in full bloom, with clusters of the yellow-green flowers at every terminal.

Cornus kousa was just opening its flowers, which would probably bleach out from green to white. To us, the surprise was the range of vivid spring foliage color, from bronze to purple.

A shrub with attractive foliage, which we had seen elsewhere, was *Illicium religiosum,* in the Magnoliaceae. One of the popular flower books portrays it with pale, inconsequential flowers, and we expected no better. Here, though, at elevations from about 4500 to 5500 feet, the flowers were of clear, attractive pinks, yellows, and apricots, and somewhat larger than described.

A shrub not previously familiar to us was *Symplocos myrtacea,* with narrow, toothed leaves. This was covered with small buds when we set up camp

and a week later, these all burst into clusters of white flowers which perfumed the mountainside.

One final shrub, among many others, was a *Pieris japonica* with rich pink flowers, seen in haste on our trip to find a new stand of the mountain type *Rhododendron keiskei,* and requiring further attention on a future trip.

Dropping to herbaceous plants, we saw the little white endemic violet, of which a mature plant covers a 25¢ piece, and the even smaller gentian. However, for us, the most attractive of all was *Shortia soldanelloides* var. *minima.* This grew sparingly near the summit of Miyanoura but formed thick beds in full bloom on the summit block of Kuromi.

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(Also, my own more detailed discussion of *Rhododendron metternichii* var. *yakushimanum* is being published in the *Amer. Rhododendron Society Bulletin,* 25: no. 2. 1971).

*Adapted, in part, from an account prepared for Amer. Rhododendron Society Bulletin, under the author's reservation of all republication rights.

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SUMMER SEED EXCHANGE, 1971—A look at this list as prepared by our new director, Mrs. Armen H. Gevjan (Roxie) assures us that this vital service of the ARGS is in good and capable hands. Of interest, over and above the listing itself, which is impressive, is the fact that over 50% of the donors were living outside the U.S.A. (19 out of 37) and that ten of these lived in the Southern Hemisphere. Another item of interest is the Director's comment, "Seed donors very efficiently cleaned, packeted and labeled their contributions. This greatly helped to expedite our function of distribution."

* * * * *

BEING LOST IN LONDON WAS NO PROBLEM—Actually Eileen and I were not lost, we just couldn't find a bus terminal where we were supposed to be at the ungodly hour of 6:45 the next morning. We had looked for an hour amid the tangled maze of streets and were about to give up. A pleasant gentleman with a cane volunteered his services before we were aware of his presence. He took charge of our search and after much marching and countermarching along the busy streets he pointed out the station we wanted. It had moved to this new location but a few days before. This man had cheerfully spent his time and energy to help strangers in his city. Do you wonder that we have a warm spot in our hearts for the English people?

REQUESTS BY MEMBERS

Will the members who are able to fulfill any of the requests below please contact directly the person making the request!

Wanted—plants, seeds, and books—*Anemone ranunculoides* fl. pl. (bright yellow), *Anemonella thalictroides rosea* fl. pl., *Conradina verticillata*—plants please, and seeds or plants of *Trillium hibbersonii* (dwarf pink), *Asperula suberosa,* and *Pyxidanthera.* These are wanted by Mrs. Herbert Sheppard, Burlington Road, Harwinton, Conn. 06790. Also she wants many rock gardening books as follows:

Alpine Gardening—Roy Elliott—1963—Vista Books—London.

Campanulas—H. C. Crook—1951—C. Scribner & Sons—New York.

The Present Day Rock Garden—Sampson Clay—1937—Nelson—New York.

American Alpines in the Garden—1931—Anderson McCully.

North American Rock Plants—1939—W. H. A. Preece.

The Garden of Bellflowers—L. H. Bailey—1953—MacMillan—New York.

Gray's Manual of Botany—M. L. Ferrald—1950—American Book Co. New York.

Rock Gardens and Their Plants—William Schacht—1963.

A Guide to Rock Garden Plants—Anna Griffith—1965—Dutton—New York.

Bailey's *Manual of Cultivated Plants*—Revised 1949—MacMillan.

Cyclopedia of Horticulture—Bailey—1937—MacMillan.

Alpines (Rock Plants for Connoisseurs)—(If there is such a book).

Collector's Alpines—Royton Heath—1964—Collingridge—London.

The English Rock Garden—Reginald Farrer—1918—Nelson—New York.

Should you have rock garden and alpine plant books for sale or can give information as to their availability please inform Mrs. Sheppard.

Mr. Hans W. Asmus, W. 8523 Holly Rd., Mequon, Wis. 53092 has been unable to buy *Propagation of Alpines* by Lawrence D. Hills. Please inform him of a source should you know one.

Information as to a source of supply, not too far from his home city, is wanted by Philip S. Cheney, 623 N. E. Brazee, Portland, Oregon 97212, for oak-leaf compost, clean quality—about 3 cu. feet; pine needle compost, same quality and amount as above; crude chalk for experimental purposes as it comes from the ground with all trace elements intact, perhaps 5 to 10 lbs.

Hepaticas, unusual in color, size, form, and foliage are what interests Clarence Van Houten. He will purchase or swap. Address him at 1043 Fairport Road, Fairport, N. Y. 14450.

Anchusa caespitosa seed is wanted by Mrs. Martha Mears, 6215 Pendleton Ave., Anderson, Ind. 46011. She will trade for hand-pollinated Aurelian lily seed.

Mr. Milton S. Mulloy, 90 Pierpont Road, Waterbury, Conn. 06705 wants *fresh* seed of any of the Pulsatillas in small quantities if they are properly identified. By the time this request reaches you, this year's seed may have passed the *fresh* stage. If so, please make a note to contact Mr. Mulloy when you have harvested your 1972 crop. Perhaps then he may get them *fresh*. He is willing to pay.

Please send your requests for seed, plants, books, slides and information to Mrs. Sallie D. Allen, 18540 26th Ave. N.E., Seattle, Wash. 98155. For inclusion in a specific issue of the *Bulletin*, requests must be received by the first of the month, two months prior to publication date. It is not possible to acknowledge receipt of requests. We would like to hear the results, if any, from those who have utilized the "Requests by Members" column in the past.

ARGS AWARD OF MERIT 1971

JOHN P. OSBORNE

The rock garden at 29 Dogwood Lane in Westport, Connecticut has deservedly become a mecca of astute and sophisticated horticulturists. There, under the warm hospitality of John and Fanny Osborne, the visitor is immediately struck by the elegant design and composition of this small suburban garden. It proclaims immediately that its creator, John P. Osborne, has the eye of an artist.

A walk along the undulating paths that wind up and over the cliff-like spine of the garden, reveals a succession of special areas, each with its own collection of treasures. Here a scree with a magnificent assortment of Lewisias, and across the path a carefully prepared bed ablaze with *Gentiana acaulis,* and a few feet beyond, a miniature pine barren where pyxie and *Gentiana porphyrio* flourish. Yet, all these separate and scrupulously prepared pockets are subtly blended and woven together by the meticulous placement of individual accents and groups of appropriate shrubs and dwarf trees. The indigenous oaks and dogwoods have been intelligently thinned and pruned high to create another superimposed pattern of light and shadow over the tapestry of plants selected and arranged with consummate discrimination.

And all this has been accomplished by a man who, before his retirement from business in 1959, had little knowledge of horticulture and none of alpine plants. Characteristic of the passion and thoroughness with which John has tackled every phase of his varied experience, he has made himself an expert in the field, by reading and studied experiment combined with an innate love of nature. Even severe physical handicap has not been able to diminish his indomitable drive.

A high measure of success has marked John Osborne's every endeavor. For thirty-five years he was associated with a large paper company and moved through the ranks to a lofty executive position. He played a prominent and prophetic role in the development of faster growing and disease resistant strains of long leaf pine trees on the company's extensive pulp timber lands in North Carolina, Georgia, and Texas.

John Osborne in his garden

Gordon Pollock

His business activities required that he spend much time in the city, but his restless spirit, his love of nature, and his unquenchable energy led to frequent hunting and fishing excursions. For thirty years he never missed the opening of the quail season in Florida, where he was thoroughly at home and relaxed in the everglades and pine woods of the Punta Gorda area. He pursued with similar zeal tarpon, sailfish, and marlin in the waters of the Bahamas and Gulf of Mexico.

During the same period, John owned a 200 acre farm at Readington, N. J., where he grew alfalfa and red-top clover hay for sale to dairy farmers. To these agricultural pursuits he devoted the same expert thoroughness that he was later to give to rock gardening. On the New Jersey farm, moreover, in addition to the agricultural crops, he developed a famous kennel of Doberman Pinscher dogs. The many ribbons and trophies which can be seen at 29 Dogwood Lane are the proof of his skill as a breeder of show animals.

He has said, "I bred Dobermans for the show ring because that was the means by which to measure success, but my main interest was to produce a superior animal. All breeding programs, while based on certain scientific facts, are in reality an art. The Doberman of the 1930's was a coarse dog. After twelve years of selective inbreeding I was able consistently to produce larger, more powerful animals with elegance and grace. There was a certain quality of temperament that still needed to be established and for that reason I regret that the program could not have been carried on."

In these words John conveys much of the philosophy which has motivated his many enterprises and has guided the development of his garden. This philosophy also permeates his selection of only the best to grace his garden.

John has served for six years as a Director of the American Rock Garden Society and was for one term Chairman of the North Atlantic Region.

In recognition of his service to the Society by his wise and friendly counsel, and most especially for the inspiration he has brought to fellow rock gardeners through the beauty of his own garden and the skill with which he grows choice and difficult plants, this special Award of the American Rock Garden Society is with affection and respect presented to John P. Osborne.

H. Lincoln Foster, *Falls Village, Conn.*

JOHN'S ACCEPTANCE LETTER

I regret very much that I am not able to be here this evening to accept the Award you have so kindly given me, but my doctor, *who is not too bright,* has advised me that the excitement of meeting so many old friends and receiving this award might do me in.

This is nonsense, but I felt that I had better follow his instruction rather than take the chance that he might walk out one me, for doctors, however silly, who will make house calls these days, are hard to come by.

As a matter of fact, receiving this award might make me a bit nervous for I have the uneasy feeling that sometimes it is felt that these awards had better be given before it is too late. Well, I may have to take it a bit easy, but I intend to be around gardening for some time to come.

As I look back on an active and reasonably long life, I seem to have pursued several careers, but the last one, rock gardening, which has been more like a passion than a career, I think has been the most satisfying and rewarding one.

Whatever I have accomplished could certainly not have been done without the help of many good friends and for this I will always be grateful. It has brought a sense of serenity to my life which would otherwise have been lacking.

My years of activity in the affairs of the American Rock Garden Society have been pleasant ones which I hope may continue for many more years, and I accept this award with deep appreciation. THANK YOU—THANK YOU VERY MUCH.

* * * * *

COLUMBINES AGAIN—From Massillon, Ohio, Paul H. Boswell writes, "Everything in the January (1971) Bulletin was enjoyable reading. I found Trevor Cole's research on columbines to be especially valuable, though I have had better luck with some species than he reported. I am fond of this genus and usually try a couple of new species each season. I got *Aquilegia brevistyla* and *A. jonesii* in the current exchange. *A. bertolonii* flowered in the garden last year and proved to be a fine dwarf. I also had *A. discolor*—tiny but not impressive, *A. glandulosa* and *A. alpina* which had come mixed with the Japanese species. Somehow, at one time, I got seeds of *A. canadensis nana,* though I didn't order them, and that has been one of the luckiest "imposters" ever. Even its seedlings come true, though there is every opportunity for it to cross with the typical plant and with half a dozen other species and hybrids nearby. I have grown several of the western U.S. species but they never survive more than a season or two. If I get germination on *A. jonesii* it will go in the scree and every effort will be made to keep it happy."

SEED EXCHANGE, 1970-1971

By the RETIRING DIRECTOR
HENRY R. FULLER, *Easton, Conn.*

The last order, from a lady member in Scotland, was filled April 23, some thousands of packets of surplus seed have been shipped to the various regions and local groups of the Society, to the Plant Research Institute in Ottawa, to one ambitious school, to the North American Lily Society, and to the Canterbury Alpine Society in New Zealand. Fresh seed arriving from New Zealand and Chile are being sent on to Roxie Gevjan of the Delaware Valley Region. So the first experiment of having the Seed Exchange administered for a two-year period by a local group, instead of by one man as long as he could stand it, has come to a close. This then seems the time to take a look and make an assessment. Has the new system been a success?

Two years ago, when the new plan was announced, Katherine Dryden of the Alpine Garden Society wrote, in a friendly and very helpful letter, something like this: "The two-year term won't work; it takes that long to learn how to do the job." She had good reason for her opinion; in many ways I feel that our group has just finished its apprenticeship. Nevertheless, the system has worked. In spite of some boo-boos and lapses (about which people have been very kind) the seeds have been assembled and sent out, and we are prepared to hand the job on, confident that we can hand on much of our experience with it and that no future group will have to start from scratch. The two-year term is long enough for any group, but the Seed Exchange as an institution can continue to mature and improve.

There will be waste motion (looking for a new printer every two years, for example) but this will be more than counterbalanced by fresh infusions of enthusiasm, energy, and new thinking every two years. Furthermore, it will be easier for the Exchange workers to adjust to severe interferences with their own living and gardening when they know that the interferences will come to an end at a definite time. (I have enjoyed the work of the Seed Exchange, but I also greet with pleasure the prospect of devoting time to my own neglected garden; and sowing some seed).

What did our local group get out of the effort? Many good things, which I hope all future groups will enjoy. A real bonus was a great new sense of community and friendship from working together—on a long, hard, continuous job—which added a new dimension to our lives. It must have been like this in past times when neighbors came together in barn-raisings and quilting-bees as a natural part of their lives. Another bonus was a lot of plain fun. Many times we got together for supper and a hilarious evening (as many as thirty, but everybody brought something). We did not work at these gatherings, but undoubtedly the work of the Seed Exchange was advanced by them in the weeks and months that followed. I do recommend to future groups that they plan to have fun together. This won't interfere with the work; it will help.

Over the years, the Seed Exchange should give our worldwide membership this same bonus—this same joy in a feeling of community and shared effort, even though we cannot gather together in one place. Anyone who has harvested, cleaned, correctly identified, and sent off to the Seed Exchange just one

kind of seed knows that this entails thought, care, and work. Consider the magnitude of the contributions of donors like Lawrence Crocker, Dr. Kurt Grimlund, or W. A. Bruce Robertson, each of whom often sends over 200 varieties of carefully prepared seed, and the many others on our magnificent list of magnificent donors. Just read that list, thoughtfully and gratefully. With our thanks, let us hope that the hard work of our donors was mixed with the fun and the sense of being part of a friendly community effort that we on the local committee enjoyed. (A note to a donor whose seed was especially valued by you would undoubtedly be appreciated).

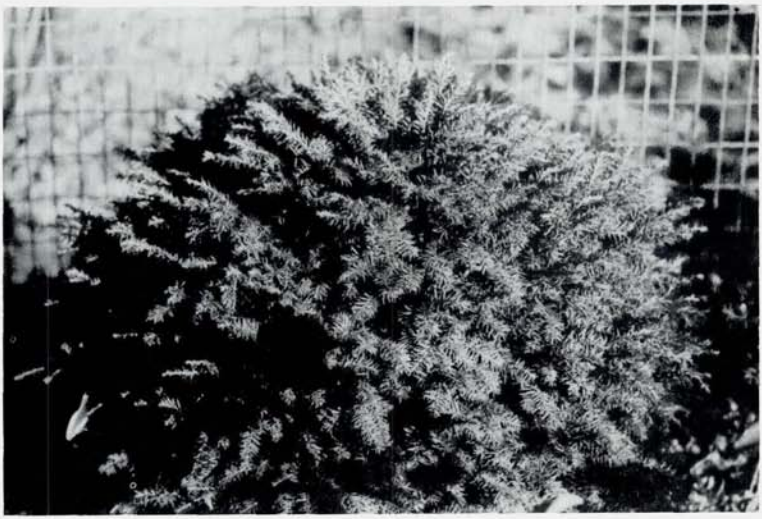
But the greatest pleasure comes from visiting a well-loved garden (like that of Fran Lubera which we visited yesterday) and seeing good and difficult and hard-to-get plants grown from Seed Exchange seed; or from letters that come from distant places telling what the Seed Exchange has meant to people we will never see. It is hard to say whether we are more pleased by the flattery of receiving seed requests from world famous gardens like the Belvedere in Vienna and the Royal Botanic Garden in Edinburgh, or by the solid satisfaction of sending seed to more isolated gardeners who have few other sources for new and unusual seed.

THE MARCEL LE PINIEC AWARD 1971

To Hazel and Don Smith

Hazel and Don Smith have been operating their Watnong Nursery in Morris Plains, New Jersey, for the past ten years. Plans for the nursery began in 1956 and the ground work was complete by the time Don retired from a long and distinguished career in the field of public education in 1961.

Don and Hazel Smith of the Watnong Nursery



Tsuga canadensis 'Watnong Star'

Stock plants for the nursery were carefully selected from the lists of specialist nurseries, from various arboretums, private gardens and, in a few cases, from the wild. Dwarf conifers, choice ground covers, dwarf rhododendrons and conifers of moderate growth predominated. Larger plants were not entirely ruled out and the big tree, *Sequoiadendron giganteum,* has proved to be very successful.

Don and Hazel are always on the lookout for interesting new material. The best ones are added to their list each year; a list which has passed the eight hundred mark this spring. Using this method they eventually found fifty-eight forms of Hinoki cypress, *Chamaecyparis obtusa.* Plants from this collection and many others have been sent to a number of arboretums and experimental stations in this country and abroad. This is a part of a plant exchange through which they hope to make unusual plants better known and available to the people who enjoy them.

During a visit to the Arnold Arboretum in 1959, Alfred Fordham gave the Smiths their first plant of the box huckleberry, *Gaylussacia brachycera.* At that time it was little known and was thought by some to be near extinction in the wild. With the help of Joseph Gable, who directed them to a site in Pennsylvania, and the invaluable notes and advice freely given by Dr. Edgar T. Wherry, Don and Hazel were able to track down forty-two sites in seven states. The preservation of collected plant material from thirty-six sites was of prime importance since large colonies had already been destroyed. Plants were given to arboretums, members of the ARGS, and to interested gardeners. Articles about *Gaylussacia brachycera* written by the Smiths were published in the *American Horticultural Magazine,* Spring 1969, and in *Horticulture,* November 1970. A third article is due to appear in the spring issue of *Castanea.*

Don and Hazel have recently introduced four interesting new plants, a

dwarf hemlock, *Tsuga canadensis* 'Watnong Star', a dwarf fir, *Abies concolor* 'Gables Weeping', a prostrate juniper, *Juniperus horizontalis* 'Watnong', and a very beautiful daphne, a sport of *Daphne burkwoodii* named 'Carol Mackie'.

A study of *Leiophyllum buxifolium* from the New Jersey Pine Barrens, along with a geographical form found on Grandfather Mt., North Carolina, has been undertaken for several years. Plants were collected from both areas with permission and are growing well at Watnong. It is hoped that a reliable method of rooting cuttings will be found.

Hazel and Don Smith have brought much that is new and unusual to the attention of rock gardeners. They have consistently presented this material in a quiet, unhurried, unassuming manner that is both relaxing and stimulating. The Marcel Le Piniec Award is an excellent way to say thank you from all of the members of the American Rock Garden Society.

Bryan Vernimb, *Glen Rock, New Jersey*

PLANTS COMMEMORATING PERSONS. I. *CONRADINA**

J. ANGUS PAXTON HEEPS, *Philadelphia, Pa.*

The introduction of wild plants into cultivation has always been close to the hearts of gardeners the world over. During the past century thousands of species of distant origin have been collected by both professional plant hunters and enthusiastic, highly skilled amateurs. Many of these were missionaries, particularly in China whence come so many of our most handsome and popular garden plants. In this series, based on plants and the men whose names they honor, it seems fitting that the very first should be

It is the author's conviction that *Conradina verticillata* Jennison possesses many of the characters that are considered essential in a good garden plant. Its garden value has not yet been fully explored, and a number of evaluations of its responses to cultivation have yet to be made; nevertheless, its beauty is such that learning of its traits under cultivation should be not only a new introduction to gardens but a native American plant—and one whose name commemorates a Philadelphia botanist—as well. pleasureful.

The Genus *Conradina* was first described by Asa Gray in 1870. It contains four species: *C. canescens* (T. & G.) A. Gray, *C. grandiflora* Small, *C. puberula* Small, and *C. verticillata* Jennison. While the first three species are found over a fairly wide area of the Gulf Coast regions of Florida and Alabama, the endemic area of *C. verticillata* appears to be restricted to the Cumberland plateau of Tennessee and Kentucky. In 1930, Professor H. M. Jennison found "relic colonies in sandy banks along Clear Fork River (in) Fentress and Morgan counties (Tennessee) about 1 mile North of Rugby." However, considerable exploring in the same area and in similar habitats "failed to turn up other stations where this endemic grows." Although known for many years to the local inhabitants of that area as "Ground Rosemary" (It bears a striking resemblance to *Rosmarinus* of Europe, though it is dwarfed by comparison) the plant did not receive a scientific name in botanical literature until Professor Jennison published a

formal description in a paper to the *Journal of the Elisha Mitchell Science Society* in 1933.

E. Lucy Braun mentions having found this plant a few years later (1935) on the Kentucky side of the Cumberland plateau and also notes the probability of its extinction in that area due to the construction of the Wolf Creek Dam. More recently, in a letter to the American Rock Garden Society, published April, 1969, Mr. Leonard J. Uttal of Blacksburg, Virginia states that he hopes to find *C. verticillata* on the slope of the Cumberland plateau in the extreme southwest corner of Virginia.

Although mentioned in the second edition of Rehder's *Manual of Cultivated Trees and Shrubs,* there is no record of its cultivation at the Arnold Arboretum. It is possible that Professor Rehder was aware of plants collected by Mrs. J. Norman Henry in the late 1930's and cultivated in her garden at Gladwyne, Pa. It is fortunate indeed that such a collection was made, for since that time the T.V.A. lakes have, in all probability, taken their toll of a number of the remaining colonies. From the stock at the Henry Foundation for Botanical Research, cuttings were obtained for the Morris Arboretum by Dr. E. T. Wherry and Mr. John Dourley in 1964. The survival of this species, in cultivation at least, is assured for the time being. Dr. Wherry brought attention to this plant in an article published by the American Rock Garden Society in their bulletin for January, 1969. It is hoped that this *Morris Arboretum Bulletin* presentation will stimulate more interest in this fine plant.

The following is Professor Jennison's original description of *Conradina verticillata*: An undershrub with diffuse branches, the lowermost rooting freely; stems cylindrical with brown bark that shreds and sloughs off as the branches enlarge; twigs 4-sided, rufous, at first puberulent; leaves linear, opposite, appearing fascicled, average length 17.0 mm, average width 1.2 mm *(exsiccatae),* margin revolute; dorsal surface glabrate, green, glandular-pitted, ventral surface hoary, midrib prominent; petiole inconspicuous, 1 mm or less in length; flowers 2-6 on short pedicels in loose verticils, or terminal; calyx 6-7 mm long, hirsute, strongly 13-nerved, the upper lip three-lobed, the lower two-toothed and slightly longer than the upper; corolla lavender, lower lip three-lobed and strongly spotted within, upper lip arched, retuse; stamens in two pairs, opposite, included within the upper lip, filaments curved, anthers versatile, parallel; style forked, slightly exserted; nutlets 4, sphaeroidal, smooth, brown, about 1 mm in diameter. Blooms in May.

There is no mention in this technical description of the plant's aromatic fragrance of the leaves and stems, which appears to be highly distasteful to rabbits and has provided for another of its common names, "Upland Rabbit-Bane." This characteristic is also omitted in descriptions found in other publications.

In the Philadelphia area, the flowering period can last up to five weeks in cool seasons, commencing in late May or early June. During the winter, the leaves turn a discolored brown-gray but are persistent; it cannot therefore be described as a truly deciduous species despite its somewhat bare appearance during the winter months.

Propagation of *Conradina verticillata* is easily effected by softwood cuttings 2-3 inches in length taken during July. There appears to be small ad-

vantage in the use of either hormones or mist units since a cutting stuck in sand will provide a vigorous plant ready for potting-up in three or four weeks. Plants from the cutting bench should be placed in 3-inch pots and immediately pinched to promote side shoots. Regular pinching back from subsequent side shoots not only produces a fine bushy plant but provides a fresh stock of cuttings for propagation; thus a large stock of plants may be quickly obtained. It is possible to continue propagation of this plant throughout the winter if so desired. This is achieved by bringing stock plants into the greenhouse in late autumn, giving them a light feeding once every two weeks, and supplementary lighting (see under cultivation). Cuttings have been rooted at the Morris Arboretum during every month of the year with a healthy rooting average 98-100 per cent.

If taken from the cutting bench and put into 3-inch peat pots, potting-on should not be necessary if plants are kept in a cool greenhouse until ready for planting out in May. Care should be taken to see that they are not allowed to dry out at any time, and regular feeding with an all-purpose fertilizer must be maintained.

As mentioned earlier, *Conradina verticillata* does tend to layer itself after two or three years; this provides yet another method of propagation. However, unless there are specific reasons for wishing to propagate it by this method, it should not be regarded as an efficient or economic proposition.

The most important requisite for this plant is good drainage. A deep, sandy, well-drained soil, preferably acid, in a sunny open situation is ideal. If planted in full or even partial shade, one must expect some sacrifice of its full flowering potential. It is perhaps best suited to the rock garden, although its use in edging of borders close to the house might be considered. Its entirely prostrate habit has prompted us to consider this plant for use as a ground cover and trials for its use in this category will begin during the spring of 1971. Rooted cuttings have been sent to many other institutions in this country for this purpose as well as to discover its reaction to hot dry climates and severely cold ones. Plants were recently delivered to the Royal Botanic Gardens, Edinburgh and the Royal Horticultural Society's Garden at Wisley; we trust they will respond favorably to the more erratic, though less severe climate of Britain.

Conradina verticillata has survived quite happily in the Philadelphia area proving itself adaptable to our temperature extremes. For the present time we must remain optimistic about its survival in other locations.

Since this plant flowers on its new growth, pinching shoots to promote a more bushy plant should be delayed until after flowering in June. Fertilizer may be applied during the spring but is not recommended in the fall.

Tests with three batches of plants have shown that this species is quite suitable for forcing. Cuttings taken September 26, 1969, and potted October 20, 1969 were placed under fluorescent lighting November 20, of that year. Fifteen hours of supplementary lighting were given in addition to nine hours normal daylight. First flowers were observed January 20, 1970, after which many more were produced in profusion, lasting three weeks. Had the plants been removed to a cooler greenhouse without supplementary lighting after the first flowers had appeared, we would undoubtedly have en-

joyed a far longer period of flowering. All plants tested were given a weekly feeding with a liquid fertilizer (20:20:20) and kept at a minimum night temperature of 70 degrees F (21.1 degrees C). Control plants were given precisely the same conditions except for fluorescent lighting. Further tests showed that as fluorescent lighting hours were decreased so also did the number of side shoots when compared with forced specimens. Fluorescent lighting might therefore be considered as a useful tool in the production of side shoots for propagation purposes.

It is our hope to interest the nursery trade in this plant by distributing rooted cuttings to those nurserymen who feel it to be worthy of introduction. Potted plants were distributed to Associates of the Morris Arboretum on the Annual Plant Distribution Days in May, 1970.

Solomon White Conrad in whose honor this plant was named, was a descendant of Thones Kunders (later anglicized to Dennis Conrad) who emigrated from Crefeld, Germany in 1683, settling in Germantown. Solomon Conrad was born July 31st, 1779, the son of John Conrad, a blacksmith. Though little is known of his early life, we do know that his business career came to an abrupt close when his partner ruined him financially.

He had early in life acquired a love for the outdoors, to which he now turned in earnest, soon to gain considerable respect for his knowledge both as a botanist and mineralogist. Described by a contemporary as an "amiable man" and an "excellent botanist," Conrad was among the first American botanists to "attempt to group our plants by the natural method." His collection of herbarium specimens is now in the possession of the Philadelphia Academy of Natural Sciences.

At the age of 24 years his first son was born and christened Timothy Abbot Conrad. He too, grew to be a prominent naturalist of his day, not in the field of botany, but in conchology and paleontology, publishing many papers on tertiary and cretaceous geology and paleontology.

Solomon White Conrad was elected as Professor to the Chair of Botany in the University of Pennsylvania March 21st, 1829. An account of his introductory address published in *The Friend,* written by Mr. Robert Vaux, gives us some insight into the character and ability of Conrad. "With a succinct review of the history of botany, he very happily blended some biographical notices of the distinguished men to whom science owed its origin and illustration. He traced with great acuteness and perspicuity, the analogy of vegetable and animal life, admitting the limit of human knowledge. Every view that he furnished of the subject, upon which he is so well qualified to impart instruction, was just and forcible, while the simplicity of his manner and chasteness of his style were, by no means, the least interesting traits of the lecturer."

Absence of biographical data prevents a more detailed description of Conrad as a man and of his contributions to the science of botany. He died October 2nd, 1831 at the age of 52 after occupying the Chair of Botany for only two years.

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PLANTS TO KNOW AND GROW

SPIGELIA MARYLANDICA from Seed

For many years we enjoyed a cheerful clump of *Spigelia marylandica,* but alas it disappeared. (For the most part wild flowers do not just die. They are frequently subtracted from their happy foothold by an overly eager weeder, or are overgrown after being forgotten). At any rate the plant had been missed for some ten years. So I asked a friend, Dr. Ralph Sargent, to please see if he could locate some seed while sojourning in the Carolinas. Several months later he mailed me a packet containing one capsule. The few seeds were planted soon after arrival, sown in light, sandy, peaty soil on September 4th, 1969. I was not able to find any suggestions as to what treatment the seed of this plant required, nor could I find someone who had grown it, so I watered the pot carefully.

It seemed that inasmuch as the seed ripened so early in the year that it would sprout before the arrival of winter, but there was no sign of any life. As the cold air arrived, it seemed advisable to place the pot in a glass-enclosed porch where no excessive cold would envelop it. Here it remained and the soil was kept damp. With the approach of spring there was still no sign of life so I removed the pot to the warmth of the greenhouse. After several weeks, still no sign of life appeared above the surface so, in disgust, I placed the pot outside to get some light frosts. . . . whether or not this worked, I will never know, but on the morning of May 20th, 1970, there were three healthy sets of cotyledons of *Spigelia,* and another subsequently appeared. This was enough to please me as there had been only a few seeds.

[Reginald Farrer, in his *English Rock Garden* describes this plant, under the name of *Spigelia marilandica,* as it grows in English gardens, with these words, ". . . the stem a foot high or so, set in pairs of green oval-pointed leaves, quite like those of the Willow-gentian, and ending in bunches of erect trumpet-shaped flowers, red outside, and yellow within late in the summer."]

Perhaps the above experience will help another interested in this genus,

haphazard as the method has been, but for all that, it may not have been unlike some winters a member of this family might encounter in nature.

Josephine deN. Henry, *Gladwyne, Pa.*

A SNOWDROP FOR MILD CLIMATES

Most Galanthus do not live long in mild climates. They need a cold climate where they can sleep like hibernating bears. Twice in years past I have planted the common snowdrop, *Galanthus nivalis,* in my rock garden. Each time only a few came up and flowered, but none came up the next year. Many of our members, I am sure, would find life difficult without snowdrops. These little plants remind me of Francis Kilvert, the famous diarist, who loved to see them in early spring near Clyro in Wales, where he was curate in the 1870's.

A few years ago, a nursery imported bulbs from Turkey. Among these was *Galanthus cilicicus,* actually a subspecies of *G. nivalis.* I planted the bulbs and every year since, they have flowered. This year they need to be divided. *Galanthus nivalis* ssp. *cilicicus* has gray-green leaves, grows taller than the type and blooms earlier. The plants are native to Turkey and "cilicicus" recalls to mind the Cilician Gates through which St. Paul passed on his missionary journey through Asia Minor. It is unfortunate that this plant is so rare. It should be propagated and distributed commercially in California and other mild climates. It is strange and wonderful that a little plant can bring to one's mind such interesting thoughts.

William Rawson, *Los Gatos, Calif.*

ERODIUM CHAMAEDRYOIDES ROSEUM

It would be difficult to pick a favorite of the plants in a rock garden, but I know one certainly near the top of my list would be *Erodium chamaedryoides roseum.*

A couple of years ago I bought one of these charming plants at one of the Delaware Valley plant sales. Rather new at rock gardening, I admit I had never heard of this plant. I was enticed by the fact that it was blooming and I could see what I was getting. There was a lovely little, deep pink flower standing out above the beautifully scalloped, rather shiny, deep green leaves. The whole plant was about three inches high.

Erodium chamaedryoides roseum

Evelyn Schule

A fellow member told me that it might not be winter hardy in our climate. I am grateful for the advice. I put the little Erodium in a sunny kitchen window where it bloomed during the winter. By spring I found I had two blooming-size plants. These I planted in the rock garden. One promptly died but the other bloomed well. Last fall, I brought this plant in and put it in a large container along with some other plants I felt might not live over outside.

On Christmas day, the first bud opened. Now, two and a half months later, it is still producing flowers, a very bright note on a dreary day. What more could one ask of a little plant?

Evelyn Schule, *Pennsburg, Pa.*

CACTI FROM SEED — A FIRST EXPERIENCE

Seeing the small note in Mr. Claude Barr's Seed List for 1970 prompts these words. My initial experience in growing the cactus, *Opuntia polyacantha* (orange and chartreuse), from seed might prove helpful.

Soon after the seed arrived, they were planted on February 22nd, 1970, in a six inch deep seed box in a very loose soil—soil, peat, and sand of more or less equal parts, plus a bit of sharp gravel and grit. Coarse, sharp "parrot sand" was placed over the seed. Some cellar screening was folded over the top, primarily to exclude birds and my dogs. These flats were placed on top of an eastern-facing stone balustrade lightly shaded in winter by naked lilacs. As spring advanced, I began to look for results. Finally, on April 26th, 1970, a very satisfactory number pushed up their amusing vertical cotyledons.

As the season progressed I moved the flat to a really hot spot, but I never permitted the seedlings to dry out. Soon, the tiny, spiny buttons appeared—a delight to see! The flat has now been returned to last winter's spot to exclude most of the winter sun from the young ones. Today, January 16th, 1971, I went out to find that the chartreuse ones appear less hardy than the orange form (this may in part be due to the excessive humidity last summer). Of the chartreuse ones there are four plants and eight of the orange ones—not many, but at any rate, enough for our purposes. The seeds were not scarified.

Josephine deN. Henry, *Gladwyne, Pa.*

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PAGE DARWIN, OR THE ORIGIN OF DILLIUMS—

Designers all tell us, and they must be right
That arrangement in three's is design at its height,
Or at least, even numbers less pleasing than odd.
To this rule genus *Trillium* has given the nod.

Then why do my Trilliums, if they may choose,
Generate offspring with all parts in two's?
Did they think, "What! More children," and heaving a sigh,
Put into the effort two-thirds of a try?

Dorothy Metheny.

ALPINES OF THE SUSUNAI MOUNTAINS OF SAKHALIN ISLAND

VLADIMIR VASAK, *Pruhonice, Czechoslovakia*
ELENA EGOROVA, *Novoalexandrovsk, Sakhalin, URSS*

The flora of Sakhalin belongs to the type of the Okhotsk flora, bearing numerous elements, with the characteristics of Japanese and Manchurian flora. Many species are common with those of the Aleut Islands and Alaska. Trees and shrubs especially are richly represented. We, as rock gardeners, do not take a great interest in this fact, except for the dwarf shrubs, as for example: *Lonicera chamissoi* Bunge, *Diapensia lapponica* L. var. *obovata* F. Schmidt. *Linnaea borealis* L. etc. Rosaceae, Ranunculaceae, Liliaceae, Orchidaceae and Polypodiaceae are among the families most numerously represented.

The Susunai Mts. are in the southeast part of Sakhalin Island. They are 60 km long and about 20 km broad, and their highest tops are Mt. Pushkin (1047 m) and Mt. Czechov (1045 m). Although they do not rate as high mountains, on the peaks of Sakhalin occur *Lloydia serotina* (L.) Rchb., *Pinus pumila* (Pall.) Rgl., and *Rubus pedatus* Smith and other species characteristic of high elevations.

Even in summer it is relatively cold in the southeast of Sakhalin owing to the cold Okhotsk Sea. On the other hand, the plants are protected in winter by a thick layer of snow averaging 60 to 70 cm and therefore even the relatively frost sensitive plants thrive there, e.g. *Lilium cordatum* (Thunb.) Koidz. var. *glehnii* (F. Schmidt) Woodc. The mean January temperature is only minus 12 degrees C. Such a cold is not in Czechoslovakia, even at Lomnicky Peak in the Tatra Mountains at an altitude of 2632 m. Owing to the sufficient and rather regularly distributed precipitation, even on the lowest slopes of Susunai Mountains grow many mountain plants which are sensitive to drought. Perhaps we have written enough about climatic conditions. Let us now examine and admire the plants, which we have met and collected in 1968. Many species had mature seeds, so their progeny is growing prosperously (or less successfully) in the natural conditions of Czechoslovakia.

We will begin with the Ranunculaceae family, represented by many nice species distributed all over the whole Temperate Zone of the Northern Hemisphere and in the Susunai Mts., too. The smallest of them we met there, with the most beautiful evergreen, trifid leaves, these being its main decoration, was gold-thread, *Coptis trifolia* (L.) Salisb. It was spread on the tussocks on the peat bog edges. With *Coptis quinquefolia,* it was regarded by Farrer (1938) as a most beautiful species of Coptis. On the shady colder habitats with the soil rich in humus, eventually mixed with the peat, it covers the ground very well. Moreover, *Coptis trifolia* is also an excellent medicinal plant. Especially its gold-yellow, thin rootstocks are used. It was named after these rootstocks; Gold Thread and Goldfaden in German. They contain up to 8 per cent of the yellow pigment berberin, toxic alkaloid coptin, resin and other medicinal substances. Dried plants with the rootstocks, being a good tonic and having effects similar to the well-known medicinal plant of North America, *Hydrastis canadensis* (Uphof 1968) are used in medicine against stomach diseases. Hulten (1968) states that *Coptis trifolia* is nearly indis-

Anemone raddeana

Elena Egorova

tinguishable from *Coptis groenlandica* (Oeder) Fern. The seeds of this species are offered by our Seed Exchange. In European gardens Gold Thread has been cultivated since 1823, and in Japan for much longer.

On Sakhalin there grows a rich palette of Monkshood. These are not small plants; on the contrary some species are veritable giants, up to 2.5 m high, but their flowers and leaves are unusually pretty. For this reason even the big *Aconitum fischeri* Rchb. was accredited by Farrer (1938) and Foster (1968) and noted in their books about alpines. After all, it is in the close neighborhood of such big plants that the little plant jewels thrive. This species gives a medicinal drug known under the name of Japanese aconite (Uphof). In European gardens it has been in cultivation since 1823. Up to this time this plant has been recorded on Sakhalin Island only from the northern part, but we found it in a new locality in the south. Another species, *Aconitum miyabei* Nakai, we found also in a new locality. As of now it had been recorded only from the middle zone of the island (Voroshilov (1966). Two other species, *Aconitum neo-sachalinense* Levl. and *A. sachalinense* F. Schm. grew regularly in their localities. Three species of Sakhalin, *A. arcuatum, A. karafutense,* and *A. umbrosum* we did not meet at all. Ohwi (1965) describes as a Sakhalin species only *A. gigas* Levl. et Van't, and *A. sachalinense.* The lovers of Monkshood would certainly be happy on Sakhalin, as the Monkshood are widespread there.

But let us go back to the smaller plants, as e.g. to the Globe-flower, *Trollius japonicus* Miq. Only twice did we have a chance to collect it. It was in a subalpine zone, but to our regret there were no seeds left. Takeda (1937) chose this plant to be among his 100 Japanese alpines as suitable for pot

culture. The conditions for its cultivation in Tokyo are rather difficult as it is too hot there. The plant prefers the mountains. After June it must be moved to the half shade. In the forest clearings at the end of August in the neighborhood of Aconitum, just about through blooming, we met the tall but uncommonly lovely Bug-bane, *Cimicifuga simplex* Wormsk, which was just fully in its finest blossom. For garden culture it is valuable just for its late flowering which extends for at least 40 days. This and the late season flowering more than compensate for its heights of 1 m. If it is placed in large quantities in a suitable place in the garden, its flowering stand affords a delight to the onlooker, not only for them but for the bees. It offers to them a lot of nectar in a season when the bees only glean. The last forest species of the Ranunculaceae family was a well-known poisonous plant—*Actaea erythrocarpa* Fisch.

Another family with many species that we met in the Susunai Mts. was the Liliaceae. As a family they were not as attractive as the Ranunculaceae, as all the species we saw were past their blooming period—no flowers at all. At the foot of the mountains, at only one location, we found *Lilium cordatum* (Thunb.) Koidz. var. *glehnii* (F. Schmidt) Woodc., which belongs to the Cardicerinum subfamily. Its large leaves look more like those of a horse radish than of a lily. It is such a great, tall lily that its capsules reached the height of our eyes. We took some snaps of it, but the pictures were not good, as this lily likes the forest shade while the camera did not like the half-light, and so to our sorrow we do not have good pictures of this interesting, exotic plant. I still remember that the capsules were so green and prepossessing that I could not resist tasting one of them. But I have to confess that I was quite disappointed as it was not palatable at all and I had to sputter a good while after this experiment. It would have been more successful if I had tasted its stalk's decoction, which is used in Japanese medicine for mitigating the temperature in fevers (Sugaware 1937). The aborigines of South Sakhalin, the Kurile Islands and North Japan (Ainus) used *Lilium cordatum* as good medicine for burns. From their edible boiled bulbs the inhabitants produced starch and cooked pancakes from it (Miyabe, Mitake 1907). But all this was in the past. By a lucky chance, while digging the bulbs of this lily, we found the miniature rootstocks of the lovely little spring *Anemone raddeana* Rgl., the large white flowers of which were sometimes greater than the whole miniature plant. To our sorrow, I have to say, its rootstocks which we brought to Pruhonice, froze during the first winter.

On the grassy slopes we also collected a nice and unpretentious amur-lily, *Lilium pennsylvanicum* Ker-Gawl., being better known as *Lilium davuricum* Ker-Gawl. Having nothing in common with Pennsylvania, it is widespread in Daurian zone and its environs. But in spite of this fact, according to nomenclatural rules, its first name is established (Ingram 1969). We do not exaggerate in calling it lovely and beautiful. In Enumeratio Plantarum Hortorum it is named by Link, *Lilium spectabile*. By Ohwi it is named *Lilium maculatum* Thunb. var. *davuricum* (Ker-Gawl) Ohwi. *Lilium maculatum* is the most known in cultivation. Being variable enough in its area, it is widespread in the large areas from Kamchatka, Sakhalin and Japan to Lake Baikal and Mongholia. Being cultivated from the scales of bulbs it blossoms in 2 or 3 years (Eremin 1970). We have a lot of its seedlings, which I could send to prospective customers should they send me their permit for plant import.

The third Lily species, *Lilium medeoloides* A. Gray grew in the moister and more shady places than did *L. pennsylvanicum*. It belongs to the Martagon section. Takeda recommends to manure it well and regularly for the best in blossoming. Our growers' experience with seeds of *L. medeoloides* shows that they are more difficult to germinate than are those of the Amur lily, for they germinate mostly in the second year after their sowing. The bulbs of both these lilies are edible as are those of *L. cordatum* (Kimoto, Sirasaka 1936).

One species of the Liliaceae we caught at its fullest beauty. It was *Clintonia udensis* Trautv. et May. Its brilliant blue berries shone in the forest's half-twilight and together with its bright green, wide leaves, growing in a ground rosette, drew one's attention to its beauty even at a distance. Its four cousins are widespread in North America and a fifth one, *C. alpina* grows in Himalaya. The reason that we saw this plant at its best was that it has two blooming seasons each year. Its flowers are china-white, and its bulbs are of a lovely gentian blue. We collected a lot of its seeds, but they have not yet germinated. Let us hope that they will pleasantly surprise us in 1971, that is the third year after their sowing.

At a height of about 900 m among the last distorted, poor birches, *Betula ermanii* Cham., grew some specimens of the day-lily, *Hemerocallis middendorffii* Trautv. et May. Their beauty was, naturally, already passed, but their seeds were still in their capsules which was fortunate for their introduction. *Hemerocallis middendorffii* is in its East Asia areal (North China, Manchuria, Korea, the Amur Basin, Ussuri, Kurile Islands, Sakhalin and Hokkaido) substantially a variable plant. The plants of Sakhalin are not yet in the culture, but they certainly will be, as their seeds we have already germinated.

We found also two species of Maianthemum, *M. bifolium* (L.) F. W. Schmidt and *M. dilatatum* (Wood.) A. Nels. et Macbr. Most often we met *M. dilatatum,* while *M. bifolium,* common in Europe, we collected but once. One may say that Maianthemum has been until now an underestimated plant. It is suitable for covering the ground under the forest parts of gardens on acid soils. It will even grow on the absolutely bare and infertile soil below the adult spruces. It is fully recommended by Farrer. Its red, sweet berries are the favorite meal of the grouse, the voice of which we heard in the Susunai Mts. from time to time.

In the lower parts of Mt. Czechov we found the fertile plants of Solomon's seal, *Polygonatum odoratum* (Mill) Druce var. *maximowiczii* (F. Schmidt) Koidz., the good looking flowers of which remain fresh in a vase for a long time, as do those of other species of Polygonatum. White mandarin, *Streptopus amplexifolius* (L.) DC. var. *papillatus* Ohwi had its edible red decorative berries at their nicest coloring. Its base-species grows in Czechoslovakia only in the mountains, but in Sakhalin, owing to the damp and colder climate, it is widespread even on the forest borders in the lowlands.

High, nearly under the top of Mt. Czechov, and only in this one spot on Sakhalin, we collected a much smaller Streptopus, *S. streptopoides* (Ledeb) Frye et Rigg. It is only about 20 cm high, and one must admit it would be a suitable plant for an alpine rock garden; especially for the rock gardeners who especially like the Lily family. In crevices on the summit of the rocks grew an Alplily, *Lloydia serotino* (L.) Sweet. High in the mountains of the Northern

Dense growth of *Lycopodium clavatum* var. *nipponicum*
Vladimir Vasak

Hemisphere it is ubiquitous.

To write about Trilliums in American publications seems to me to be "carrying coals to Newcastle." North America is so rich in species of this genus, yet we collected on Mt. Czechov two species that have not spread to the New World at all. These are *Trillium kamtschaticum* Pall. and *T. smallii* Maxim. Both species have edible, juicy, palatable great berries. Trilliums are used by Japanese as medicinal plants in aid of digestion (Sugawara 1939). *Trillium kamtschaticum* has white flowers but they are not as large as the American *T. grandiflorum,* though on some well-developed individuals the flowers will average 10 cm across. *T. smallii* has blossoms of dark purple-rose. On Sakhalin it is scarce except on the south end. There it is widespread as it is in the southwest of Hokkaido. Its related *Trillium apetalon* Makino has a much greater distribution area including, beside the greater part of the Japanese Islands, a part of Korea and the Kurile Islands (Mitchel 1969).

The last plant of the Lily family we saw was herb-Paris, *Paris hexaphylla* Cham., which we met as a fertile plant only once. Do not let its Latin name confuse you as you can find, not only 6 foliate plants, but 4-8 foliate plants growing in the same neighborhood.

Another family of Susunai Mts., which we will now mention in detail, is that of the pteridophytes. Eagle fern, *Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desv.) Underw., and Cinnamon fern, *Osmunda cinnamomea* L. have one little-known common feature; their young sprouts are after a preceding treatment quite edible. This fact was well known on both sides of the Pacific by the Indians and the Japanese (Uphof 1968, Kimoto, Sirasaka

1936). The pteridophytes we met and collected on Mt. Susunai were not quite pygmies but because of the beauty of their habits they belong to those plants which are appreciated by rock gardeners and lovers of beautiful plants all over the world.

The two species of Lady ferns were found, *Athyrium filix-femina* (L.) Roth, and *A. melanolepis* (Franch. et Sav.) Christ. The most numerous of them all was Dryopteris, divided by Ohwi and other botanists into further numerous smaller genera. Among them were some of the larger ferns such as *Dryopteris crassirhizoma* Nakai and *D. braunii* (Spenner) Underw., some medium ones, as for example *D. amurensis* Christ, and finally the smaller ones, tender and frail like the sylvannymphs such as the Oak fern, *Dryopteris linnaeana* (L.) C. Chr., and the Beech fern, *D. phegopteris* (L.) C. Chr. Most species of Dryopteris are widespread in the whole North Temperate Zone, but some of them are limited to smaller areas; *Dryopteris amurensis* growing on Amur, in the Okhotsk zone, on Sakhalin and Kurile Islands and in the northern part of the Japanese Islands. *D. crassirhizoma* has a similar distribution though it extends a bit farther south.

We often met an interesting plant, the Grape fern, *Botrychium robustum* (Rupr.) Und. These ferns from the Ophioglossaceae, suggesting little plant gnomes, grew either alone or in parties of two or three.

Since the club-mosses belong to the pteridophytes, we should like to mention them, too. Of a number of species growing in the forests and on the cleared places caused by fires, we collected in the Susunai Mts. *Lycopodium clavatum* L. var. *nipponicum* Nakai, *L. complanatum* L. var. *anceps* Asch., *L. annotinum* L. and *L. obscurum* L. forma *strictum* (Milde) D. C. Eaton. The last species is very neat as it looks like a miniature juniper. Also its synonym accords with its habit: *L. juniperoideum* Sw. It is a pity that club-mosses are not suitable for culture for it is not easy to cultivate them because of their high demands on the unvarying air and soil moisture. Otherwise, *L. juniperoideum* could be a first rate decoration in every rock garden. But let us see if there isn't an asset in this drawback? Perhaps we must have some unrealized wishes; we must be longing for some plants which we cannot have at home in our garden. I think it is the same as if we admire some pheasants in Zoo gardens and in spite of our enthusiastic admiration we cannot breed them at home. And in the same way we can admire the shapes and the beauty of some plants only in the open air—in the forest—in the mountains—on the high cliffs—perhaps on Sakhalin Island alone!

TO BE CONTINUED

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A FOLLOW-UP ON THE GLIDE WILDFLOWER SHOW (See *Bulletin* of April, 1971). From a small beginning a very few years ago, the Glide Wildflower Show, held each year at Glide, Oregon, on the last week end of April, has developed amazingly. This spring the show was host to some 3,500 visitors according to a letter from Mrs. Reggie Miller, an enthusiastic organizer of the show. And this attendance was in spite of a backward spring and a resulting paucity of plant material.

BOOK REVIEWS

WILD FLOWERS OF ALASKA by Christine Heller. Graphic Arts Center, Portland, Oregon. 103 pp. Over 300 illustrations, all in color. $7.50.

Nearly half of the 300 plants depicted in this book are of interest to the alpine gardener. In addition, there are enough pictures of Alaskan scenery and fields of wild flowers to whet the appetite of any normal person and cause him to place this unspoiled land first on his vacation list.

This book is essentially for those with little or no botanical training and is divided into color sections to facilitate identification of plants. Both colloquial and botanical names are given, as well as the family to which each belongs.

If the excellent photograph of each plant is insufficient to enable one to make a positive identification, the reader is able to clinch matters with the adequate description given. Finally the general location and the habitat of each plant is disclosed.

It is hoped that the success which Christine Heller deserves with the publication of this book will spur her on to explore further in Alaska and give us a book entirely devoted to alpines and other plants which might be considered as suitable for rock gardens. There must be hundreds more waiting to be identified and photographed. And more of those scenic views would not come amiss.

Clifford G. Lewis, *Bellevue, Wash.*

THE MANUAL OF PLANT NAMES by C. Chicheley Plowden, Published by Philosophical Library, N. Y. C. 260 pp. $10.00.

If you are interested in plant names, this book should be kept within easy reach at all times. You will find the answers to many questions that arise whenever you work with plants or read about them. It is useful to those newly enthusiastic about plants and to serious gardeners, as well.

Here is a wealth of information easily available. Without this book at hand much pertinent information that might be needed would necessitate the scanning of any number of other reference sources. Here the information is at your fingertips.

A mere listing of the chapter headings should convince you that this book should be in your library. These chapters are : The Naming of Plants—Generic Names—Specific Epithets—Common Names—Botanical Terms—The Flower and Inflorescence—The Leaf—The Plant System and, of course, an Index.

As an example of how this book may be used, suppose that in one of your plant explorations you came across a plant which you key out as *zigadenus venenosus* and you were puzzled by the name. You look it up in *The Manual of Plant Names*. You find that the plant is in the Liliaceae family, which you may have suspected; that *Zigadenus* is a Greek combination word referring to the double glands of the perianth (not of too much importance to a non-botanist). Then on another page you find that the specific name, *venenosus*, indicates that the plant is poisonous. Possibly then you will decide not to collect the plant.

OMNIUM-GATHERUM

To continue with the garden tour which bracketed the Harrogate Conference in late April: In the July *Bulletin* you were left coming out of Tilstone Lodge, the residence of Sir Harold and Lady Bibby, for a look about the spacious grounds. (Fig. 1—The man on the left is J. K. Hulme, Director of the Ness Gardens who was our tour leader). Some of us went directly across the lawns, semi-terraced by knee-high land dykes, to the gently rippling lake replete with wooded isle and moored rowboat with oars aslant. (Fig. 2). Turning to look at the distant house, framed in great cedars, remembered as Cedars of Lebanon *(Cedrus libani)* (Fig. 3), we were conscious of the weight of years and the loving thought and care and the enormous amount of work that had wrought this lovely and uncluttered bit of old England. Then to the rock garden where we, before getting half through, were called to assemble at the bus for the long ride to Harrogate. This rock garden was notable for the pleasing use of dwarf conifers which were well into maturity and were exactly the right foil for the colorful rock plants that were then in bloom, as well as acting as the intermediate step toward the surrounding great evergreens and deciduous trees, the latter at this moment not yet in leaf.

The Conference, once we arrived at the Crown Hotel, kept us thoroughly and happily occupied for another four days and then the Scottish part of the garden tour started. This time our tour conductor was Mrs. L. C. Boyd-Harvey, Secretary of the Scottish Rock Garden Club, and again we were fortunate, for even while she wrestled with the problems of scheduling and timing maintenance, she fed us pertinent bits of historical lore as we sped along fine highways and took it easy along the picturesque country lanes.

The first garden visited was that of Mrs. J. Brunskill, near Belford in Northumberland, quite close to where the North Sea touches the English shore. Her house and garden is situated in a rather scooped-out hollow with a burn running through it, entering the property via a mild sort of waterfall. There was a phenomenon here—whereas it would seem that the garden area should have been protected from the almost constant wind that drove in from the sea, such was not the case. Strangely enough, once the wind enters this hollow it starts rotating and fails to find its way out for some time. So to garden here one must be well conditioned to wind. This is so with Mrs. Brunskill. She takes the sun and wind, the soil and the sometimes raging burn in stride and maintains a garden which gives her pleasure as it did our group. One of her plants that was much admired was a silver-leafed pear tree, *Pyrus salicifolia pendula* about nine feet high. Its long drooping branches, clothed with willow-like leaves and starred with white pear blossoms made a glittering, trembling veil about the trunk as the wind fretted and fussed.

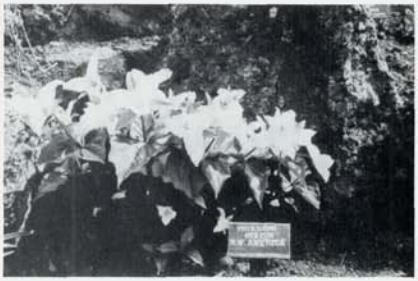
In the same general area, we visited Newlands, the home of Miss C. Sanderson where we found spaciousness again. Not far from the house was a small lake along whose curving edge ran a broad path. Between the path and the water's edge swept a long curve of yellow daffodils in their prime (Fig. 4). Cruising back and forth along the yellow-bordered shore swam a majestic white swan whose bashful mate remained across the lake, undoubtedly attend-

ing her nest or her young. On the other side of the path, in the woodland of mostly deciduous trees the ground sparkled with native primroses, pale yellow and soft rose. In the more formal part of the garden, near the house, we found two fine examples of the proper use of *Senecio grayi,* gray against fine old walls. Here at Newlands we experienced the same hospitality that had marked the entire tour. Then we were away to Edinburgh where, after touring through the very heart of the city, along Princes Street, of course, we were finally hoteled comfortably on the very outskirts of the city.

Tuesday morning we were taken to the Royal Botanic Garden. The day was sunny and there were flowers and birds everywhere, and many people about. This was April 27. Two weeks before, Eileen and I had arrived in Edinburgh, having come from London immediately after arriving there on our charter flight from Seattle. We had spent the day of April 13 in this same garden and had visited it on the two following days before returning to London to start on the organized tour on April 17. While in the garden for the first time we were intrigued by what appeared to be a vast *Rhododendron williamsianum.* Actually, when planted there had been three distinct plants which now appeared as one, magnificent and wide-spreading. That portion of this multiple plant, where the sun had had its way, was smothered in buds of deep rose, while buds on the other parts of the "plant" were yet tight, showing no color. So now, two weeks later, we were astonished at what so short a time had accomplished. Where there had been rosy buds were now great masses of rich pink blossoms and the rest of the "plant" was displaying its colorful buds. It should be added that again in this garden on May 6, as we were hurrying to London for our return home, this same Rhododendron was one long sheet of pink—almost no leaf at all was visible. In the bright sunlight of that rather breezy day the effect was breath-taking, especially to us from the Pacific Northwest where *Rhododendron williamsianum* is not considered a prolific bloomer.

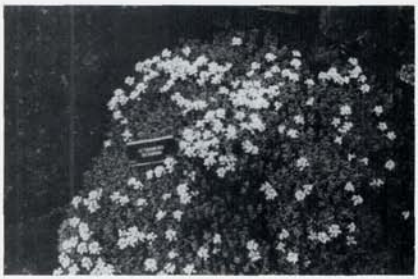
The fact that in this garden use had been made of so many American plants, especially many from the Pacific Northwest, made us feel at home. Among the American plants, which seemed happily at home, were Lewisias, Penstemons, Phlox, Trilliums, Erythroniums, and occasionally Dodecatheons. Our own *Trillium ovatum* (Fig. 5) we found much used, not only here but in other gardens, as well. Upon first entering the Botanic Garden, through the back door as it were (this was on our first trip) and taking a turning away from the rock garden we came to a small pool on the far side of which loomed a magnificent pine, like a dark thunder cloud on the horizon (Fig. 6) which proved to be *Pinus nigra,* according to the attached label. One thing about this Botanic Garden that pleased us was the proficient labeling of all specimens, labels well placed and readily legible from the paths. Two plants of interest noted (and for which we have pictures) were a fine dwarf conifer, *Chamaecyparis obtusa minima* (Fig. 7) perched at eye-level atop the rocky wall, and *Aethionema iberideum* which was just coming into flower (Fig. 8).

It is possible for an interested gardener to lose himself in this rock garden for hours at a time and be completely unconcerned. There are so many twisting paths, so much uphill and down, such contrast of light and dark foliage, such a diversity of plant material, so many things to see and study, and should one find himself going over the same path for the second time, so much







Figures 1, 2, 3 and 4
Figures 5, 6, 7 and 8

The Suttons

the better. One cannot see everything at the first passing. At one spot we came upon a fellow member of the ARGS completely absorbed in taking a picture (Fig. 9) of a four-foot shrub fairly well covered with creamy blossoms—maybe more yellow than cream. Some of you will recognize him as Harry

Butler, of Dayton, Ohio. The shrub was *Fothergilla monticola.* We were loath to leave this garden for we had seen but little of the other features—the Heather Garden, the Woodland Garden, the Peat Garden, the Rhododendron Walk, the Copse and many others.

That afternoon, we were left free to do as we pleased about Edinburgh—shopping, sight-seeing, etc. Many of us availed ourselves of a real treat. On this free afternoon, Dr. and Mrs. I. Simson Hall and Dr. and Mrs. E. A. Cormack were holding open garden for the tour group in the late afternoon. Eileen and I chose to walk from our hotel, the Barnton, down Whitehouse Road to the Halls' where we were able to see in reality the garden that had been so modestly described by Mrs. Hall (Kathleen S. Hall) in the January, 1967 issue of the ARGS *Bulletin.* Here is a sizable garden located in a rather thickly peopled residential district, originated and maintained by the Halls without other help. We found it in perfect order. Though the propery is almost level, their artistry had achieved many changing vistas which we enjoyed as we made our slow way from one deft planting to another (Fig. 10). From Mrs. Hall's article we had expected to find many plants from America, and we did, but we found them artistically intermingled with those from many other parts of the world. In a small trough, appearing age-old, glowing in pristine verdure, nestled several rosettes of Lewisia—perhaps a hybrid (Fig. 11) reveling in health and beauty, even though without bloom. The hour spent with the Halls was one of the highlights of the whole trip, and the generous tea served before we left gave us a chance to get better acquainted with these superb gardeners.

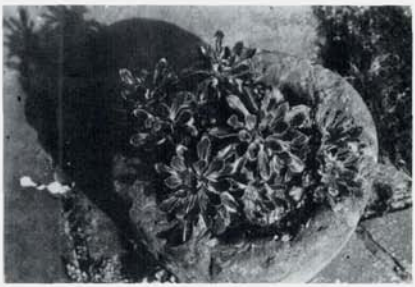
That evening we were entertained at a wine party given by the local unit of the Scottish Rock Garden Club. The time there went too rapidly and many opportunities for making additional friends were lost. There it was good to see Jos. Starek, of Prague, again after having told him goodby at Harrogate.

Next morning it was away for Pitlochry and the garden of Major General D. M. Murray-Lyon. We left the bus and climbed the hill to his home to be greeted by the General and Mrs. Murray-Lyon. It was a windy morning and rather cold. Even though it was late April, we were told that a few nights before a late frost had damaged many of the Rhododendron blossoms. To defend his hillside garden from the heavy wind that often blows to the General's discomfort as he works in his garden, he had years before planted a conifer windbreak (Fig. 12). Now this grouping of trees performs well its appointed task. We were glad to see one of our native Washington State fir trees used, *Abies grandis,* with beautifully patterned leafage and branches, fully clothed, right down to the ground.

In spite of the rather exposed location and the none too mild climate, the General has had remarkable success in growing many treasured alpines behind his wind screen of conifers. Among the many treasures tucked in throughout this fine garden were *Douglasia vitaliana* making its bright display to the honor of the European Alps, and *Lithophragma parviflora,* from Western America, already seen in other British gardens and always dainty. In the shady peat area examples of the successful culture of ericaceous plants were numerous.

The General is another of our members who lives in Scotland who has contributed generously to the ARGS *Bulletin* over a long period of time.



Figures 9, 10 and 14
Figures 12, 11 and 13

The Suttons

So absorbed in the garden, our teeth chattering in the chill morning air, some of us barely had time to drink a cup of hot coffee with Mrs. Murray-Lyon before the rush to the bus. It had been a rewarding morning.

On the last afternoon of the tour, we arrived at Keillour where Mrs. George Knox Finlay greeted us with warm hospitality. Again there were so many fine plants and plantings to see and again this was the work of a dedicated couple, Mrs. Knox Finlay and her late husband, George. One feature was a deep ravine where the paths on both sides were bordered by fine Rhododendrons, most of them in bloom, and lush woodland ground covers. In the garden on the castle level (Fig. 13) were such seldom seen plants as

Corydalis cashmeriana, Hylomecon japonicum and *Glaucidium palmatum.* These and many others were in generous blossom, especially Hylomecon which presented a pleasing mingling of light green and tender yellow.

Eileen and I were leaving the tour at Keillour and it was with real regret that we parted company with such delightful traveling companions. After bidding Mrs. Knox Finlay goodbye with thanks for her hospitality and compliments for her garden, and leaving her at her door, we walked down the long lane, carried our considerable luggage out to the country highway, closed the gate, and started what we thought would be an hour's wait for our rendezvous with Harold and Altha Miller, whom we had last seen at Harrogate. For the next eight days we were scheduled to be with them in their new VW camper, picked up in London before the Conference. We were to spend most of the time on the Isle of Skye and in the Highlands. This is another story, of course, and may be told later. The Millers arrived shortly after we had closed the gate so there was no hour's wait. However it should be told that on the way back to Pitlochry, where we were to leave the Millers, we stopped at Jack Drake's nursery. We enjoyed the peat beds but what was most astonishing was to see a regiment of small pots (Fig. 14) arranged as in close order drill and each pot containing a healthy plant of *Lewisia cotyledon* (hybrids, it is supposed). Seemingly the British Isles need never be without this American plant which they have taken to their hearts. Among the many plants we found being propagated there was *Salix cascadensis* from our own Cascade Mountains.

Our time with the Millers ended at Millglen, the home of Dr. and Mrs. T. A. Stuart at Moulin, close to Pitlochry. For a real description of their incredible garden turn to the ARGS *Bulletin* of October, 1968 and let Margot Stuart entertain you. Again this has been the work of a super-dedicated couple. So often we find that the loveliest of the residential gardens are the result of a man and his wife working together to create a bit of enchanting beauty. And always it seems that something of this beauty steals into the character of such couples and lifts them to a higher level of understanding and felicity, and in some subtle way is transmitted to those who are fortunate enough to come in contact with them. Perhaps this is the true purpose of gardening!

In the Stuart garden, as in so many other gardens we visited, water in one form or another is present. Here at Millglen a lovely burn has been made to serve in many ways. The Stuarts have made utmost use of their mountainside by integrating the natural contours of the land and the lively stream into their finished garden—if any garden can be said to be finished—ever!

It would be worth while to describe here this garden in detail, but there is not the space. It is suggested that you will be well advised to re-read Margot's article. (A copy may yet be obtained from the Society's secretary—see the back cover of any recent *Bulletin*). But mention must be made of a glorious *Lewisia tweedyi* blooming happily and furiously in (or on) a low wall, flowering for the fourth year and lighting up the whole wall. As remembered, when we approached the wall our eyes went directly and naturally to the Lewisia and it seems now impossible to remember having seen anything else about the wall or its other occupants. Along the streamside, among the several species of willow, *Mimulus lewisii* has almost attained weedhood—but what a nice weed! And in the gently flowing stream, more pool than stream, blazed

the brilliant green and yellow of the double form of *Caltha palustris,* a target of anyone's eyes who approached the water.

The Millers saw us off on the train at Pitlochry as we started our homeward journey. So ended our tour, both organized and improvised. We joined the rest of our charter passengers in London at the time designated and soon we were home in Seattle after a short stopover in Iceland. A month of travel, of visiting gardens, of lectures, of learning, of living new experiences and making new friends. It was a glorious time!

We hope our friends of the ARGS, especially those who stayed at home have, as a result of reading the Bulletins for July and October, felt that they have had a share in our adventures as some small return for their kindness and generosity.

* * * * *

FROM COTTON FARMING TO ROCK GARDENING—This is a rearrangement of a letter from Mrs. Beulah W. Gibson, Rt. 4, Box 380, Decatur, Alabama 35601:

"I have been a member of the ARGS for a year now and am trying to get a rock garden started. Some of the plants I put in last spring are real pretty now. I have quite a few different sedums, some sempervivums and *Saxifraga virginiensis* (which grows wild here on limestone cliffs). I have a few other native wild plants which I collected in the woods. This is the first letter I have written to any of the members. I would like to get in touch with someone who has a well-established rock garden and may have some extra plants to sell or trade.

"I am 58 years old, have eight children, all married and gone except my youngest boy who is 24. I have been a widow for 12 years. When my husband was living we were farmers and raised a lot of cotton, so we worked hard. My son and I still live on a farm but we don't do farm work. I have always had my share of flowers, the easy kinds. When the children were small and we were working so hard, I had little time or money to put in a flower garden or have anything for myself. Of course, my health is not so good now and I can't do much work, but I plan on staying active as long as I can. I would like to hear from anyone who would care to write and if there are any plants or seed to sell, let me know."

* * * * *

HOW TO ENJOY READING THE *BULLETIN*—An excerpt from a letter to Henry Fuller from Mrs. Ray Raimer, of Cambridge, Ohio, tells how it is done:

"I have been in the ARGS for only about ten years, but in those few years the Bulletins have brought infinite pleasure and relaxation to me and taken me out of my work-a-day world into distant lands and far away hills and pastures where, with my mind's eye, I could see the little alpines come into bloom, give out their sweetness and blow and toss in the wind.

"I am half Irish, so I have a good imagination. I do not read the Bulletins as soon as they come. Just to know that they are there and waiting for me is such a pleasure. I hustle around and do my chores with increased celerity so I shall be free and easy in mind when evening comes, the last dish washed, and then can give hours to reading and soaking up the contents of the *Bulletin*; through the long winter months especially."

COMMENTS AS A RESULT OF A BOOK REVIEW—Mr. Leonard J. Uttal, of the Virginia Polytechnic Institute and State University, Blacksburg, Virginia, has this to say:

"I would like to comment on Bernard Harkness' review on Evans' *Gardener's Guide to Sedums,* on page 31 of the January, 1971 *Bulletin.* Mr. Harkness differs with Mr. Evans on the name *S. nevii,* saying that American authorities recognize plants from Virginia and West Virginia as a different species, *S. glaucophyllum.* For a while this was true. The 8th Edition of Gray's *Manual* perpetuated this confusion, but it was a short-lived one. No basic difference has been found in northern Appalachian plants from those of the type locality in Alabama, and most current botanists include them all in *S. nevii,* as all did formerly.

"I do not understand any apparent favoritism for this species over the more common *S. ternatum.* In flowering they differ not a whit. The only difference is in the foliage. That of *S. nevii* is close, but narrow, and alternate. That of S. *ternatum* is broad and whorled. What's more, out of flower, *S. ternatum* stays green and continues as an attractive ground cover, while *S. nevii* tends to shrivel and turn gray under adversity. All around, *S. ternatum* is the better of the two, more familiar, and illogically slighted if faulted second to *S. nevii.*"

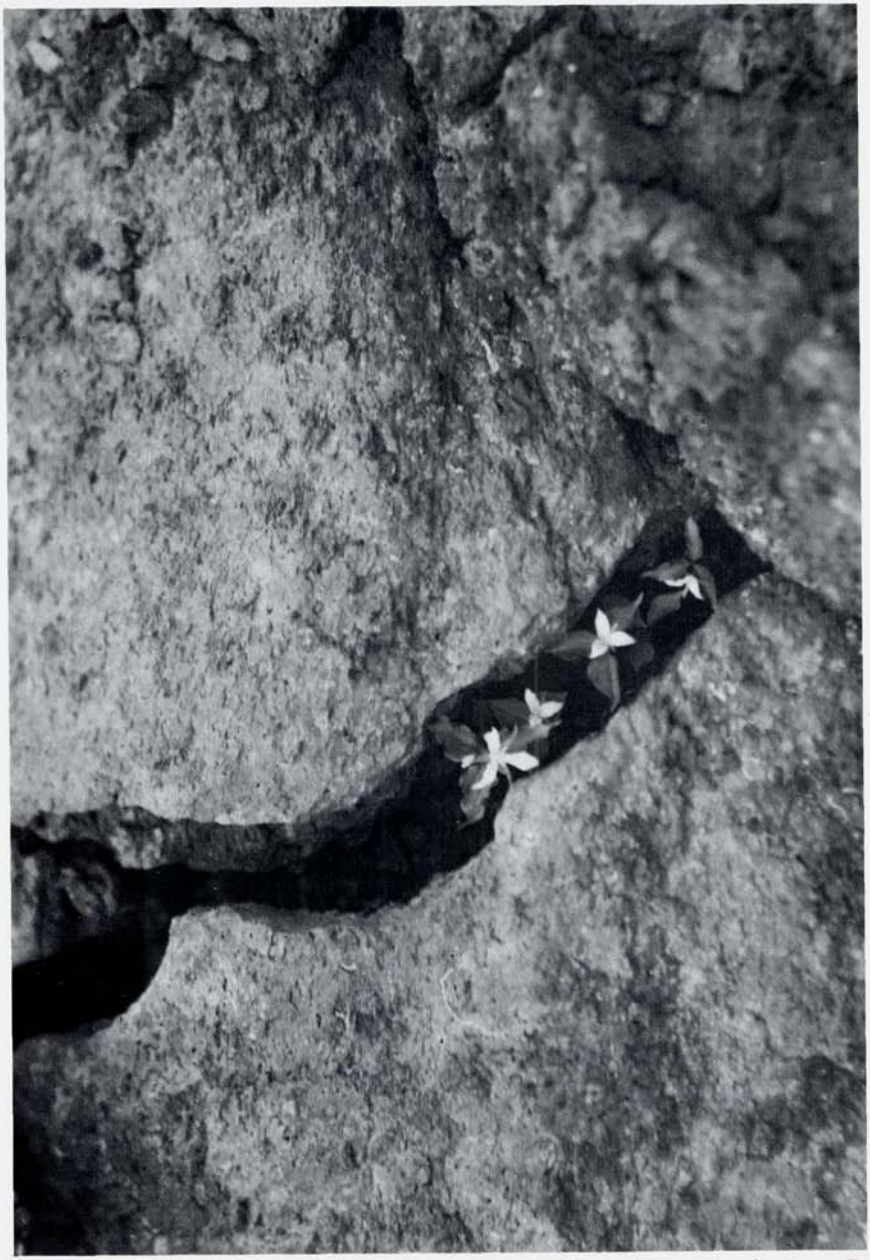
TRILLIUM OVATUM IN THE McKENZIE LAVA BED

GUS N. ARNESON, *Seattle, Wash.*

The Western Trillium, *Trillium ovatum* is a lovely queen that dwells in the moist, shady forests of the Pacific Northwest. Although Bailey, in his *Standard Cyclopedia of Horticulture* (1930) writes that these plants are one foot or less in height, which they commonly are; where the soil is deep and rich they grow to 18 inches and more in height with blooms five inches across. There is evidence, however, that this charming inhabitant of cool, shadowy places can also thrive and maintain its beauty in the more rigorous life of the pioneer. I recently came upon a small colony blooming in a most unlikely place.

Spreading over some 70 square miles around McKenzie Pass (elevation 5,325 feet) in the Cascade Mountains of Oregon is the McKenzie lava bed, spilled over the area by volcanic eruption less than 2,000 years ago. It is mostly barren, somewhat fissured, igneous rock with only a few areas where accumulated soil supports a precarious existence for trees and other vegetation.

I was walking over this inhospitable terrain when, in a crevice formed by the cooling lava, I saw a row of Trilliums. Our brave little *T. ovatum,* retiring dweller of the forest, was in the vanguard of the agents of erosion that will, during milleniums to come, reduce these hard lava beds to fertile soil! How the seeds got there, germinated, and the colony survived to come into full flower is an interesting speculation but they appear to be happy and I photographed the bright faces that were turned up toward the sky.



Western Trillium—*Trillium ovatum*, growing in crevice on the McKenzie Lava Bed near McKenzie Pass in the Cascade Mountains of Oregon

Gus N. Arneson

1972 SEED EXCHANGE

MRS. ARMEN H. GEVJAN, *Newtown Square, Pa.*

November 1, 1971—Closing date for sending seed.
March 10, 1972—Closing date for seed requests.
Every effort will be made to have the seed list in the mail early in January. Donors can do much to help!

1—Send seed as early as possible.
2—Seal all packets carefully.
3—Check nomenclature for accuracy.
4—Type or print clearly on packets.

MUSINGS ON THE SEED EXCHANGE

Donors to the Summer Seed Exchange stand up and take a bow! There were many comments on the excellent variety of the seed listed. A salute, also, to Henry Fuller who has been so instrumental in encouraging members to donate seed.

It is a dilemma, truly, to set dates for closing of seed donations; too early eliminates seed not yet ripe, too late makes it impossible to get the list and seed to members at the optimum time. Therefore, we feel it is better to cater to the bulk of seeds rather than a few strays that ripen at leisure or bloom a little late.

We would welcome comments on germination results, particularly of seeds from New Zealand, Australia, and Tasmania. It would be of great value to know your successes and your methods. The committee will be happy to tabulate results and send them to the *Bulletin*.

Donors to the 1971 Summer Seed Exchange deserve another round of applause for seed that was carefully cleaned, packeted, and labeled.

Apparently, some members were confused about who received the Summer List. The memo in the *Bulletin* of April, 1971, stated: "The Summer Seed List will be sent automatically to all donors. Others who wish to receive the list should request it in writing before Stepember 10, 1971." Since we only implied that such donors were to be those contributing to the 1971 Summer Exchange, some readers interpreted it to mean any previous donor. To help in rectifying this misinterpretation, we sent lists to some donors from the previous seed exchange. We apologize if you were left out!

NOTE: Please mail all seed to Mrs. Armen H. Gevjan, 536 Dogwood Place, Newtown Square, Pa. 19073.

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TWO BOTANIC GARDENS IN JAPAN—Visitors to Japan who find themselves in Sendai, Miyagi Prefecture, or in Kochi, on the southern shore of the island of Shikoku, should visit the botanic gardens which are located at these cities. As customary in Japan, these gardens charge a very nominal fee and have definite hours and days when they are open to the public.

At Sendai, Tohoku University maintains its botanic garden within the campus. This garden is part of the old castle grounds and caps the highest land in the city. The old walls are all that remain of the castle, built in 1602,

but the forest-like vegetation has been relatively undisturbed.

In contrast, the Makino Botanic Garden outside Kochi is a very new garden in an almost tropical climate. The Makino Memorial Library building is a central feature, as is the new tropical house. This garden is located on one of the highest, tree-covered, rocky knobs which rise out of the Kochi delta, so the views from it are spectacular. Here they are developing areas which correlate plants with the rock they like to grow on. Enormous amounts of limestone and serpentine have been hauled in for creation of these areas, but the local outcrops of chert are ample for plants which prefer this rock.

Visitors to this garden in the next few years probably will see the results of a devastating typhoon, the worst in 300 years, which hit on August 10, 1970. Six feet of water stood in parts of the city of Kochi for 48 to 100 hours. It was necessary to replace 320 panes of glass in the new tropical house. Mr. Yamawaki, the director, reports that recovery is well under way and that a large new area has become available for planting.

C. D. D., *Seattle, Wash.*

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A CHARTER MEMBER OF THE ARGS PASSES—Dr. Manton Copeland —A clipping from a Maine newspaper concerning the life and death of Dr. Manton Copeland was sent the editor by Betty Jane Hayward, Scarborough, Maine. Excerpts from her letter and from the clipping follow: Betty Jane writes, "Dr. Copeland became a charter member of the ARGS at that first meeting and was appointed to serve as the first New England Regional Chairman. Later he came to me to request that we try to organize a Maine Unit. This Unit developed into a successful undertaking, meeting monthly for study and continuing for a good period of years. I have never known a more talented and kindly gentleman and he was interested in so many aspects of living. To know him was to love and admire him. His love of alpines was only a small part of all that brought joy to him through the years." From the clipping which tells of the many honors heaped upon Dr. Copeland during his teaching career at Bowdoin College and afterwards: "At that time (1966) he was described as 'a citizen of Brunswick, a summer resident of Woods Hole on Buzzards Bay, and a collector incarnate of moths, butterflies, worms, sewing birds, duck decoys, flowers, books, friends, students and children.' "

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