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AMERICAN ROCK GARDEN SOCIETY BULLETIN

Albert M. Sutton, Editor

VOL. 28 July, 1970 No. 3

TWO SIDES OF EVEREST

GEORGE H. PRIDE, *Jamaica Plain, Mass.*

Obviously, a month's vacation is far too short a time to view, even superficially, the mountain flora of northern India and Nepal—to say nothing of trying to get a glimpse of Wisley, the Floralie Internationale in Paris, and the bulb fields of Holland. All of these were packed into 4 weeks in April and May of 1969. Being shepherded about in India and Nepal by the knowledgeable Mr. and Mrs. Oleg Polunin and a small group of botanists and ornithologists helped greatly. The vacation ended with a quick jump to Wisley, Paris, and a near week in Holland fanning out from Amsterdam. The expert guidance and hospitality of Dr. Robert Legro (of red delphinium fame) helped get the most out of the Holland episode.

Leaving London on April 6th, we made a short stop at the Moscow airport. After flying through the long night over southeastern Russia and Afghanistan, we were greeted by the rosy hues of the morning sun bathing the incredibly rugged and forbidding jagged peaks of the snow-covered Himalayas below and all around us. This is certainly one of the most magnificent sights to be experienced on this planet.

We dropped down first at Delhi, then went on to spend the night at the glamorous Taj Mahal Hotel in Bombay. In Calcutta the next day, we changed planes for Bagdogra and the long drive in rugged taxis up to the Oberoi Mount Everest Hotel in the hill country of Darjeeling, which was to be our headquarters for a week. Our first reward here was a spectacular view of Kanchenjunga, the great snow-clad massif, one of the highest and most beautiful peaks in the Himalayas. Darjeeling borders Nepal, Bhutan, Pakistan, and Sikkim. Here one sees a fascinating blend of people from various ethnic origins, including Nepalese, Tibetans, Bhutanese, and Sherpas. Now that India has its independence, the many hundreds of English who vacationed here in the past are diminished to no more than ten elderly people. They seem resigned to living out their remaining years here.

Up at 3:45 A.M. the next morning to reach the top of 8,500 foot Tiger Hill in total darkness, we waited for the spectacle of seeing the superb show of the sunrise as its rays picked out the various peaks in the distance until Everest itself was finally spotted. Then the first plant collecting of the trip

started in earnest in the dense, partly deciduous forest just below the summit. At times like this, one is torn between wanting to revel all alone in acres of exciting plants, and calling constantly to one's companions to come see what new wonders have been found. *Paris polyphylla,* an odd relative of our Trilliums, and various remarkable Arisaemas were literally everywhere in these woods. The latter, the Jack-in-the-pulpits of the Himalayas were actually massed by the thousands, growing so thickly that one could not walk among them without stepping on many. *Arisaema griffithii,* looking like a tiny baby elephant, was the most remarkable to me. The spathe is rolled and pleated in a very strange way and it has a sort of healthy elephant color.

Here and there in more open areas, *Gentiana quadrifaria* with tiny, but intensely blue flowers, a few violets, *Gaultheria nummularioides* with round black berries, *Vaccinium retusum,* a complete epiphyte with tiny white bells closely striped with red, and various other plants abounded. A tiny, floor-of-the-forest plant, *Isopyrum adiantifolium,* with delicate white flowers reminded me greatly of our *Anemonella thalictroides.* Huge trees of *Magnolia campbellii* towered above everything. The easiest way to see its very large, lovely pink flowers was to pick up the blooms that had dropped from the top branches. Occasionally, clumps of *Mahonia napaulensis* rose above our heads, growing luxuriantly instead of just surviving as so much Mahonia does in many parts of New England.

On the edge of the forest, two treasures are well remembered. One of the loveliest of vines, the pistillate form of *Holboellia latifolia,* has abundant clusters of lavender-purple flowers with a very sweet fragrance. A relative of Akebia, it belongs to that family with the wonderful name, Lardizabalaceae. The other exciting find was the first Rhododendron of the trip, the mostly epiphytic *R. dalhousiae* was found here in limited numbers. It is odd to see a Rhododendron perched on a tree with either no roots reaching the ground, or very long, thin ones just making it. *R. dalhousiae* has large, almost pure white flowers with a rich, heady fragrance. It took real botanical determination to crush these flowers and those of Holboellia in the plant press to make herbarium specimens.

A visit to the Lloyd Botanic Gardens in Darjeeling is a must for the plant enthusiast. Taking with us most of our herbarium material that had been collected on Tiger Hill the previous day, we found excellent professional help from Mr. G. C. Sen, the Superintendent, and several members of his small but talented staff. The Botanic Gardens cover about 40 acres and are at 6,000 feet; the annual rainfall is 110 inches. Here may be found excellent examples of the characteristic flora of the Sikkim Himalayas. *Cryptomeria japonica,* which grows all through this area into towering, husky specimens, was first acclimatized at this garden when brought in from Japan years ago. The rock garden, named for Sir John Anderson, contains many alpines and sub-alpines growing under conditions similar to those of their native habitat. Many members of the genera *Cotoneaster, Meconopsis, Primula, Saxifraga, Fragaria,* and *Ranunculus* were represented. The orchid house contains over 2,000 plants and features Cymbidiums, Vandas, and Dendrobiums. The herbarium consists of over 3,000 specimens, including most of the species of the eastern Himalayas. I noticed that few new specimens had been added recently and that there seemed to be an air of need about the establishment.

I firmly hope that the Indian government can and will furnish enough aid so that this excellent establishment will not deteriorate. Certainly, there is keen interest among the few workers and impressive young botanists here. They would do credit to any botanical garden. Incidentally, I was pleased to see two Dawn Redwoods, *Metasequoia glyptostroboides,* growing well here. This famous introduction of the Arnold Arboretum seems to be greatly appreciated wherever it is grown. A small but well-written guide book to the Botanic Gardens is available with much useful information including the fact that "The Ladies' toilets are situated at the junction of Joseph Hooker Avenue and Wallich Avenue behind the bamboo hedges."

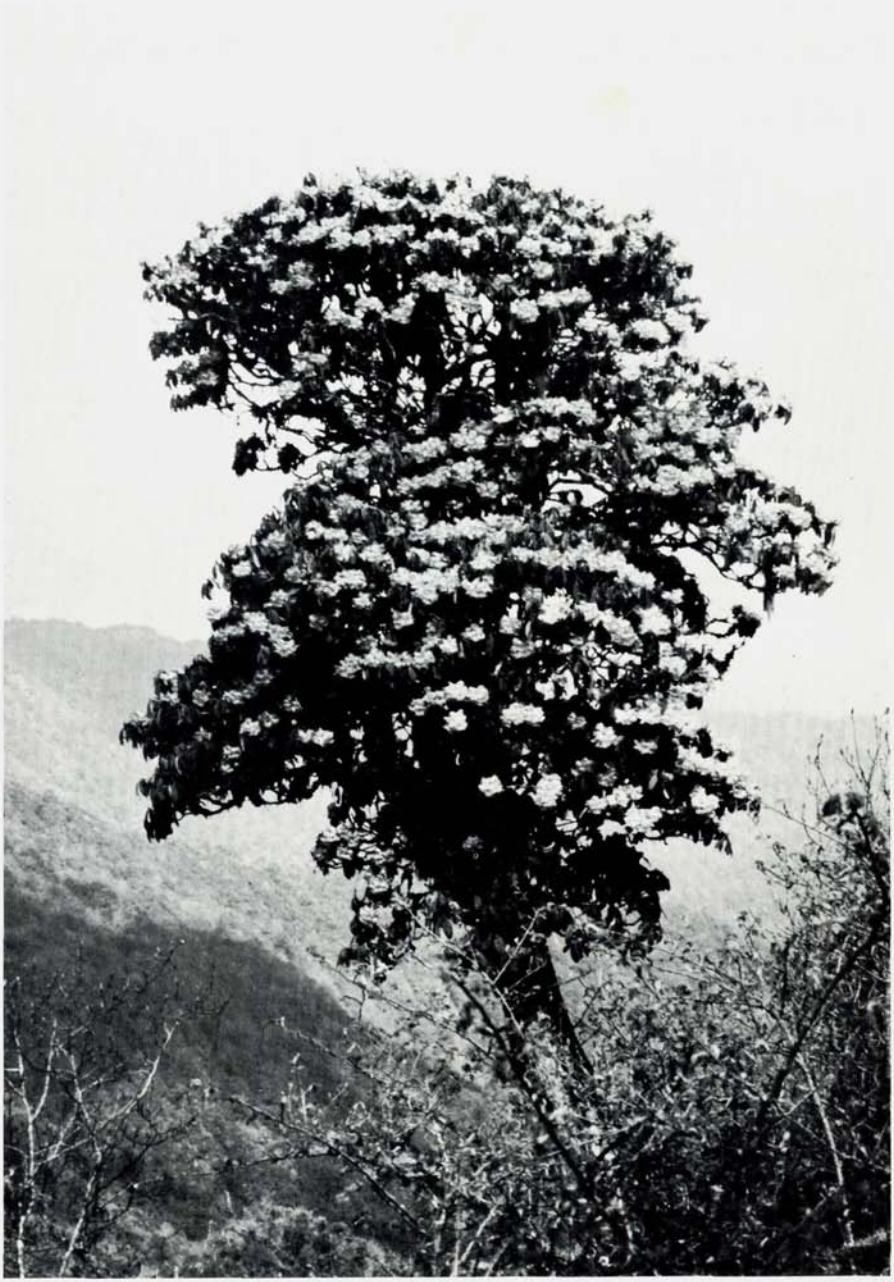
The forests about Darjeeling are remarkable for many reasons, but to the botanist the great number of epiphytic dicotyledons comes as a distinct surprise. One gets used to orchids perched nearly everywhere on tropical trees, but in this area at least 27 species of dicotyledons involving 18 genera and 12 families are found. Some are total epiphytes growing exclusively on trees and shrubs. Others are partial epiphytes growing on rocks and trees, or on soil and trees. Many have extensive root systems. Mr. Sen has made a special study of this phenomenon, and a pamphlet published in 1963 sums up his knowledge of it to that time. He believes that a set of conditions consisting of extreme hilliness, a very high humidity, and a generous rainfall producing profuse growths of moss with much humus on tree trunks and branches are mainly involved with bringing about this special group.

A full day's journey to Kalimpong netted us little new plant material, but much of interest in other ways. Soon after leaving Darjeeling we saw the famous "Mountaineering Rock," an enormous, nearly perpendicular cliff several hundred feet high. This is where the students of the Mountaineering Institute learn rock climbing under the guidance of Tensing Norgay, the famous Sherpa who climbed Everest with Sir Edmund Hillary. (Incidentally, the students at the Institute are required to study alpine botany as part of their course so that they may have a well-rounded knowledge of the whole environment). The first orchid find on this trip was *Dendrobium rotundatum* in great clumps, perched on bushes in several areas near the roadside. The flowers were only medium sized and of a khaki-brown color, but everyone with a camera put it to good use. As we approached the Sikkim border, traveling became more and more treacherous. The Teesta River had overflowed its banks during the violent, unseasonable rains of October, 1968. Bridges were washed away, and gigantic landslides were everywhere. Many people had died. The rebuilding of roads and bridges here is a very slow process.

For centuries, Kalimpong was the end of the line for two main caravan routes from Central Asia. The sights, sounds, and smells of the market district can be fully appreciated only from actual experience.

To find a large and rather comprehensive nursery not far from Kalimpong was a distinct surprise. Days could be spent at the Universal Bulb and Plant Nurseries run by Mr. Pradhan and his family. Here is a large collection of cactuses, orchids, and amaryllis. Extensive breeding work was being done with the latter.

To practically look over the border of Sikkim and not be able to enter was one of the great disappointments of my life. Unaware of the difficulties in getting permission from Indian authorities to enter Sikkim, I had started



Rhododendron arboreum at Tongalu, a half day's journey from Darjeeling.

George H. Pride

the lengthy procedure too late to get the proper credentials. Even with the help of Queen Hope of Sikkim, the permission failed to materialize in time. With an invitation from the Queen to use the guest house on the palace grounds while making forays for plants, and a keen desire to botanize with Dr. Pradhan of Gangtok—a relative of the owner of the Universal Nursery near Kalimpong—there was no alternative but to hope that the opportunity would come again sometime to return with the proper papers.

The grand finale in the Darjeeling area was an extremely arduous all-day trip to Tongalu. Because we would be approaching the Tibetan border, special permission had to be obtained to pass through the many army roadblocks. Our jeep snaked back and forth, but slowly upward in this mountainous area as we approached a wonderland of miles and miles of forests of giant Rhododendrons and Magnolias in full bloom. Clouds would keep closing in upon us only to reopen and reveal giant waves of almost pure stands of these two types of trees. *Rhododendron arboreum,* mostly the bright red-flowered form, dominated and was a most spectacular sight. Occasionally, great globs of white could be observed on distant slopes where huge trees of *Magnolia campbellii* were in full flower. *Rosa sericea* bushes were abundant with white flowers near the incredibly poor roadway our jeep crept over slowly. We saw many *Arisaema nepenthoides* with reptilian mottling on their stems, standing in little communal groups. Our driver had a tiny, but tough body, and he was tested thoroughly in trying to manage the jeep. Fortunately, he kept two sticks of incense burning on the dashboard in front of him during the whole trip. I am sure that this is the only thing that spared us.

The remarkable epiphytic dicotyledon *Pentapterygium serpens*, a member of the Heath family, and a shrubby Daphne with small, very fragrant flowers were frequent along the roadside. Toward the end of this trip, the pleasure of finding a few great yellowish-haired rosettes of a Meconopsis was negated by the absence of buds or flowers.

I was able to crowd in an early morning visit to the world-famous nursery of Mr. G. Ghose at Townsend, Darjeeling. Mr. Ghose is an extremely knowledgeable person regarding the flora of this area as well as of Bhutan, Sikkim, and Nepal. Almost saintly in his appearance and in his courtesy to visitors, I found him a charming host as he showed me the extensive nursery in the limited time available. Tragedy seems to wait here. His somewhat younger brother will eventually inherit the nursery, but there is no one else in the family who is at all interested in this work, and the eventual fate of this really remarkable collection is not pleasant.

On the 17th of April, we transferred to another side of Everest, Kathmandu in Nepal, for a week's stay at the Annapurna Hotel. My plant collecting time here was cut nearly in half by a serious attack of intestinal disorder which is most inelegantly described in this locality as the "Kathmandu gut clutches."

It is necessary to travel at least 35 or 40 miles from Kathmandu before a flora worthy of much attention is found. A visit to Nagarkote, high in the mountains outside of Kathmandu, was the most interesting trip in this area. We left at 4:00 A.M. so we could see the sun rise and shine over a 350 mile stretch of the Himalayas; then some botanizing was done. *Cotoneaster microphylla* occurred all over the bleak mountainous slopes as low, green tussocks of heavily interwoven branches covered with masses of small, pure white flowers.

Only a few plants of Smilax, Berberis, and other relatively uninteresting plants had escaped the browsing of the sheep and goats.

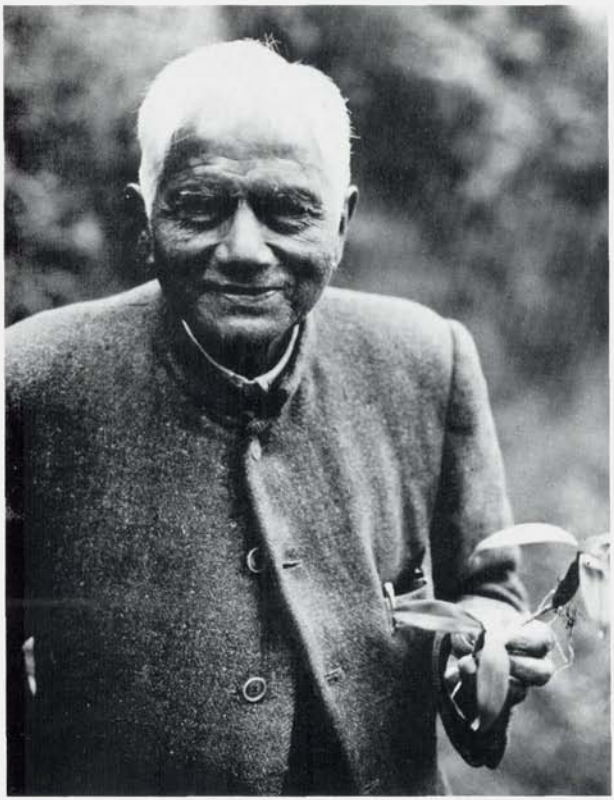
After a stop at Agra for a visit to the Taj Mahal, we returned to Delhi, again crossed the bleak but remarkable snow-covered mountains of Afghanistan, and made another equally chilly stop in Moscow. Then we went on to London.

A full day at Wisley in early May is a delight. Both the rock garden and the alpine house were in peak bloom. The heath gardens were also near perfection. *Erica mediterranea* var. *superba* was outstanding in beauty here. In the alpine house, it was impossible to resist taking pictures of wonderful specimen plants of *Saxifraga* 'Edie Campbell', *Cyclamen repandum, Omphalodes cappadocica, Lathyrus vernus, Anchusa caespitosa, Gentiana verna* var. *angulosa, Pleione pricei*, and *Saxifraga* x *irvingii*. In one of the greenhouses there was a magnificent display of Schizanthus. Those called Dr. Badger's hybrids were especially fine. A vine of unusual tiger-like flowers, *Thunbergia mysorensis* was in full bloom in another greenhouse. Here, also, I had my first look at an iridaceous plant from New Zealand, *Libertia grandiflora*, which is like a very large Sisyrinchium with clusters of inch-wide, white flowers massed on stalks three feet high. It looks as though it would flower for a long time and is certainly a worthy resident of a medium-sized greenhouse.

Out in the rock garden the number of things flowering was bewildering. Many primulas, both species and hybrids, were masses of bloom. One I especially noticed was Primula 'Tawny Port'. In the swampy area of the rock garden, *Lysichiton americanum* stole the show with its big, bold, yellow spathes.

On to Paris for the Floralie Internationale. This spectacular outdoor and indoor display at the Bois de Vincennes was destined to be open for visitors for several months. I saw it a few days after it had been opened. After a full day of note taking, I found that four plants seemed to stand out above all others. I most clearly remember a beautiful blue cultivar of forget-me-nots called *Myosotis* 'Ultramarine', *Aubrieta* 'Manon', and two Rhododendrons, *R.* 'Scarlet Wonder', with brilliant red flowers on a low compact bush, and *R. impeditum* var. *moerheim*, also low growing and with striking lavender-blue flowers.

Holland in the spring, with the bulb fields a huge multicolored carpet of bloom, deserves a whole story to itself. A whirlwind tour of experimental establishments and plant-breeding stations took up part of a week, but I was able to crowd in a day and a half at Kirkenhoff. Fortunately, the peak bloom here was later than usual and I couldn't have timed it better. A rock gardener can see masses of small bulbs here used in vast dramatic displays. Most of them he can plant in more conservative quantities in the home rock garden to get nearly as remarkable effects. The many color forms of *Anemone blanda* were lavishly used. Three especially effective new ones were 'Charmer', a deep pink, and 'Radar', a vibrant purple-red with a white center, but possibly the most effective was 'White Splendor', well named with the purest large white flowers imaginable. Two fairly new *Narcissus triandus* hybrids, 'Liberty Bells', a soft yellow, and 'Horn of Plenty', a snow white, are fine additions to rock garden material. A jonquil hybrid called 'Baby Moon' is very sweet-scented, free-flowering, and of a lovely soft yellow color. The low-growing tulip species, *Tulipa fosteriana, T. greigii*, and *T. kaufmanniana* and their hybrids offer splendid rock garden material. Two *T. greigii* hybrids, 'Pandour', and 'Plaisir', were bizarrely splendid.



Mr. G. Ghose of Townsend, Darjeeling. The only ARGS member in India.

George H. Pride

The greatest thrill of all in Holland was to see the fabulous new colors in the Delphiniums of Dr. Robert Legro at Wageningen. Hundreds of plants in all shades of red and pink, and various tones of yellow attributed to the intelligent work this good friend has been doing for over fifteen years. They will soon be introduced as the University Hybrids and, though they will not be thought of as rock garden material, there will be few gardeners who will be able to resist them.

It was a long way around through England, Russia, India, Nepal, and then back to Russia, England, and France to arrive, finally, in Holland, but it was a fitting climax to a remarkably full month's vacation.

* * * * *

IN THE RAIN FOREST OF THE OLYMPICS—The great trees of this forest have adopted as their companions the mosses and the ferns. Sometimes the trunks and wide-spreading and gnarled branches of the great maples will be sheathed entirely in moss with festoons of what seems to be aerial ferns which undulate rhythmically with every current of air, giving the trees a peculiar shimmering appearance. On the ground ferns and mosses are everywhere. Photographers take note that light meters can fool you for there is usually more light present in this woodland place than the meters record.

DRABAS FOR THE ROCK GARDEN

REX MURFITT, *Victoria, B. C.*

Would you buy a Draba if it were offered to you? Among the many colorful rock garden plants displayed at the nurseries, it is more than likely that this genus would be entirely overlooked. Any nurseryman would take a few moments to show you one or two species—if you asked him!

If you do a little reading, you will find that Drabas get fair coverage, but the tendency is to concentrate on the choicer species which, in addition to being tricky to grow, are getting harder to find. Many lovely and amenable varieties are left to the curt recognition or scant description of the nursery catalog.

It is true that many species are little more than weeds, with lax, sprawling habit and dingy, off-white or dirty yellow flowers. Between the aristocratic, high alpine species (so often described) and these weedy species, there is a range of Drabas capable of satisfying almost every gardener.

Before getting down to specifics, let us take a look to see just what a Draba is and where it belongs in the plant kingdom. I suppose I would not be doing its image any good if I started by saying that it is related to a cabbage, or worse still, the mustard plant, yet this is so. The botanist classifies it as belonging to the family Cruciferae, the cross bearers; the name being derived from the arrangement of the flower parts, the four petals forming a cross.

All gardeners are familiar with many of the genera in this family, perhaps *Brassica* most of all, as it contains many edible plants, from broccoli to rutabaga and turnip. True, in these we may not be familiar with the cross-like arrangement of the flowers because our interest in these plants ceases long before flowering begins. Other genera are grown for the flowers alone—Alyssum, Arabis, Iberis (candytuft), Lunaria, the moonflower or honesty grown for the silver seed pod remnants. For those whose climate permits, there are the lovely multi-colored wallflowers.

The rock garden specialist's interest lies in the genera *Aethionema, Aubrieta, Hutchinsia, Erysimum, Lepidium, Morisia, Petrocallis, Ptilotrichum,* and *Thlaspi.* Perhaps some of these names are unfamiliar, but they indicate the popularity of the Draba's relatives, so they cannot be all bad, even with such a family tree.

For the most part the Drabas are easy, undemanding plants, tolerant of climate and a wide range of soils. For the specialist gardener who likes to experiment with soil mixtures, the miniature landscaper who works with containers, to the largest rock garden owner, this family has few rivals. One reason is that they propagate so easily, growing quite rapidly from cuttings or divisions in the open garden. They produce seed that germinates readily, providing a supply of young plants with good root systems that facilitate transplanting into various locations. All they ask in return for their generosity is a home where they can delve their roots deep into cool, safe depths between protecting rocks. Under such conditions they can endure much that

Draba sibirica

Rex Murfitt

adverse weather conditions may hurl at them. Many are by nature saxatile plants (growing among rocks) and once seen growing under these conditions, the gardener quickly realizes that ledges and crevices of the rock garden, or wall garden, are the best places to display Drabas. As long as the soil contains some organic matter and plenty of stone chips, or gravel, to ensure free drainage, it does not matter whether it is limestone or not. If these few conditions are met, the plants will stand more heat, cold, and excess water than where sitting soft, fat and vulnerable in rich garden soil.

Drabas come in several shapes, from ground-hugging carpets to rounded domes and down to tiny pincushions hardly distinguished from moss.

One of the easiest to grow and usually the most readily obtainable is *Draba sibirica,* sometimes to be found under the name *Draba repens.* I do not know which is the correct name, but sometimes it is better to look the other way botanically. The species name *sibirica* is a much nicer sounding name and one gardeners are more familiar with. This species differs from many Drabas as it has leafy runners in place of rosetted leaves. These runners carry narrow, oblong, slightly hairy leaves, barely raising themselves above the ground. As early as spring will permit, countless delicate, three-inch stems arise to open into heads of bright, light yellow flowers. There are fewer sights as lovely so early in the year as this simple carpet of green completely covered in the yellow mist of flowers.

Care of this plant is simple. Give it a light soil on a sunny outcrop or pocket in the forefront of the rock garden with a few square feet of 'elbow

room.' Let not its apparent vigor disturb you, as it is not invasive or uncontrollable. To preserve the emerald carpet appearance, it is good practice to severely shear all the dead flowers right down to the foliage, so far down, in fact, that some of the leaves get cut off. Clean up the mess with a hand brush and dump a bucket of light, sandy soil on top of the plant and work it in with your hands. This gives the rooting stems something to root into and assures a crop of healthy leaves.

Some gardeners use this plant as a groundcover for dwarf bulbs. There is little doubt that a combination of yellow and the blue of some early flowering bulbs is effective. If they do not always flower together, the green sward of *Draba sibirica* makes a pleasant garment for the often naked stems of the bulbous plants.

From the European mountains comes *Draba aizoon* which in cultivation proves to be extremely hardy, sun tolerant, and non-invasive. It has dark green, spiny rosettes made up of minutely hairy leaves. It forms a hard dome some three or so inches high; its golden flowers are carried on slender stems two to three inches high that have a pleasant habit of popping into bloom the first warm days of spring. The size and constitution of this species permits its use in a wide range of situations. It can be planted in the larger open spaces in the rock garden as well as in terrace gardens. It appears very natural in the 'cliffs' along a rock garden path and is equally at home in a vertical crevice of a dry stone wall.

Draba aizoides is another European plant with a wide spread across the mountain ranges of southern Europe and as a result is variable, a point that will soon be recognized if they are grown from seed. In fact, it is sometimes almost impossible to be sure whether you have *D. aizoon* or *D. aizoides,* they are so similar. Normally, this species is slightly smaller in stature than *D. aizoon,* but still able to compete for a prominent spot. The leaves make bristly-looking rosettes and the golden-yellow flower heads adorn the humping mass.

Draba bruniifolia, sometimes spelled *D. bruniaefolia,* and often listed as *D. olympica,* is a lovely plant. Although it may be similar in format to the two preceding plants, it has important differences. Where the two tend to mound and hump, this one makes a low, slowly spreading mat. The foliage is much softer, lacking the spiny character, the rosettes are smaller and of a fresher green. The flower stems are delicate, yet produce quantities of deep yellow flower heads, so much so that the foliage is barely visible. To retain the tight, alpine quality, it should be grown in sharp, gravelly soil.

Draba rigida is without doubt the best of the easier-to-grow species, comparing as it does in size and habit with some of the rarer and harder-to-grow ones. It makes dark green hummocks of tight rosettes that resemble a pincushion, and in early spring numerous flower stems sprout from every angle, bearing rich yellow blooms. There will never be any danger of this one becoming too large for the smallest spot, for though it slowly increases in size it yet remains a tight, iron-hard mound.

Draba dedeana is a change of pace, a lovely little species from the mountains of Spain. The true species seems to be hard to obtain these days. In fact, one very experienced plant collector, who has explored the mountains of its native haunts, doubts that it is even in cultivation in the United States today.

What we grow as *D. dedeana* may be a form or a variation of the true plant, or it may be a superior form of another similar species. Whatever it is we grow and love as *D. dedeana,* it is truly a delightful rock plant, with its low, compact mounds of silvery rosettes made up of tightly overlapping, blunt little leaves covered with white bristles, giving the whole plant a soft, downy appearance. The heads of pure white flowers on inch or so stems make a welcome change in a family so predominately yellow-flowered. Such a choice plant as this can easily be lost or overcrowded in the larger garden, so a choice little pocket or niche should be selected. Close association with rock and a generous collar of stone chips will protect its downy leaves from the soil splashed up by heavy rain showers.

The danger of turning these notes into a series of descriptions of similar green mounds topped by yellow flowers is imminent. The easier to grow and useful garden species have been discussed, and all that remains to be said is a few restrained words on the true gems of the race. At the risk of challenging the reader, these are difficult to grow under normal garden conditions and, like a lot of other choice plants, very hard to come by.

Their arch enemies are hot, humid summers and excessive wet in the fall and winter. In their native homelands, winter conditions are dry and constant under an insulating blanket of snow, safe from a false spring that fools them into growth only to be frozen that very night. If you have no choice but to grow them in the open rock garden, their best chances of survival are in vertical crevices in partial shade (not full shade). Some elevation above ground level is desirable to get the maximum air movement during those spells of clinging humidity. If this spot can have some shelter from the worst of the drying winds, and a slight overhang be contrived to shed the worst of the heavier rains, it will help guard them against these hazards.

It is not easy to choose a species to head the list, but *D. mollissima* is my choice, if only for its soft, woolly appearance. It makes a rounded cushion, eventually the size of a good old-fashioned 'bun.' The leaves are tiny and covered with soft, white hairs, the rosettes tightly packed, giving the plant a solid compactness. Its fragrant bright yellow flowers are carried on two-inch stems, and have a less formal Draba look about them, owing to numerous stamens that protrude around the rounded heads of flowers. As the winter approaches, the whole plant begins to turn brown. This is not a sign of death, but preparation for the long winter of the Caucasus Mountains and its blanket of cool, dry snow.

Draba polytricha and *Draba bryoides imbricata* must both take equal place for charm and difficulty. The former has the dense, woolly cushion of *D. mollissima,* but its flowers are on much shorter stems culminating in tiny clusters of pale yellow flowers. There is no better description of *D. bryoides imbricata* than moss-like. Imagine a compact ball of moss topped with golden-yellow, four-petaled flowers on threadlike stems no more than one inch high and you have this lovely plant from the overhanging cliffs high in the valley of Zei in the Caucasus.

If you look through the pages of catalogs and seed lists, you will undoubtedly find several Drabas listed. Some may have glowing descriptions, others will have none—just a name. They may be described as having pure white flowers, or as golden carpets, or other such tempting phrases. Fine—

Draba mollissima

Rex Murfitt

Draba bryoides imbricata

Rex Murfitt

go ahead and try them as that's the fun of gardening. Just be prepared for an occasional disappointment should they not come up to expectations.

Before I become guilty of the crime of dismissing the family offhandedly, I would like to mention that our own mountains have a Draba population, many of which are excellent garden plants with all the characteristics that make the exotic species so desirable. If you are an easygoing, relatively contented gardener, I advise you not to go too deeply into the nomenclature. It is simpler to stay with whatever name the seed packet bears. North American species like *Draba oligosperma, D. andina, D. paysonii, D. incerta,* and *D. densifolia,* although they may be and are variable, should be grown at every opportunity, because once in a while you will hit upon a packet of seed that produces plants of such silvery cushioned beauty that you cannot help but become a Draba addict—like me!

* * * * *

THIS SUMMER, those of you who come to Seattle to attend the Annual Meeting in July and wish to become acquainted with Northwest flora, will find plenty of opportunity. Many will take advantage of the Sunday (July 26) day-long trip to Burroughs Mountain on Mt. Rainier. Some who come early and join Harold Epstein's bus tour will find themselves enchanted with the varied and beautiful flora of Oregon's high places. Other early ones, traveling independently in the same state, may venture further south into the Oregon-California border country of the Siskiyou Mountains. Then, after the meeting, those who remain for a while longer, including those on the bus tour, may be visiting the Olympic Peninsula's Rain Forest on the Ho River, and Hurricane Hill in the heart of the Olympics. A few may find time to visit in the Wenatchee Mountains in central Washington, while others cross the border into the lovely land that is British Columbia. For the benefit of these visitors there will be scattered throughout this issue short items of interest intended to heighten their anticipation.

* * * * *

HURRICANE HILL IN THE OLYMPICS—This high area is reached by auto over a perfect and picturesque highway. Hurricane is more of a very long, narrow ridge than a hill. From the lodge and general parking area, one may motor along this ridge for several miles in a southeasterly direction to Obstruction Point, or a short distance in the opposite direction to a picnic area. Here the car may be left and one may follow an asphalted trail for about two miles to where the old observation tower was situated. There will be flowers every step of the way. Many are Olympic endemics, such as *Viola flettii, Campanula piperi, Senecio websteri, Erigeron flettii,* and *Petrophytum hendersonii.* There is not enough room to list all the plants that may be spread along this ridge for your enjoyment, but you should keep a wary eye out for such plants as *Douglasia laevigata, Phacelia sericea, Elmera racemosa, Potentilla villosa* and *Synthyris lanuginosa.* Toward Obstruction Point you may see what appears to be hillsides yet covered with snow which in reality are great masses of *Erythronium montanum,* so thick that no one would think of walking through them. On this ridge, trees and shrubs, birds and animals, studies in geology, and superb scenery will compete with the flowers for your attention.

WHAT IS A ROCK GARDEN? Excerpts from a manuscript written by Mr. Donald E. Havens, Chairman of the Wisconsin-Illinois Section of the ARGS give his definition. This manuscript was intended to be, and may have been, published in the June-July issue of *Garden Talk,* a publication of the Chicago Horticultural Society. A copy of the manuscript was sent to the *Bulletin* editor with these words appearing in the letter of transmittal, "It's primarily a promotional effort and certainly contains nothing of interest to the sophisticated members of the ARGS." Not all ARGS members can be classified as "sophisticated" and the majority may not read *Garden Talk;* hence these excerpts.

"The uninitiated may well ask: What is rock gardening? It's a type of landscaping furnishing decorative charm, but with the prime objective of creating conditions assuring successful growth of miniature plants. Rock gardening is held by many to be an art and therefore not subject to any inflexible rules, but governed only by the individual tastes of the one practicing the art. This attitude has spawned some monstrosities in our time. Present day practice seems to embrace the concept that certain basic principles of design and construction, compatible with over-all good landscape design, should be the framework within which the individual's taste is expressed.

"Any space given over to growing plants in close proximity to rocks is, in fact, a rock garden. Native wild plants in most any region of the country, including ours, are found growing among rocks, in ravines, stream-sides, etc. One can recreate these conditions on home grounds quite easily with rather pleasing results.

"Present day rock gardeners have raised their sights, however, and are "going for" alpine gardens stocked heavily with alpine or sub-alpine plants. The challenge is great, success is sometimes elusive, but patience and persistence can be rewarding.

"The native haunt of most alpines is high mountain slopes above timber line, and below the perpetual snow of the summit. There will be windswept tablelands, even alpine meadows, through which traverse ice cold streamlets. Rock debris at the base of high cliffs will have a mantle of dainty plants, each blossom a jewel of perfection, so colorful that one thinks nothing growing at lower altitudes can compare with it. The wonder is that it grows at all, because it seems to be growing directly out of the narrowest imaginable crevice in the rock. Therein lies the secret of its life. The greatest part of the year that elfin plant has been dormant, dry and snug. Its growing season is 90 days, sometimes to 120 days. It made its annual growth, set and matured its seed, all within that short period.

"The alpine gardener sets himself the task of duplicating the conditions just described, but down out of the clouds in his own home grounds! His quest for success will keep him happily engaged for the remainder of his life. He learns early he is not alone in his madness. Countless numbers of his own kind are doing the same thing all over the world. Alpine and rock plant societies provide him means of communication, seed exchanges, plant exchanges, and sources of plants. Literature in periodicals of each group is helpful. He will never have room enough for his collected treasures even though the dimension of his garden seems to increase each year."

Do you have a different definition of a rock garden?"

PLANTS TO KNOW AND GROW

CONVOLVULUS MAURITANICUS

It seems unfair to call this refined and beautiful little Morning-Glory a Bind Weed! *Convolvulus mauritanicus,* although belonging to a family of ramping plants, is one of a number of choice small, non-invasive species. The low spreading shoots of fresh green splay out from the crown measuring little more than a foot at the most. When the little Morning Glories come in mid-summer, their beauty and refinement is evident. The blossoms of lovely, clear blue continue on for many weeks and into the fall. Little flowers just over an inch in width, a deep spot at the center, open each morning as the sun arises.

Authorities usually warn that it is not hardy in cold climates. However, several plants lived over winter, well covered in a situation where the snow lay deep. A safe practice, and an easy and simple way to keep it is to take cuttings of non-flowering shoots, dip them in root-inducing powder, grow them indoors in a plant pot with other house plants. This method is safer, perhaps, than chancing them all in the garden. Coming from North Africa as it does, care and special attention will insure the keeping of this fine rare plant.

CORTUSA MATTHIOLII

Cortusa matthiolii is distinct but allied to the true *Primula* species. Its name embraces a whole section under the name of Section Cortusoides. The well-known *Primula cortusoides* is the typical representative of most of the other species in the section. *Cortusa matthiolii* has rounded palmate leaves, somewhat hairy, on long petioles. Flowers on long scapes, vary in color and size, from white through purple, magenta, and yellow. Some are choice and comparatively rare. It grows in nature in the mountains of Europe and in Asia and favors moist and shady areas. It spreads by enlargement of the crown, and by seed that is set generously. The leaves are quite like its primrose relatives, crinkled and hairy. The reddish lavender blossoms are somewhat pendent and this is, perhaps, what makes it distinctive. It is perfectly hardy under the right conditions and is a choice and worthy plant to have in the garden. A rare form, *C. m.* var. *alba* is known and can occasionally be found in seed lists.

ANEMONE BLANDA

A lovely sight in spring is the spread of *Anemone blanda* growing thickly through the wide mats of Thyme, and coming up between the rosettes of Sempervivums. The two ground covers in my garden were designed to fill the margin of the garden separating it from the lawn. *Anemone blanda* was originally planted in a specially prepared spot across a wide stone step away from the spreading plants. Mysteriously, through several seasons, the whole colony abandoned that location, leaving only an occasional clump.

The prevailing southwest wind carried the seed to the welcome protection of the shaded ground where the seed and the resulting corms found the ideal root association. We often forget that the wild flowers of the world seldom grow in isolation, but rather are usually found in the company of other species.

In this instance, Thyme and Sempervivum were the ideal cover to allow

the taller *Anemone blanda* to grow and display the ferny leaves and the lovely blue blossoms—a white one came along, too. The whole exhibit rivals what might be seen in the Anemone's habitat in Greece and in the Isles of the Mediterranean. By July, the Anemone disappears, leaving the Thyme to blossom above. A thought to those who have failed in establishing this choice Anemone; try pushing the small corms into a ground cover of some sort.

CAMPANULAS

Campanulas have always been favorites and are so considered by most rock gardeners. Although of modest effect and display of color, the great variation among the species and their adaptability in the rock garden scheme makes them desirable. Through the years many sorts have been in and out of the rock garden, some are lost but not forgotten, and hope persists to have them once more.

Recently, the form of *Campanula garganica* named *C. g.* 'Blue Diamond' has been established and is a desirable addition, being several shades deeper blue, and the leaves a bit larger and of firmer texture. *C. aucheri* is always an admired species, with its large blossoms just above the spoon-shaped leaves on long petioles. It is an aggregate of several similar species, needing a botanist to differentiate. All have fine large blue flowers. *C. aucheri* is not difficult to grow, but like most of the treasured kinds, slugs make for it first.

C. raineri, one of the best when the true species is obtained, sometimes is mistaken for a dwarf form of *C. carpatica.* The true plant is distinct, compact and low-growing with small leaves, gray and slightly scalloped. The large, deep lavender blossoms open wide to cover the leaves, and are held aloft on very short stems. *C. tommasiniana* has lived for many years in a crevice at the top of a wall. It is one of the latest to bloom; after others have passed, the narrow, almost tubular flowers of lavender appear at the axils of the narrow leaves.

C. caespitosa is not too well known. It has much the appearance of the well-known *C. cochlearifolia,* the same creeping habit and similar leaves. The pale lavender flowers are distinctive, being drawn in and puckered at the mouth, making one wish it could be that rare and unobtainable treasure *C. zoysii.*

C. cochlearifolia, so well known and useful, has variations in size and color of flowers. Some are the usual little tubby bells, others are tiny and half the size. Some are of deeper lavender and have more substance. The white form, *C. c. alba,* is lovely. These species that spread by means of stolons beneath the ground should be reset after flowering to prevent a straggling growth.

C. pulla is a desirable species, dwarf and growing as a tuft of dark leaves. The flowers atop the short stems are open trumpets of deepest purple. It deserves a choice spot and is especially beloved by slugs. *C. lasiocarpa,* native to the western states, Alaska and Japan, is one of the choicest, although of no long life. The well-opened flowers are a light shade of lavender-blue, slightly ribbed in effect at the center. These and the dark green foliage are of firm texture. Seed usually germinates freely.

All by Betty Jane Hayward, *Scarborough, Maine*

A COURSE IN ALPINE ECOLOGY

NICKOLAS NICKOU M. D., *Branford, Conn.*

The distribution of plant species has always intrigued me, particularly those involved in the Pleistocene shift and those found in Arctic and alpine situations. Of all that has been written about this subject I have read only a small portion, so when I saw advertised a course in alpine ecology given by the Rocky Mountain Nature Association I felt it would be a good chance to get my academic feet wet again. My last formal studying took place over twenty years ago when I was finishing medical school.

Keeping up with the latest both in medicine and in the plant world by reading, attending seminars and lectures is one thing, but taking a college credit course is another.

Needless to say, the enthusiastic rock gardener who reads the various publications available, attends meetings, and feasts occasionally on Farrer, Clay, Thompson and others is himself perpetually a student.

Our teacher was Dr. Paul Kilburn, Professor of Biology at Principia College in Illinois. In addition, specialists in varied alpine studies from the University of Colorado and the Institute of Arctic and Alpine Research lectured and guided some of the field trips. Most of the study areas were in Rocky Mountain National Park, particularly the Trail Ridge area.

Each morning we met at 8 A.M. for lectures followed by car convoy generally up Trail Ridge Road which rises to a high point of 12,183 ft. The timberline is at approximately 11,000 ft. so there are many miles of driving in alpine tundra on an excellent paved road. The hairpins are not for the weak of heart but the views are magnificent and the close proximity of extensive tundra is a treat.

Numerous plants were in bloom and could be appreciated by the casual tourist from the car, but a short walk on the meadows would be much more rewarding. By far most of the tourists posed in front of snow banks for pictures and threw the ceremonial July snowballs at each other. Some dutifully read the informative signs describing the alpine tundra and the distant mountain sights, but few walked more than a few yards from their cars. It's a pity, of course, but it does save the delicate tundra from trampling.

Our course ran from Monday to Saturday, July 7th through 12th and Trail Ridge was at its peak. On the first day, following a one-hour lecture on the tundra plants we were to see and a discussion of the plant life forms of Raunkiaer, we drove to Fall River Pass, 11,796 ft., parked, ate lunch, toured the excellent museum, then started our first field trip. It was a familiarization tour along the abandoned Fall River Road which was unpaved when in use. It has been closed off over thirty years, so has become an ideal location for the study of plant succession in the tundra. It was very slowly reverting to the stand-types of the immediate surrounding tundra. As we progressed through the fellfields, plants 1 to 2 inches in diameter of *Silene acaulis* and *Paronychia sessiliflora* seemed to be getting started first. Further along where the snow accumulation was greater, *Ranunculus adoneus, Geum rossii,* and

dwarf willows were getting started. It was obvious that many more years with no further man-made disturbances would be required to carpet the old road so that it resembled the adjacent tundra.

Scientists lately who have studied the Arctic tundra north of the Brooks Range in Alaska have found it to be easily damaged and very slow to repair itself. Even a single passing of a heavy vehicle leaves a track which can be seen for years.

One's first impression of the tundra was of a brownish-greenish undulating mountain top which appeared quite uniform, but closer study revealed a complexity of situations which have been studied, described, and named by various authorities throughout the world. These variations are known as stand-types.

An extensive study has been made on nearby Niwot Ridge. The different stand-types are generally named for the indicator or the commonest plant in a certain situation. Wind is the prime factor in determining the plant cover and to a lesser degree other factors are involved. Sloping areas facing west, the source of the prevailing winds here, are scoured by frigid, high velocity winds with little or no snow cover resulting, while on the lee of the same ridge many feet of snow would be deposited.

The two main plant stands in this severe habitat are the Kobresia Meadow stand-type and the Fellfield, or Cushion Plant stand-type. The former is named for a sedge, *Kobresia myosuroides,* which is intolerant of snow cover, and the latter for its rocky, stony, pebbly surface with scattered cushion plants represented by *Eritrichium aretioides, Arenaria obtusiloba,* and others.

Another feature noted during our first walk was that all the plants were perennials to compensate for the severe winters and short growing seasons. There was one exception, *Koenigia islandica,* a tiny annual which required constantly running water and a cold environment. It was found at the base of snow fields which required most of the summer to melt and thus supply the necessary conditions. An ideal place to look for this interesting plant is on the various levels of the strange moor high on the slopes of Mt. Evans.

Something else of interest which we learned on the first day was about the vegetative methods of propagation exhibited by two plants as an adaptation to the hostile tundra which would start new plants more effectively than seed. One was *Polygonum viviparum* which instead of producing seed on its flower stalk, formed tiny bulbils which fall to the ground and can make a plant resistant to the elements much sooner than could a germinating seed. The Whiplash saxifrage *(Saxifraga flagellaris)* sends out runners which bear minute plants at their tips which root and start self-sufficient plants while still supported by the mother plant.

We slowly drifted through the Krummholz and down into the subalpine forest of Engelmann spruce and subalpine fir. The last few hundred yards were through snow drifts and wet boggy areas which took the starch out of this office-bound plantsman.

The frequent lectures, the magnificence of the scenery, and the interesting plants and habitats took our minds off the fact that on our first day we had hiked about three miles gently downhill through tundra from 11,796 ft. to Poudre Lake at 10,758 ft.

One of the plants we saw on the first day which was new to me was

Hymenoxis (Rydbergia) grandiflora

Dr. Nickolas Nickou

Hymenoxys (Rydbergia) grandiflora, also called Old Man of the Mountain, which bears the largest flower on the tundra, an eye-catching yellow composite. Also new for me was the Sky Pilot, *Polemonium viscosum, Primula angustifolia, Thlaspi alpestre, Castilleja occidentalis, Lloydia serotina, Androsace septentrionalis, Paronychia sessilifolia, Sibbaldia procumbens,* and *Besseya alpina.*

In addition, there were such old friends as *Eritrichium aretioides, Silene acaulis, Trifolium nanum,* and many others. Some I had seen on Beartooth Pass, in Montana, others in Iceland and Greenland, and on the top of Mount Washington.

On the second day, following lectures on the tundra community types, we again took to the highlands for some sampling of measured areas to determine the species in the different community types and their frequency of occurrence.

As the Kobresia Meadow was of particular interest to our professor, we studied it in greatest detail. This is a relatively snow free community which supports quite a few species despite its exposure to severe winds and temperature extremes. The commonest plants in our quadrants were Kobresia, *Polygonum* [illegible]*rtoides, Artemesia* sp., *Carex* sp., lichens, *Trifolium nanum,* and *Selagi*[illegible]*a densa.* In addition, depending on depth of soil and moisture, there were fewer plants of *Polygonum viviparum, Erysimum nivale, Arenaria obtusiloba, Silene acaulis, Saxifraga rhomboidea, Mertensia viridis,* and *Caltha leptosepala.*

The fellfield is the stand-type which is subjected to the strongest winds, is snow free and averages less than 50% of plant cover. The Kobresia

Meadow is also a snow free stand-type but is completely clothed in vegetation. It is the fellfield or Cushion Plant stand-type which would interest the rock gardener most of all. It is a scree in the rock gardener's parlance, and I was surprised that our instructor had no knowledge of the term. Here grew the plants which typify the ultimate in alpines, tight, hard buns studded with entrancing flowers which only the experts can grow at lower altitudes, and then generally only in an alpine house.

The most exciting to me always is the gorgeous *Eritrichium aretioides* which along with *Androsace chamaejasme* I consider to be the elite of this wind-blasted, dessicated world. We did not find the latter on the Trail Ridge, but it was common on some parts of Mt. Evans.

On the fellfields, we also saw *Arenaria obtusiloba, Oreoxis alpina, Paronychia sessiliflora, Trifolium nanum* and *Phlox pulvinata.* Certain species were found in several stand-types but some definite incompatibilities were obvious. Typical fellfield plants would not tolerate prolonged snow cover. *Geum rossii* was quite cosmopolitan and did well in most stand-types. It was the commonest plant on the tundra. *Polygonum bistortoides* was equally adaptable and, in fact, we found some at 7500 ft. which were 2 ft. tall and did not look like the same species. It is grown in England as a robust ground cover in some areas.

In addition to the Kobresia Meadow there is the Hairgrass stand-type which is also turf-like, but has some snow cover in winter. Its indicator plant is Hairgrass *(Deschampsia caespitosa),* a true grass. Growing beside this dominant plant were the ubiquitous *Geum rossii* and *Polygonum bistortoides* plus *Lloydia serotina, Trifolium dasyphyllum, Silene acaulis, Castilleja occidentalis,* Eritrichium and others.

The areas with the heaviest snow cover which allowed the shortest growing season were frequented by *Sibbaldia procumbens* only. Where snow persisted still longer no plants would grow as the first snow would fall shortly after the last season's snow melted.

There were a number of other stand-types, but to describe them completely and at all seasons would require a book rather than an article. Our text booklet, which can be procured from the University of Colorado Press, was *The Ecosystems of the East Slope of the Front Range in Colorado* by John W. Marr.

We were fortunate in having Dr. Betty Willard give some of the lectures and accompany us on several of our excursions. She was the one who took the group to Mt. Evans, a short distance west of Denver. This mountain is an alpine text in itself. Near the summit we found the magnificent *Claytonia megarrhiza,* and further down the fragrant and enchanting *Androsace chamaejasme.* Nearby was a fine stand of wind-contorted Bristle-cone pine *(Pinus aristata).*

On Niwot Ridge, near Boulder where The Institute of Arctic and Alpine Research has its study stations, we learned about the climatological studies being done in alpine areas. It was here that I saw large numbers of *Lewisia pygmaea* and on the long hike up, many fine specimens of *Primula parryi.*

Some of our trips took us through the subalpine forests frequented by Engelmann spruce and subalpine fir. The common ground cover was *Vaccinium myrtillus,* along with a scattering of Pyrola. As we walked through

Class studying tundra on Niwot Ridge

Dr. Nickolas Nickou

the forests toward the tundra, the trees became shorter and shorter. The last specimens before reaching the Krummholz exhibited flagging because of the severity of the wind. No branches formed on the windward side of the tree but a definite trunk was evident. Similar manifestations may be seen at lower elevations near beaches where ocean winds affect tree growth. On the island of Aruba, the famous Divi-Divi trees exhibit an extreme form of flagging with the trunk itself bending away from the constant trade winds.

The Krummholz is the last vestige of tree growth. No definite trunk is seen. The tree resembles a topiary creation sheared so the windward side is at ground level tapering upward toward the leeward side which is several feet in height with an abrupt drop back to the ground. These dwarf trees are found in the lower portions of the tundra. In the ameliorated microclimate to the lee of these trees are occasionally found plants which frequent lower elevations although surrounded by the tundra habitat.

On the last day of the course, we hiked from Glacier Gorge Junction to Andrews Glacier. After a rest stop at The Loch, we proceeded on up to the glacier. It was five miles up and, of course, the same distance back. We huffed, we puffed, we looked longingly at every soft grassy patch, but our professors cajoled us on. When we reached the base of the glacier, the lecture on the plants of the terminal moraine started. Of interest here was that 70 or 80 per cent of the Eritrichiums were white instead of the usual blue.

The view was magnificent, and on the way up I took numerous photographs of the scenery and plants. I remember best the dwarf *Kalmia polifolia*, *Salix reticulata* in bloom, and right on the banks of a rushing stream large

plants of the impressive *Primula parryi* growing in the spray of the rushing water. We drank from the stream and ate snow higher up. It was a clear, warm day and as we put ourselves into the spirit of the climb we gradually removed parkas, then sweaters, and finally with rolled up sleeves and open collars we pulled ourselves up the talus for the last stretch to the glacier.

All of these observations can be made from the car or with a minimum of walking, but to do it right in a satisfying and thrilling fashion one must get out and walk, and walk for miles.

REQUESTS BY MEMBERS

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

I am trying to compile a large collection of the genus *Saxifraga,* section Kabschia (including Engleria) and I am interested in the wild original species from their localities, as well as in good cultivated hybrids. Correspondence with similar collectors on this subject and exchange of plants is welcomed. My Index Plantarum 1970 will be sent on request to any interested ARGS member. So writes Dr. Jiri Josifko, Prague-Strasnice, Novostrasnicka 58, Czechoslovakia.

Mr. Donald Morrison, Old Route 26, South Paris, Maine 04281 wants *Aethionema* 'Marvis Holmes' (a sport of 'Warley Rose') plants, and *Artemisia ludoviciana* seed or plants.

Styrax wilsonii, seed or small plants—Mrs. Connie Raphael, 2841 Magnolia Blvd. West, Seattle, Wash. 98199.

Would like to exchange wild flower slides, seed, or living plants. Special interests are *Calochortus, Cypripedium, Erythronium, Fritillaria* and *Trillium.* In exchange will supply similar material from Eurasia and the Far East. This from Mr. Josef Halda, Narodni tr. 23, Prague 1, Czechoslovakia.

Sanguinaria canadensis, double, will buy. Mr. Ranstead S. Lehmann, 416 East Chicago Street, Elgin, Illinois 60120.

I am studying the genus *Sedum,* section Aizoon, but have had difficulty in acquiring specimens and information of the following Japanese species: *Sedum maximowiczii* Regel, *Sedum sikokianum* Maxim, and *Sedum yabeanum* Makino. Seed, plants, and information on distribution and habitat. This is the request of Mr. James E. Kirby, Riverside Cottage, Ardentinny, By Dundoon, Argyll, Scotland.

Joan C. Sindusky, 256 Twelfth Ave. N., South St. Paul, Minn. 55075 wishes to purchase the following books: *Campanulas* by H. Clifford Crook, *Gentians* by David Wilkie, *The Present Day Rock Garden* by Sampson Clay, *Primulas in the Garden* by Kenneth C. Corsar, *The Primulas of Europe* by John Mac Watt, and any delightful informative old books about alpines.

Campanula zoysii, seed or plant. Mr. Donald E. Havens, 2323 West Club View Drive, Glendale, Wisconsin 53209.

Aquilegia adoxoides (Isopyrum japonicum) and *Ranzania japonica,* seed or plants. These are wanted by Mr. Dwight Ripley, Stirling House, Greenport, Long Island, N. Y. 11944.

Mrs. Albert Brauss will buy plants of *Hepatica* x *media* 'Ballard's var.' and her address is 7517 196th N.E., Redmond, Wash. 98052.

Now comes Sallie D. Allen, herself, wanting the white form of Rhodora, *Rhodendron canadense.* Her address is in the next paragraph below.

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.

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THE TRIP TO BURROUGHS MT. ON MT. RAINIER—TRAIL FROM YAKIMA PARK (where buses and autos will be parked) TO FROZEN LAKE—This trail is, for at least half its length, nearly level, extending parallel with the peaked ridge, the peaks of which are called the Sourdoughs. Along the trail there are flowers nearly every step of the way. If you are headed for Burroughs, some 1000 feet higher, you should wear blinders along this trail, otherwise you will be stopping time and time again. Here the flowers are more subalpine than alpine yet have the power to attract much attention. You may see *Luetkea pectinata, Potentilla flabellifolia, Lupinus subalpinus, Phyllodoce empetriformis* and *P. glanduliflora, Phlox diffusa, Campanula rotundifolia, Eriophyllum lanatum, Hydrophyllum congestum,* and many others.

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A SIDE TRIP TO MT. FREMONT—An easy trail from Frozen Lake to Mt. Fremont will disclose bright patches where *Potentilla fruticosa* blooms at the beginning of the trail. Marmots and possibly ptarmigans may also be seen in this sloping meadow. Further up the trail gay spots of blue and light green peer from the crevices where *Polemonium elegans* lives. In the sliding talus, *Collomia (Gilia) larsenii* struggles to keep its lengthening roots anchored and spreads its dusky flowers on the talus surface. Half way up the trail on the downhill side can be found the rare *Sedum integrifolium* with its purple blossoms. All along there are several species of Penstemon, notably *P. davidsonii.* They love to decorate the warm rocks with purple blossoms.

PYROLA ASARIFOLIA MICHX.

DOROTHY METHENY, *Seattle, Washington*

The genus *Pyrola* L., with about 15 species, is assigned by some botanists to its own family, the Pyrolaceae (which also includes *Chimaphila, Moneses,* and *Monotropa*). Other botanists include it in the great family of Ericaceae, where it joins that group of plants whose flowers have distinct petalled, rather than gamopetalous corollas. The distinction between these two families, according to Alfred Rehder, would be chiefly that the Pyrolaceae are suffruticose, i.e. perennial plants with only the lower parts of the stems and branches woody and persistent. Whereas the Ericaceae are mostly upright or prostrate shrubs.

The name Pyrola was formed as a diminutive of Pyrus, meaning "little pear," because the leaves of some of its species were thought to resemble pear leaves. The specific epithet, of course, refers to the fact that the leaves of *P. asarifolia* somewhat resemble those of *Asarum caudatum,* the wild ginger.

The genus has a circumboreal distribution in the north temperate zone, with species reported (R.H.S. Dictionary, 1965 edition) indigenous in eastern North America, Europe (including Britain), western Asia, Japan, and western North America from Alaska down through British Columbia, Washington, Oregon, and to California. Christopher Grey-Wilson, in his article, "The Heights of Olympus" (*Bulletin* of the Alpine Garden Society, Vol. 37, No. 3, Sept., 1969, p. 261) mentions seeing *Pyrola rotundifolia* (synonymous with *P. asarifolia*) and *P. chlorantha* on Mt. Olympus in Greece.

Half of all the Pyrola species are indigenous in the Pacific Northwest, where they generally prefer moist areas in coniferous forests. One member of the genus, *P. aphylla,* is a virtually leafless saprophyte, but the others have the well-deserved common name of "Wintergreen" (not to be confused with the aromatic oil producing *Gaultheria procumbens.*

In the Pacific Northwest, the species of Pyrola are rather variable. Botanists have tended to separate the species and varieties on the strength of color characteristics of leaves and flowers; and, as the colors are not durable in herbarium specimens, some confusion exists. This is particularly noticeable in the case of *P. asarifolia,* which has an impressive list of at least sixteen synonyms (contributed by a dozen authors), of which the most common in the Pacific Northwest is *P. bracteata.* This species is distinguished by solid green, not mottled, leathery leaves, 3 to 7 cm. long, on petioles usually at least as long as the blades. The leaves are all basal, shiny on their upper surfaces, paler and frequently reddish beneath, though our plant's leaves are just a lighter green beneath. The flowering stems, which may be from 6 to 16 inches tall, bear one or two scarious bracts below the raceme of 10 to 20 flowers, which appear over an all-summer season. Their exserted, declined styles have a toboggan slide, or ski jump appearance, and a collar below the stigma. Summer would be over a month sooner at their home in the mountains, but ours were still blooming in mid-October in our garden not far above sea level.

Two varietal forms of *P. asarifolia* are sometimes recognized; *P. asarifolia* var. *asarifolia,* with nearly entire, often cordate leaves and sepals at less than 3.5 mm. long; var. *purpurea* (Bunge) Fern. with sepals at least 3.5 mm. long and leaf blades usually acute at one or both ends, and noticeably serrulate owing to the excurrent (prolonged) veins.

The small plant which we collected five years ago from the forest on the west side of the Cascade Mountains in Washington at an elevation of about 2,500 feet, appears happily established in our sandy, acid soil under a very old apple tree. The original grassy turf in this area was turned under some time ago. Nature has furnished it with a variety of mosses, which form a comfortable seed bed for Rhododendrons, Chamaedaphnes, Gaultherias, Vacciniums and numerous other seedlings, undoubtedly transported there by the birds that perch on the apple branches above. *Rubus lasiococcus* and *R. pedatus* run about almost too freely, and *Selaginella wallacei* has appeared there. This is one part of our garden where a sprinkler is always in place so that it can easily be put to work once a week in dry weather.

Though our plant has so far had no more than two flower stalks, its creeping root stalks have produced a number of shoots over an area of about two square feet. We can hope to see more flower stalks rising from these new shoots before long. The leaves of our plant are medium dark green above and somewhat lighter and duller green (not at all reddish) beneath. The flower stalks are only six inches high and the flowers are pink at the start, turning purplish with age.

Synonyms for *Pyrola asarifolia* Michx., according to Szczawinski, are as follows: *Pyrola bracteata* Hook., *P. incarnata* Fish., *P. uliginosa* T. & G. ex Torr., *P. elata* Nutt., *Thelaia bracteosa* Alef., *Pyrola rotundifolia* var. *bracteata* Gray, *P. rotundifolia* var. *purpurea* Bunge, *P. rotundifolia* var. *incarnata* Fish., *P. rotundifolia* var. *uliginosa* Farw., *P. asarifolia* var. *bracteata* Jeps., *P. asarifolia* var. *purpurea* Fern., *P. asarifolia* var. *incarnata* Fern., *P. asarifolia* var. *ovata* Farw., *P. asarifolia* var. *uliginosa* Farw., *P. bracteata* var. *hillii* J. K. Henry.

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ON BURROUGHS PLATEAU—If you want to see flowers, keep your eyes on the ground—not on Mt. Rainier (I dare you) for here on this plateau you will be closer to the great snowy dome than at any other time. Here you may find scattered plants of *Silene acaulis* nestled among the rocks. As you examine the pink stars of this mounding silene, a flash of scarlet catches your eye where *Castilleja rupicola* enlivens the gray rocks with its brilliant scarlet inflorescence. On the sun-baked flat of the plateau *Erigeron aureus* adds gold to the landscape. Several linear-leaved Arenarias, *Arenaria laricifolia* among them, sprinkle the pumice stone with white, and if you must have blue in your color scheme, *Lupinus lyallii* happily obliges.

ALL IS NOT LOST

PAUL PALOMINO, *Seaford, N. Y.*

With the scarcity of alpine nurseries in this country, many of us are patronizing nurseries abroad. This sounds easy enough, but with shipments held up by today's slow mail service and the precautionary measures of our Dept. of Agriculture, entire orders are sometimes lost. Shipments that look fairly healthy upon arrival will not show immediately their dislike for root disturbance, dryness or wetness while in transit, or for the gassing that the U.S.D.A. puts them through. After they are potted up, they start to show their resentment by dying one after another.

The following paragraphs are meant to help such plants through these trying times. This article relates a method I use and found successful and is not meant to be considered a sure-fire cure-all. I will relate to you, through all my mistakes, how I came to use this method.

About four years ago, I had an alpine house erected. I was very pleased with it and decided to order some alpines and saxifrages unattainable in this country. So, that summer I wrote to all the overseas alpine nurseries I could find. After reading all the catalogues received, I decided upon two nurseries, one for alpines and the other noted for their saxifrages. That November, I sent a large order to each of these nurseries. While waiting for the plants to arrive, I spent my evenings reading alpine books, checking the culture of each plant ordered, and in anticipation, I mixed three different potting composts.

Finally, after a month the alpine plant order arrived. The plants looked in fair shape and I spent that night until the wee hours in the morning potting alpines. Nothing much happened the first week, but to my horror, in the second week many of the plants collapsed and died. Right then and there, I knew I was doing something wrong. After giving the situation some thought, I vaguely remembered reading an article somewhere on collecting plants in the wild. It said that when such plants were sent or brought home, they were placed in a closed frame with gentle bottom heat and weaned back to health as a result of new root growth. I bought an inexpensive heat cable, set up a section three feet by three feet by six inches deep in one of the alpine house benches with a mixture of sand and peat, placing the heat cable on the bottom. I saturated the mixture with Pan O Drench (to prevent fungus that could rot the plants) and let it set for a day. In the meantime, I built a frame with four eight-inch legs and covered the sides and top with clear vinyl (the heavy kind that comes in rolls). This is to be used as a cover for the plants, to retain moisture and keep the air temperature up (my alpine house temperature goes down to below freezing). The following day I took out of the pots all of the plants that were yet alive and planted them neatly in rows in what I will call a weaning frame. Within a week the plants looked considerably better, with no new casualties.

The order of saxifrages arrived and were also placed in the weaning frame. As the weeks went by, plants from the first order were potted up as they showed new growth. At the same time many of the saxifrages in the same frame were dying, so I moved them over to the side of the frame where

I allowed the mixture in that section to get a little drier. This suited them much better. They also were potted as they showed new growth. I lost about half of both orders and was far from satisfied.

The following summer, I gave much thought to my problem and came to the conclusion that the mixture was holding too much moisture. In the fall I made a new mixture of fine grit, sand, and peat and went about setting up a weaning frame, the same as in the preceding winter.

Winter came and I duplicated the orders from the previous winter. The plants arrived in fair shape and were set up in the frame, the same as before. This time the plants fared much better with only about 20% casualties. I was pleased with the alpines, but the 20% loss was mostly among the saxifrages—so back to the drawing board. In the same frame that spring I rooted some alpines from cuttings and some saxifrages.

The following fall, I decided to use an entire bench three feet by seven feet. I put in a propagation mat (a heat cable moulded in a flexible plastic mat ¼ inch thick that can be rolled up for storage). The mat measures eighteen by seventy inches and uniformly heats an area two by six feet by four inches deep. A thermostat can be purchased to be used with the mat. When setting up the frame for operation, the mat was placed on the bottom touching one side and the back of the bench. That left a section of one foot in the front of the bench and one foot at one end which would receive little or no heat from the mat. In this section I am going to put saxifrages, which I have found do not care for much bottom heat. A cover was made the same as before, but this time to cover the entire bench. Small holes were cut in a four by three foot section of the top. This was done to let out excess moisture as miffy alpines that resent moisture on their foliage are to be put there along with seed pans and newly potted plants as they re-establish themselves. Saxifrages will be put along the front unheated section. The rooting medium in the section for the miffy alpines and saxifrages was to be kept half as moist as the other section.

The new weaning bench has been in operation since October. This being only March, four large orders of alpines and saxifrages have gone through with about 2% loss, so you can draw your own conclusions.

I also rooted alpine rhododendrons, conifers, saxifrages, and lewisia cuttings in the moist section. I also brought through, in the new frame, some pines, chamaecyparis, and a few rare conifers from England, which normally have a very high mortality rate when potted up as received. These were not year-old rooted cuttings, but plants a few years old with massive root systems and in some cases having trunks ⅜ to ½ inch thick.

Yes, I am pleased, and I wish you the same results if you try the method I used.

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FROM FROZEN LAKE TO BURROUGHS PLATEAU—Keep your eyes turned to the left, the up-hill side of the trail. This trail is not long but rather steep. Cuddled in the lee of the rocks there are many little colonies of *Saxifraga tolmiei,* often mistaken for a white sedum, and the quaint *Oxyria digyna,* little mountain sorrel. Sometimes sheets of *Salix nivalis* spread between the rocks making shining, dark green mats. At the head of this trail you will be on the near level again and at over 7000 feet in elevation.

ONE MAN'S JAPAN

ROY DAVIDSON, *Seattle, Wash.*

Japan is many things to many people; no two would bring back similar impressions. A plantsman going to Japan for the first time is likely to be quite astonished, as I was, by the profusion of plant life there, both by its quantity and its variety. Little wonder the Japanese people have paid little heed to foreign plants, for their own flora is so rich that many fine things are even yet scarcely known in spite of centuries of culture linking them so closely with nature. One reason, no doubt, is that these people have been tradition bound; their ancestors did not acknowledge yellow flowers, white was associated with death, but anything blue was highly regarded; red flowers were festival flowers. To this date flowers in themselves are only secondary to the total evaluation of a plant's worth; scale and texture of the foliage being of primary consideration, and, as always, most anything grown strictly for its flowers is a pot subject. However, blue is hardly more prized than yellow today, red is still festive, and white is no longer used solely to decorate graves. Many plants never before attempted are being grown today in gardens.

It is reported that Japan has five thousand species of vascular plants, all in an area equal to that of our state of Montana. Ecologists and plant geographers explain this embarrassment of riches in terms of the earlier plants' abilities to either migrate or speciate in order to survive the challenges of intermittent periods of volcanism and glaciation which birthed and shaped the land. Those unable to do either are now numbered among the paleobotanical (fossil) elements of the Japanese flora, though they include many species with close relatives in present day central Asia and North America.

A warm and wet summer accounts for the lush verdancy disguising Japan's knife-sharp mountain ranges and knife-cut canyons and the broad flood plains, now strictly agricultural. The arboreal members are largely of evergreen nature and consequently the autumnal coloring of the deciduous element becomes of greater impact than the gaudiest floral display, and is traditionally revered. This is easily understandable after the relative monotony of the greenness of the remainder of the year.

The unique position and topography of this small country allow a wide range of life zones, from the semi-tropics of the southern islands, with a profusion of ancient palms and cycads (not much altered from their ancestors) to the boreal flora of northernmost Honshu and Hokkaido. It is to these latter areas the alpinist is drawn, though many lowland regions throughout the land are rich in temperate subjects. Even as the land mass lay beneath polar ice, the shores remained remarkably mild, we are told, and here those elements which could migrate survive, many of them today found only on coastal dunes, in ancestrally-foreign circumstances. Others found it within their abilities to adapt and evolve to forms better suited to the changing environments, giving rise to a most unusual number of endemic species. Some of the most striking examples include *Peltoboykinia*, taken as derived from *Boykinia*; *Weigela* from *Diervillea*, and *Schizocodon* from *Shortia*. Certain formerly widespread elements were driven southward as far as Japan during glacial periods and remain

today as relict endemics; examples being *Kirengeshoma*, *Tanakaea* and *Anemonopsis*.* These are but part of the conditions and circumstances contributing to the present Japanese flora, of tremendous fascination to plantsmen and scientists alike.

Toward the briefest of investigations of this great treasury of plants, my short stay in Japan was rewarded with two major explorations into fascinating areas, a number of short hikes (to every possible short walk a great deal of importance is attached), innumerable visits to shrine gardens and temple grounds, to nurseries, plant shops, and street stalls, and to bookshops, each with its own surprises and discoveries. Always memorable will remain the hospitality; one of the true rewards for having ventured to Japan is to experience the warmth of the people; the polite, even distant, but sincere regard for the welfare of a guest. Early one dawning day as I was wandering about Tokyo, trying to 'get the map on the ground', I was observed puzzling at an intersection by two workmen (who else would be up so early?) and after some discourse between themselves, one approached and apologetically asked if I might not be in need of assistance. It was not the act itself but the way in which it was done; privacy in Japan is the most respected of conditions, understandably; although they knew full well I was lost, they respected my right to be lost!

Literally thousands of tourists visit Japan annually, its shrines, its gardens, and its night spots; all return impressed with this more than politeness, but when a plantsman goes, the word travels with the wind, and he is passed from friend to friend, plied with tea and goodies, sake and plant gifts. I was most fortunate in having friends in Japan and in being able to enjoy their hospitality, their friends and their friends' friends, their interpretative skill (I speak not a word of the language, even now). Without them, I should have had a very bad time indeed, for I am a miserable tourist. Principally, my time was spent with Jack and Ginko Craig, friends of many years, and together we made most of our explorations. There were days when we scarcely made headway for the many little receptions . . . . teas, cakes, sweets, ceremony, gifts . . . . and it was all thoroughly delightful. And the food . . . . I loved it, all of it!

The Craigs live in Shimizu, a seaport town some forty miles nearly due south of Fuji, with an unobstructed view of the sacred mountain from the rise of their hill. At the base of the hill, along the street which was a section of the Imperial Highway linking Kyoto with the then new capital of Tokyo, is one of the oldest and finest of nurseries displaying magnificent bonsai, some having served to illustrate publications concerning the ancient art. It was rather awesome to see a maple, living and breathing, displayed alongside its portrait in a book many year old, as the tree appeared in its early manhood, one might say. Until one has seen such examples, the fullest meaning of the art is not explained, and then suddenly it does not need explanation.

A short walk south of the Mikadodai section of Shimizu one evening showed what an undisciplined tangle of growth the original cover must have been. Among such introduced elements as timber bamboo, the wild camellias, *Hydranga hirta* with dainty french-blue lacecap clusters, and a reforestation of

*These are not original ideas but are directly gleaned from taxonomic and ecological works published in Japan. Included in the author's reading were the two volumes of *Distribution Maps of Flowering Plants in Japan*, by Hara and Kanai, *and Spring Flora of the Sikkim Himalaya* by the Japanese members of the Indo-Japanese Expedition of 1960.

Cryptomeria, a varied carpet of ferns and other shade plants spread through the narrow valley. Notable among them, and certainly a feature in the dense shade, were the marbled leaves of some of the oriental Asarums. This genus has come into a great deal of taxonomic attention for its great variation and has even been separated into three separate genera by some workers on the basis of the floral structure as it adapted for the convenience of a series of pollinators, it would appear. *A. kooyanum* is marbled, veined, and spotted as well, so that a great array of forms could be assembled. Of the ferns here the genus *Gleichenia* was new to me. Of the family *Gleicheniaceae*, this is a group of ferns (at least those I encountered) reminiscent of bracken, tall and intricately branched, often dichotomously so; hard, and drying in shape. Though I was told they were impossible of transportation, we shall see about that, for one extricated from the eroding bankside seemed to be faring well a couple of weeks later.

Irises are one of my weaknesses. Japan has no less than eight to be found as wild plants, though at least two of them are likely to have originated as brought from China or Formosa. The mountainsides of the Izuru temple in Tochigi-ken were richly covered with the shining lance-leaves of *Iris japonica*, rambling everywhere by long stolons, even into bamboo groves where few other plants will grow. The Japanese form of this Iris is triploid and sterile, so that all have come from a single source, carried from shrine to shrine and escaping into the wild.

Iris tectorum, the Roof-Iris, is also an introduced species; we were fortunate to find the rare variegated form in one of the nurseries. Another nursery offered plants of *Iris uniflora alba*, the white form of the eastern Asiatic, *I. ruthenica,* and only rarely given separate status. *II. minuto-aurea* and *rossii* are the yellow and purple color forms of the Chinensis group, so little known. They are small grassy plants grown in trays in the Orient, in what might be likened to damp meadow conditions. Little is known of them in the wild, and they may exist in Japan in cultivation exclusively, as so much of the original terrain has been altered to agricultural uses.

Iris gracilipes was seen at Nikko, flowering at the higher elevations; its albino form is a collector's piece there as here, and the double 'Blue Rose' is highly sought. Of course, the magnificent "Japanese Iris" cultivars were seen, the finest show of them at Mr. Kamo's in rural Kakegawa, where we approached in the misty rain of a late afternoon to see from across the rice-paddies the great blocks of color fronting the family compound of aged tile-roofed buildings, the garden dominated by an enormous old black pine, all against the steep mountainside, so like a print of a garden in the rain, even to people walking about under umbrellas.

At Dr. Hirao's breeding nursery grounds in Chiba, we admired the results of his crossing the daintier of the garden forms back to the wild species, *I. kaempferi*, the results being a better range of color in flowers scaled to smaller gardens; only the blues are lacking in the results. *Iris laevigata* is the ultramarine-colored one familiar in prints, growing in shallow water. Although a hundred sorts were once grown in shrine gardens, only about a dozen remain today. *Iris setosa* is found in Hokkaido and northern Honshu, the one species occurring in both the old and the new worlds. *I. sanguinea* is known as *I. nertschinskia* in Japan; one of the parents of the well-known Siberian garden hy-

brids, it is a familiar garden plant. The Eurasian yellow water-flag, *I. pseudacorus*, has escaped in many places there, as it has in the United States and, indeed, throughout the world, to appear as part of the wet landscape. It was particularly prominent in the valley below Nikko. The multi petaled form is accorded great favor as a garden plant.

Hosta was a genus of which I hoped to learn much. In the wild and in cultivation, I personally noted no less than 48 species and varieties, according to my notes, and was able to send home some forty, mainly through the generous gifts of friends. It is not surprising to find that the garden forms of many species of this genus constitute the more gross individuals, the selectors in the days of von Siebold, Thunberg, van Houtte, et al., having been afflicted with the megalomania that still dictates the will and reason of some plantsmen! *Hosta tokudama* (= *H. glauca* of gardens) and *H. ventricosa* (familiar to us as *H. caerulea*) as seen were only about half the dimension of their counterparts as we know them. The smaller "typical" forms lose none of the character which makes this bold group of shade plants of such value. They are more in scale with present day gardens, though they do not possess that shocking quality of tropical grandeur to quite the same degree. Some of the smaller forms are fascinating bonkei plants, with leaves only an inch, or so, in length.

I was fortunate in being able to collect authentic material of *Hosta longipes* through the generous assistance of Dr. A. Moriya, of the faculty of Utsonimiya Agricultural College, who took us on a four-day excursion into the Tochigi woodlands. Known as "Iwa-giboshi" (Rock Hosta), this species is inevitably found growing in the seams of damp rocks, although this would appear a most strange place for a hosta to grow. Our first and finest sighting of it was at the Tagi Shrine, itself underneath a waterfall! The cliffs alongside the trickling "cataract" were unbelievably studded with the plant, the reddish petioles gleaming in the light and the leaf blades a glaucous green, powdered white below.

TO BE CONTINUED

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FROZEN LAKE AND ITS VICINITY—It is not often, unless one goes much farther north, that one can see an iceberged lake surrounded with slopes and meadows where alpines abound. If one can take his eyes from the sky-reflecting lake where these icebergs float, from the surrounding peaks, where occasionally mountain goats are seen, from Mt. Rainier itself, he may see on the ground some odd and interesting plants; *Spraguea umbellata,* a ground hugger, *Smelowskia calycina,* a dainty Crucifer, *Anemone hudsoniana,* not as spectacular as some, sheets of shiny-leaved *Empetrum nigrum* with its bead-like berries, black and glistening. If the season is more advanced than usual in late July, low-growing *Polygonum newberryi* will have colored its leaves to a dull flame and scattered the meadows with small bonfires. Solidago dwarfs are here as are the diminutive Artemisias. In one spot, and only in that small place, the jewel-like *Lewisia pygmaea* (this may not be its true name for it could possibly be a new species or variety) has chosen for its companions the sparse-appearing *Cassiope mertensiana,* a frail *Pedicularis ornithorhynca* and one, only one, *Kalmia microphylla* no more than five inches high. This is a strange microclimate, gray and dry (after the melted snow has gone) rather ghostly in appearance. It will undoubtedly be missed by most visitors, even though at trailside.

A very small part of the H. Lincoln Fosters' garden with its stream and great slabs of beautifully stratified limestone. Can we allow this to be destroyed?

Rex Murfitt

OMNIUM-GATHERUM

TO SAVE A GARDEN!—Conflict is in the land! There are the proposers and the opposers. One begets the other immediately and with vehemence. As individuals, we may be sometimes on one side and sometimes on the other. No one person belongs exclusively to either side. Therefore, it is not a clean-cut division of our people. It is more nearly a shifting mass with constantly interchanging units. It is humanic fission and danger can lie ahead unless there is control.

Why this instant antagonism for every announced proposal? At the bottom is self-interest, on both sides, not to be categorically condemned. Self-interest is the sustainer of life, the mainspring of progress, and the very reason for existence. Without it human life could not exist. At first glance, self-interest seems analogous to selfishness, but it can be, and many times is tempered by consideration, helpfulness, sacrifice, compromise—even love.

Under our country's system of private enterprise, through government subsidies and public works there is presently money in the land that must be put to work. It must be spent toward the furnishing of necessities, be they food, clothing, drugs, housing, power, transportation, amusement or other things. This money is in the hands of individuals, companies, corporations, utility complexes and government agencies at all levels, each with different powers and methods of operation, and each subject to various laws and other restricting conditions.

To spend this money certain proposals are made to build dams and endless transmission lines that there may be power to turn the machines that will provide goods for the needs of a future population; to build vast highway systems that people and goods may flow readily from every point in the country to all other points; to build innumerable housing projects, high rise apartments, institutions, shopping centers, amusement parks, etc. These seem all good and progressive objectives. Why, then, the instant and vigorous opposition to each of these proposals to build? The answer lies mainly in the people's new consciousness of conservation.

In the mad rush to make money, to live decently, to better each family's economic condition, and to enjoy the pursuit of happiness, people have stopped long enough to take a critical look at what is happening to our country, what has happened, and what will happen in the future as the population expands. Life in these United States is more than matters materialistic; there is the esthetic side of life, more necessary now than ever before, for people must have relief periodically from the turmoil of everyday life, from too close daily association with too many people in crowded working and living areas, from frustrations, and from the pollution of our environment. People must have a place to go where the air is pure; the noise level is lowered, or better yet, where silence reigns; where the scene is far-sweeping, uncluttered, and beautiful; where the landscape is as Nature made it, as yet undefiled by human activities. They must have a place where they may be alone to contemplate nature and their own soul in peace and quiet; where they may repair in their own way the many physical, mental, and spiritual damages done to them in their workaday world.

The balance between our country's land that is occupied and not occupied has been assessed and the people are afraid. Increasing population and the means of sustaining it will change this balance; unoccupied land will become occupied and in the end there will be no more wilderness, no place to go for relief. So people are up in arms and immediately oppose each proposal for building anything that means the sacrifice of more open territory, of more breathing spaces, or any part of the beautiful heritage that was once theirs and of which so little yet remains. As an example:

There is in the Berkshire Hills of northwestern Connecticut, a peaceful valley where people live in quiet contentment—or did until recently. It is a valley with forested hills on both sides and pleasant streams flowing into the larger stream in the valley, with open sky and unpolluted air. Now comes the Northeast Utilities of Massachusetts and Connecticut proposing to build a mammoth power facility which will flood the valley, destroy the homes, denude the hills, make hideous the total landscape with unsightly transmission lines, and disrupt the lives of the valley's people.

Among the homes to be obliterated is Millstream House, the home of Linc and Timmy Foster. Linc is an internationally known author and plantsman and Timmy is an artist as well as an author. Their centuries-old house will go, their magnificent and very beautiful garden with all its precious plants will go, the work of many years demolished, and a beauty spot that draws people from all over New England will cease to exist. And for what? Power for the future. There may be those who in weighing the needs of the future in terms of power against a few homes and a world-famous garden will agree that power is necessary, that gardens are not, and though they may sympathize with the Fosters, that is all they will do. However, it is certain that this is not to be the attitude of the members of the American Rock Garden Society. The very nature of their Society precludes this. Conservation is something in which they whole-heartedly believe. Gardens and open spaces are necessary to their way of life. They will willingly help the Fosters in their fight to save their home and their garden, to keep undisturbed this section of semi-solitude in a land already too heavily populated.

To do this we are urged to write to the president of the utility company. He has invited such letters. Write to Mr. Lelan F. Sillin, President of Northeast Utilities, P.O. Box 270, Hartford, Conn. 06101. Every letter will help and much help is needed if the utility company is to be convinced that this area should remain wild and the Foster's garden saved for the benefit of those who will visit it in the future, rejoice in its loveliness, and learn that seeds collected there are sent to people in all parts of the world so that the enjoyment of alpines and other rock garden plants is multiplied many times. Do not delay in writing to Mr. Sillin.

Anyone wishing to keep informed on this situation as it develops is asked to send his name and address to Berkshire-Litchfield Environmental Conservancy Council, Inc. (BLECC), Box 313, Salisbury, Conn. 06068.

AN OMITTED SAXIFRAGE HYBRID—Notice was received from Hans Honcik, author of "Engleria," that he had failed to include one hybrid in the list that appeared in the April, 1970, *Bulletin*. The notice arrived too late for inclusion in that issue. It is printed here:

Saxifraga 'Schottii' SUEND.
(S. corymbosa var. *luteo-viridis* x *S. stribrnyi)*

With its flat, silvery rosettes it is very pretty even when not flowering. The flower stalks, about 8 cm long, terminate in the upper third in a panicle with 4-6 flowers. The leaves of the sterile shoots are obovate-oblong or obovate-spatulate, 6-9 mm long and to 3.5 mm wide. They appear somewhat pointed. This point, however, is very short and very small. Moreover, they are broadly revolute-margined and have on their margins 7 to 11 foveolae (small pits). The stem leaves have a spatulate form and are obtuse. Their upper surfaces are greenish and glabrous, but the under sides are very thickly purplish pubescent. The yellowish inflorescence is furnished with small, purplish glandular hairs. The flowers are muddy yellow. The cinnabar-red petals are obovate-cuneate, very blunt, 3-3.5 mm long and about 2 mm wide. Bred by Suendermann.

ANOTHER ROCK GARDEN SOCIETY—Word has been received of the recent organization of The Rock Garden Club in Prague, Czechoslovakia. Dr. Zd. Moravec is chairman of the new club and he wrote that many of its members are also members of the ARGS and that he hopes there will be cooperation between the two societies. This is a certainty.

BRITISH COLUMBIA'S ROCK GARDEN SOCIETIES—The editor visited the Spring Flower Show of the Alpine Garden Club of British Columbia on April 18-19 at Vancouver, B.C. After spending parts of two days at the show, he came away with the surprising realization that he had but glimpsed the many fine flowers so tastefully exhibited. Rather his time had been spent in visiting with the members of the club and with those present from Victoria's sister organization, the Vancouver Island Rock and Alpine Garden Society. There is quite an intermingling of memberships, so it is not strange that there should be so much to discuss.

Attention should be called to the April, 1970, issue of the *Bulletin* of the Alpine Garden Club of British Columbia, edited by Mr. James MacPhail. Should you be fortunate enough to obtain a copy of it you will be happy that you read this notice. Whether copies are available is not known, but if interested, you could write to Mr. MacPhail at 1908 Westview Drive, North Vancouver, B.C. and make inquiry.

ANOTHER REVIEW—Again the *Bulletin* of the ARGS has been reviewed in a foreign magazine. This time it is the issue of October, 1969, and again the review appeared in the latest issue of *Hortikultura,* a magazine published in Yugoslavia whose editor is Prof. Inz. Petar Matkovic of Split, Yugoslavia. He is an ARGS member. The review is lengthy and it comments on almost every article in the issue, including Omnium-Gatherum.

PLEASE! YE FAITHFUL SEED DONORS—Take the guess work out of the Seed Exchange. Make the director's work much easier. It takes the director's time, amid a mountain of detailed work, to look up and correct a misspelled botanical name on a donated seed packet. Should the incorrect name slip by and appear in the seed list, the high standing of our list slips

a bit, too. As our Seed Exchange Director, Mr. Henry Fuller, points out, there are many similarities among plant names and mistakes will be made unless great care is taken by everyone involved in contributing, packaging, labeling and distributing seeds.

Many of us can read our own handwriting—but can others? When labeling your seed packets use the typewriter, if possible. Otherwise write the name legibly and with care, or better still, print it. You have no idea how much time and mental anguish you will save the director and his helpers. The director loveth a careful label writer!

YOU ARE COMING TO SEATTLE IN JULY, AREN'T YOU? The Annual Meeting of the ARGS to be held in Seattle on July 24-25-26 will be outstanding. Headquarters will be at the Washington Plaza Hotel, Fifth at Westlake, Seattle, Wash. 98101. The speaker on Friday night will be our Past President, H. Lincoln Foster, and on Saturday night, Margaret Williams, of Reno, Nevada. There will be three eventful days with meetings, dinners, garden tours, local hospitality, and a whole day amid Mt. Rainier's flower fields. The activities preceding and following the three-day meeting for those who come early or stay late will find our members scattered from the Oregon-California border north into British Columbia. We are anxious to welcome you to the Great Northwest.

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WENATCHEE MOUNTAINS — These mountains are the native habitat of the renowned *Lewisia tweedyi.* Other Lewisias grow there, too; *L. columbiana* and *L. rediviva.* A visit to these mountains in late July could be a disappointment depending upon the vagaries of the spring and summer weather. An early season and all the blossoms would be gone, even in the high places. In a retarded season, one might be in luck. As this is written late in May there seems an even chance that in late July some plants might yet be flowering. Other likely plants to be found in these mountains under the conditions of a retarded summer are *Claytonia nivalis, Clematis columbiana, Aquilegia flavescens, Douglasia nivalis (dentata)* and *Campanula scabrella.* Some fine ferns may be found regardless of weather conditions. Where there is but little shelter from the hot sun you may possibly find *Cheilanthes gracillima,* but always with its roots tucked under a rock. On serpentine areas *Polystichum mohrioides lemmonii* may be found. Both are fine garden ferns.

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