

Tiarella cordifolia

Laura Louise Foster

Bulletin of the American Rock Garden Society

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The Bulletin

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THE COMPOST PILE

ANNUAL MEETING

The annual meeting of the ARGS took place in Seattle during the Conference. A new president, vice-president, and secretary were elected, as well as three new directors.

Our new president is James A. (Jim) Minogue, who has been chairman of the Potomac Valley Chapter since 1974. He was born and brought up in the "sub-arctic" terrain of northeastern Minnesota, took his professional training in geography at Clark University, the great center of such studies, worked in land-use planning in Mississippi, "where there wasn't a stone larger than a pea in thousands of square miles," and as a geographer in the National Archives and the Department of Defense. He retired in 1970.

It's hard to imagine a more useful background for rock gardening than geography, for that discipline was fundamentally ecological before the term "ecology" became fashionable, and Jim must have an understanding of factors, both climatic and edaphic, that the rest of us can only grope after. Serious gardening, however, came only in the 1960s after the demands of a career, and of raising four daughters, abated somewhat. Since that time the Minogues, Jim and Adelaide, have been active in horticultural circles in the Washington area. Both are volunteer guides at the National Arboreum. Jim is a Member-at-Large of the National Capital Area Federation of Garden Clubs. Both are deeply interested in indoor light gardening and



Sharon Sutton

Out-going President Harry Butler (left) greets incoming President Jim Minogue

they give lecture-demonstrations on the subject. (They have promised to do a piece for the *Bulletin* on the use of indoor light set-ups for the rock gardener.) They garden on "some long abused and very stony mid-slope Blue Ridge Mountain terrain" and so are perforce rock gardeners.

Jim considers the most significant benefit from his participation in the Society's affairs to be associations established with other members. He is an obviously experienced and natural-born administrator. Our affairs should be in good hands.

Our new vice-president is Eleanor Brinckerhoff. Her dynamic flair is well-known to our members. See the citation in Vol. 31, No. 4, p. 140 on the occasion of her winning the Award of Merit.

Our new secretary is William Hirsch. Bill seems to be reluctant to supply biographical details. We should all be grateful to him for taking on the not inconsiderable task of keeping the Society's affairs, and staff, in order. Meanwhile, Milt and Jeanne Mulloy are enjoying their freedom and are planning to join Sallie Allen's garden tour to England (see the announcement on p. 195).

The annual banquet is the occasion for awards. This year's recipients are as follows:

AWARD OF MERIT

ANITA KISTLER

It is hard to make distinctions among the great pleasures of one's life, but surely one of them is the privilege of writing about someone who for the last twelve years has been not only a very close personal friend, but also a mainstay and staunch supporter of all programs of the Delaware Valley Chapter.



Anita Kistler in her garden

From the initial days of the chapter's development, Anita Kistler was always there. In every organization there is someone whose competence is continually taken advantage of. Anita has displayed her organizational abilities with the forming of the chapter, with three Eastern study weekends, and with a National meeting. She has written many articles on alpines, their care and culture, for our *ARGS Bulletin* as well as for the magazine of the Pennsylvania Horticultural Society, *The Green Scene*.

As chairman, co-chairman, or willing helper she has been instrumental in the success of the Delaware Valley Chapter's exhibits at the Philadelphia Flower and Garden Show.

Her own garden and Alpine house are things of wonder. The garden has grown over the past years to the point where it now occupies almost

all of the extensive Kistler backyard and is filled with many plants that no one dares grow outdoors in southeastern Pennsylvania. Her success in growing these gems is without precedent. The "Kistler" alpine house was designed by John and Anita. It is a polyethylene lean-to, chock full of seedlings and rare plants to be shared with all who visit the Kistlers in West Chester, Pa.

The designation of the Pennsylvania Horticultural Society as the official archivist for the ARGS and the PHS lending library service to members of ARGS resulted from the cooperation of Anita and Julie Morris, Horticultural Librarian. The lending service has sent thousands of books by mail to our membership.

Anita's latest endeavor for the ARGS was the indexing of all the ARGS Bulletins, a job that not even the angels would do. She has done with good humor a superb service for our society.

Anita is one of the outstanding people of the Delaware Valley Chapter, and this very special award is well deserved and brings high honor to Anita, our chapter, and the ARGS.

Lee M. Raden



Jim MacPhail and Bob Woodward in Vancouver

Sharon Sutton

JIM MacPHAIL and BOB WOODWARD

I am privileged tonight to bring you a bargain, two for one, not two half-talents combined to merit one award, but two genuine super-stars, each abundantly worthy of honor in his own right. In a relatively short time these two marvelous undeniable characters have become known collectively

and separately as lecturers, photographers, gardeners, editors, organizational leaders, and plant explorers. They are infectiously enthusiastic, energetic, eloquent, and enviably able to absorb through the covers the contents of their considerable botanical library. They are co-authors of an impatiently awaited new book on American alpinists. I present this award with joy, respect, and undiluted enthusiasm to Jim MacPhail and Bob Woodward.

Sharon Sutton



Lee Raden in Wyoming

LEE RADEN

I have seldom met a more inspired and witty plantsman than Lee Raden. He organized the Delaware Chapter of the American Rock Garden Society in the early sixties, and served as its chairman until 1970. During this time, he built up a large, enthusiastic membership through good programs and a zesty newsletter each month. His drive and energy helped and encouraged others to form new chapters. Lee was responsible for introducing rock plant classes to the competitive section of the annual Philadelphia Spring Flower Show, and was always involved with prizewinning exhibits as early as 1966. In 1967, he hosted the annual meeting at Longwood Garden, served two terms on the ARGS board of directors, and was one of the founders of the "Study Weekends."

Lee built up an exceptional collection of alpinists and always shares plants and ideas with his visitors. His place was often the center of meetings and plant sales for the Delaware Chapter of the ARGS. He participates in all local and national ARGS plant shows, usually taking first prize.

Lee Raden definitely played an important part in the growth of the ARGS these past fifteen years.

— Karl H. Grieshaber

From 1937 to 1972 a dominant teacher and personality in the Department of Botany at the University of Washington, Seattle, was Dr. C. Leo Hitchcock, known affectionately to several generations of students as well as his colleagues as "Hitchy".

For most of those years he taught courses in general botany, elementary and advanced taxonomy, as well as others on the local flora and ornamental plants for the Pacific Northwest. From 1942 to 1962 he was Chairman of the Department. Annually for many years he conducted systematic field trips, benefiting not only the students but also herbaria both in North America and overseas, through exchange of specimens. In the 1940s and 1950s, accompanied by his friend Clarence V. Muhlick, he made extensive collections in the western mountain ranges, gathering material and laying the groundwork for a later magnum opus.

The major product of Hitchy's tenure in Seattle has been the production of five volumes of *Vascular Plants of the Pacific Northwest*, published between 1955 and 1969 by the University of Washington Press. In this important and much-needed work he was aided by joint editors Dr. A. Cronquist of the New York Botanical Garden, the late Dr. Marion Ownbey of Washington State University, Pullman, Washington, and J. W. Thompson of Seattle who had for many years collected in this area. To quote Dr. A. R. Kruckeberg, now Chairman of the same Department, "Modesty would get in the way of Hitchy's accounts of his contribution to this monumental work, but we all well know that he has been the chief and most persistent organizer-catalyst-editor-caretaker of the project, as well as author of many substantial families in the flora".

A one volume abridgement, more practical for field work, was also produced by him in 1973, containing many of the same drawings though on a reduced scale.

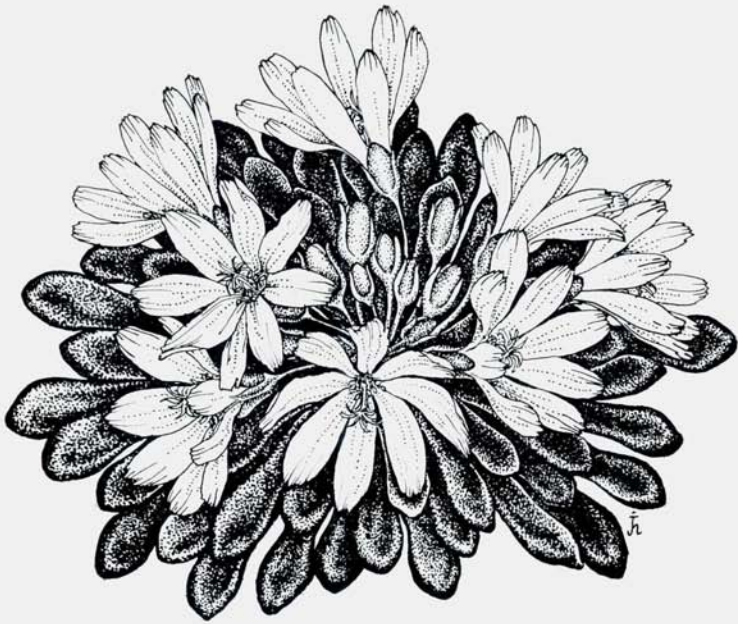
For all these devoted labors steadfastly pursued over so many years, both the botanical and horticultural worlds are enormously indebted and deeply grateful to Dr. C. Leo Hitchcock, to whom the Wherry Award of the American Rock Garden Society is now presented.

THE MARCEL LE PINIEC AWARD — CHARLES THURMAN

Charles Thurman is a keen plantsman with a sixth sense for finding plants in the wild and a third green thumb when it comes to growing on and propagating the wildlings for the rest of us to enjoy.

Charlie's interest in native plants was awakened by a biology class when he was in high school and he's been searching for natives and growing them ever since. His wife, Gladys, shares his deep love of the outdoors as well as his love of the plants.

In the 1930s he established the Evergreen State Native Plant Nursery, but this operation was interrupted by the war. In 1960 he started Thurman's Gardens which was largely a mail order business at their family home just outside of Spokane, Washington. The beautiful colored photograph of *Lewisia tweedyi* which graced the cover of his catalogue along with the cultural notes in the catalogue convinced me I had to see his nursery. Indeed, Charlie did grow *Lewisia tweedyi* to perfection, huge mats were draped on a rock wall near the house. In a short time we picked a



Lewisia Brachycalyx

Jarmilla Haldova

peach lug full of lewisia seed heads. Other plants which he described so vividly in his catalogue were growing contentedly at the nursery. Some of the plants of the Pacific Northwest are rather difficult to grow, but his success with them was partly due to the observations of their growing conditions that he made on many trips to their native haunts. Patience and devotion also contributed to his success as a grower.

In 1962, Charlie became horticultural supervisor for the Spokane Park Department and held this job for the next 12 years in addition to operating the nursery. He and Gladys bought a large tract of woodland near Mt. Spokane State Park which they named Silvaglen. The undisturbed slopes were heavily wooded and a beautiful stream flowed through the property. In their spare time, they began building a house, clearing fallen trees, and establishing paths. When Charlie retired, the nursery business was sold, and they moved to Silvaglen and have devoted all their time to grouping the wildlings in sections from desert to alpine plant life zones. Silvaglen is open to the public and Charlie's dream of bringing the native flowers within the reach of everyone is now a reality.

— Margaret Williams

ALPINES OF THE AMERICAS

The conference in Seattle and Vancouver was, I suppose, the most momentous event in the history of North American rock gardening. Officially it was sponsored by the ARGS and the Alpine Garden Club of British Columbia. Actually it was our Northwestern chapter that, on the American side, bore the burden and deserves the credit.

The high point, in a quite literal sense, of the Seattle section of the conference was the trip up Mt. Rainier, and the mountain, visible from



Sharon Sutton and Roy Davidson, two V.I.P.s from Seattle, sitting down, at last, in Vancouver

the square in front of the building where the lectures were held, dominated our proceedings.

If the presiding deity at Seattle was the Baal of Rainier, His prophet was surely Roy Davidson, under whose guidance the program was shaped. The emphasis was on the interrelationship of things, of plants with each other and with soils, climate, and fauna (including man and bug). The whole world of nature was before us. We saw with new eyes that fragile floral integument that precariously covers the angular, crumbling, ever-shifting detritus of age-old geological events. The program was strenuous, educational — mind-stretching might be the modern cant — and, in the end, deeply moving.

In Vancouver the tone was different. The emphasis was horticultural rather than ecological, on plants in themselves rather than on their positions in the great scheme of things. There were how-to-do-it demonstrations, a spectacular rock garden and a peat garden to study, talks on favorite plants and their cultivation, and, best of all, on a terrace connected to the lecture hall by French doors, a series of twenty or more large troughs, each containing representative plants of a given region, e.g., the North Andes, the Olympic peninsula, the Eastern U.S. After the awesome demands of Seattle it was a relief to be able to gaze with child-like wonder at a feast of plants and to think once more of our little gardens back home and wonder if we could do this or that.

It was unanimously agreed that the conference was admirable both in conception and execution. The 519 (plus or minus 5) registrants, some from as far away as New Zealand or Norway, and a sizeable contingent

from Britain, must have returned home with a sense that the territory comprised by our own Northwest and the adjacent British Columbia was one of the great garden centers of the world, great for its climate which, like England's is hospitable to an enormous variety of plants, great for its scenery and rich native flora, and, most important, great for its gardens and plantmen.

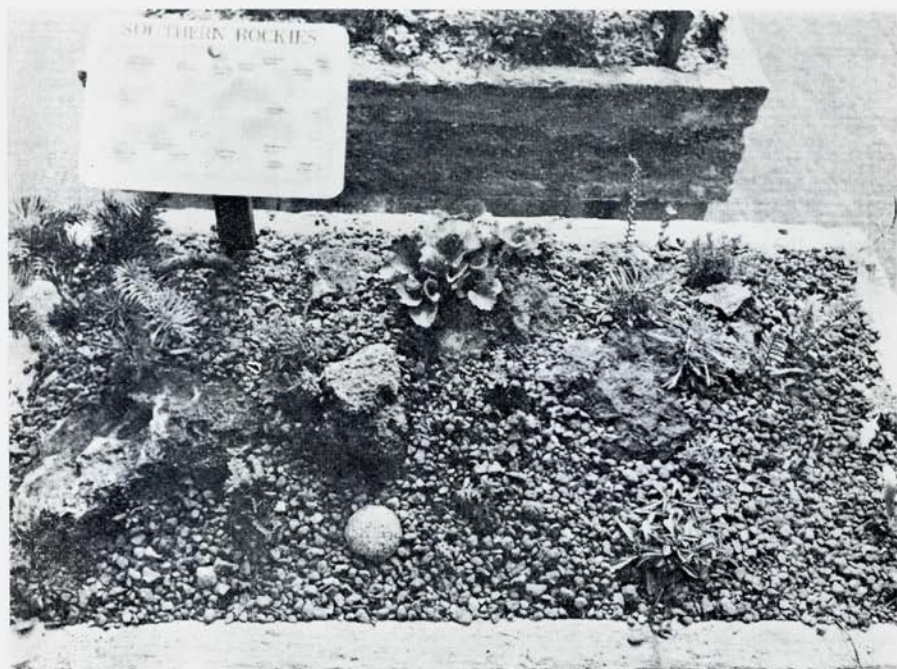
Since a full Conference Report will be issued, it would be superfluous to go into details here, but the following are some personal impressions that have been sent in.

Pam Harper, a most lively and knowledgeable gardener from Seaford, Va., writes:

THANK YOU FOR HAVING US

. . . and congratulations on a masterpiece of organisation. If some of you felt overburdened at times, it didn't show. Marguerite Bennett smiled on through the flurry of registration, and Frances Roberson was everywhere at once — even at my elbow to point the way when I got lost on campus (I can get lost between bedroom and bathroom . . . and did). Even the weather clerk had been persuaded to co-operate, and there was Mt. Rainier, dreamlike but clear, like a painted stage backdrop.

Two weeks (three for me) crammed with lectures, garden visits, mountain trips, meeting with old friends and making new ones. "Ten countries represented", I was told, but I counted thirteen on the registrants' list. My informant must have included Scotland in England, Canada in U.S.A. and New Zealand in Australia! No one looked lonely or left out — if they



The Southern Rockies trough in Vancouver

William E. Brown

were there was always the Cliff Lewis daily match-making service. The spirit of fellowship throughout the conference offered hope that through common interest groups the nations of the world may yet meld into one people, a feeling summed up in the quotation (from where?) inside the programme cover (did everyone else have to get home before they found time to read it?)

“It is well, my brother
that we share this interest —
What is significant is
that we come thereby to know one another”

A humbling experience — so much expertise so willingly shared, as when Mrs. Williams gently corrected my assumption that the holes in *Campanula excisa*'s bells had been cut out by bees . . . (“excisa”, of COURSE). Probably everyone developed horticultural indigestion at one time or another. Invidious, perhaps, to pick out one talk, but “Just for the Walk” will stay long in my mind, Sharon Sutton's lovely slides and Roy Davidson's contemplative commentary touching the heart as well as the mind.

So many gardens, each reflecting a different personality or life style, all with something to teach. “Dartshill”, a plant photographer's mecca (the baneberry about which we conjectured was, I am told, *Actaea arguta*) . . . Roy Davidson's water garden, sculpted in old trunks and stumps . . . the neat (revolving?) hose stops in the Miller garden . . . the Frees' labelling system, using nails with punched tape numbers on the heads, and the *Castilleja* self-seeded into their alpine beds, casting doubt on the root-fungus-association theory . . . the happy intermingling of *Frankenia thymifolia* and *Linaria aequitiloba* in the Rourke garden, interspersed with *Raoulia* mats . . . and a little plant masquerading as *Raoulia* which turned out to be *Gypsophila aretoides*.

Mountain walks (a “first” for me). The weather had been slow to warm up, but at Paradise (truly!) on Mt. Rainier (21st July) I photographed a dozen species, among them *Veronica cusickii*, *Phyllodoce empetrifomis*, carpets of white *Erythronium montanum* (not, sadly, amenable to garden cultivation) and the yellow *E. grandiflorum* (which is), *Dodecatheon jeffreyi* (one small, solitary clump), *Potentilla flabellifolia*, buttercup yellow and buttercup glossy, *Lupinus latifolius* var. *subalpinus*. (the most plentiful, on this trip, of all the mountain flowers, both here and in the Olympics), the white flowered Kingcup (“Cowslip”, perhaps, to you), *Caltha leptosepala*, and pink *Mimulus lewisii*, both with their toes in running water. My fingers itched to collect a variegated form of *Veratrum* tucked almost out of sight among the trees. There seemed to be two different forms of *Veratrum*, the green leaved *V. viride* common also on the east coast, and another (more plentiful) with a grey bloom to the leaves — could this be *var. escholtzii*? Several of us lined up to photograph one shy bloom of *Anemone occidentalis* peeping through the mud, but the most photographed flower of the day must surely have been the adjacent mats of pink and lavender penstemon (*P. rupicola* and *P. davidsonii*?)

On 30th July I returned to Mt. Rainier, the Sunrise side this time. Chipmunks came to be hand fed, posing for a picture cheeks abulge with biscuit, but making it clear that neither celery nor nectarine pits were

much to their liking. *Anemone occidentalis* was now in full flower, some with seed heads already formed. Abundant, too, were baby blue "Sky Pilots", *Polemonium pulcherrimum*, stemmed yellow violets, *V. glabella*, and *Phlox diffusa* in colors from white through pale pink and lavender to almost blue. Right by the parking lot grew a patch of yellow *Pedicularis* — *P. rainierensis* possibly, the only flower on the mountain to be found nowhere else. There were small patches of *Cassiope mertensiana*, *Mimulus guttatus* and the red *Castilleja oreopola*. The thickest stands of flowers were alongside the road, flung gravel forming a natural scree I suppose, ideal for seed germination (also the case with my sandy drive but colonised, alas, by grass, not alpine gems). Massed at about 5,000 feet were mixed patches of blue lupin and flame colored *Castilleja miniata*, the more striking for their background of snowclad peaks. Local experts looked disbelieving when I mentioned a prostrate, grey-leaved, white flowered *Potentilla* — I await the return of my slide to prove, at least to myself, that I really saw what I thought I saw.

Before the post-conference Olympics tour I had done some homework, so I managed to identify a few of the species seen on Hurricane Ridge at 5,230 ft. Not, however, the tiny *Lewisia pygmaea*, which I took for an onion. There was an onion nearby, the curly leaved, pale pink *Allium crenulatum*. *Lomatium martindalei* var. *flavum*, grey-green lacy foliaged and yellow parsley flowered, looked as cool among the hot grey rock as did its companion plant, *Phacelia sericea*, the leaves silver velvet, the lavender flowers fuzzed with extended stamens. In similar hot, dry situations *Lilium columbianum* was dwarfed to four inches, whilst in moister spots it topped a foot. *Rhododendron albiflorum* and the bright green mats of *Luetkia pectinata* also chose moist shade.

After four hours on the trails we were resting over lunch, listening to the marmots' shrill whistling and admiring a field of blue lupin dotted with *Polygonum bistortoides* when Jim McPhail offered a ride to Obstruction Peak — rare good luck to have so knowledgeable a guide, able to name immediately *Douglasia laevigata*, *Penstemon procerus*, *Lupinus lyallii*, or should it be *lepidus* var. *lobbii*? (shorter than the other lupins, and grey foliaged), *Sedum divergens* (looking not at all like picture 6 so named in "Wildflowers of the Olympics", which seems to be *S. spathulifolium*?) and *Campanula piperi*. Sharper eyes than mine got a glimpse of the white form of *Campanula piperi*, still in bud. Our numbers grew as Jim picked up weary walkers (nine people finally tumbled out of his 5-seater van) and the value of botanical nomenclature as an international language was well proven when Seiko joined us, shaking her head in emphatic denial at the suggestion that *Viola adunca* also grew in Japan.

Home again, clutching a 6 lb silver salmon. For the benefit of future visitors to Seattle, Jack Sadis in the Pike market will pack fish for air travel, and mine stayed cool and fresh between its ice packs despite a four hour stopover in Chicago. Back with me came a suitcase full of plants, ground covers and easy doers mostly — alpine gems I must remember in their own habitat, they are not for Virginia's muggy summers. Among my finds — *Coptis laciniata*, glossily evergreen carpenter, *Alchemilla alpina*, smaller and more silvery than *A. mollis*, *Blechnum penna marina* with close packed crenate fronds of green and bronze, *Indigofera decora* — long

sought in east coast nurseries and now a gift from Sallie Allen, evergreen *Vancouveria planipetala*, blue *Convolvulus mauritanicus*, red burred *Acaena microphylla*, tiny *Sedum brevifolium*, and *Leucothoe davisae* with upright spikes of white flower.

Questions . . . questions. Where can I read more about *Desmodia formosum* (looking like *Indigofera*) and is it on the market? Which *Hepatica* is D.Metheny growing? It isn't *H.transsilvanica (angulosa)*, nor the hybrid *H.x ballardii*. Linc Foster describes the European *H.triloba* as very similar to the east coast *H.americana* (invariably catalogued and written about as *H.triloba*), but these are taller, bushier plants with more leathery evergreen leaves. Is Sallie Allen's bayberry really *Myrica pennsylvanica*? It doesn't look like it, but perhaps the juvenile foliage is misleading. What is the origin of *Asarum hartwegii*, of which I saw yet two more forms in Seattle gardens? Why does *Arctostaphylos uva-ursi* look so different (leaves fatter and glossier) from the one sold under this name in the east? Is the three foot ivy with leaves two inches across REALLY 'Conglomerata'? Will the ground covering mounds of *Bolax* grow on the east coast?

Twenty rolls of film now trickling back will bring happy reminders, as well as more questions. Impossible to thank individually everyone involved, but my personal thanks to my own hostess, "D" (for dillium?) Metheny will be echoed, I know, by all who experienced west coast hospitality. "Will ye no come back again?" asked Roy Mansfield, saying goodbye. I hope so, soon. Meantime we can keep in touch with west coast activities via two excellent publications. "Pacific Horticulture" came into being only in January 1976. There are four issues a year and if you rush off a \$5 subscription to Pacific Horticulture, P.O. Box 22609, Hall of Flowers, San Francisco, CA 94122, you may be in time to get the back copies and be in on this from the beginning. Sallie Allen edits the other — sufficient recommendation, write to her for details.

("the other" is the Newsletter of the Northwest Ornamental Horticultural Society. Sallie Allen has sent us copies and generous permission to reprint what we will. We certainly expect to take advantage of this offer, because much of the excellent material would be of interest to rock gardeners everywhere. — Ed.)

William Brown, chairman of our Long Island Chapter, contributes the following impressions:

"It is rare to have the opportunity to experience the coming of spring twice in one year. With this thought in mind, what rock gardener could resist the invitation to visit the mountains of the Pacific Northwest for The Interim Rock Garden Conference in Seattle and Vancouver and to enjoy a second spring.

"The wildflowers of the Olympic Mountains were at their peak during the conference and, seizing the occasion, there I stood amid the towering peaks and ridges of the Olympics.

"Those marvelous people who conceived, designed, executed, and attended the First Interim Rock Garden Conference were the highlight of this conference for me. The opportunity to see, discuss, and live alpine plants for seven days with so many dedicated gardeners from around the world was a real treat.

I regret to report that on more than one occasion Bill was observed to be playing hookey, gadding off to the mountains, or to Bob Putnam's nursery, when he should have been attending lectures, note-book in hand. Perhaps this is because he is a teacher himself.

Like Bill, Aslaug Rein, of Oslo, Norway, was most impressed by the people he met, or rather the universal friendliness he encountered and which overcame his "Norwegian shyness."

"On the trip" — the pre-conference field trip to the North Cascades — "we were like one big family, sharing the delight of finding rare specimens of flowers, being given valuable information by those who were more skilled. The one who was lucky enough to find a special 'beauty' didn't keep the find to himself, but howled to the others to come over, eager to share his find. To me it was a thrilling experience to see such a variety of beautiful alpine flowers at such high altitudes. I'll never forget my first sight of the Avalanche — and Glacier Lilies blooming right at the edge of the snow bank. The sight was really breathtaking.

"Thanks to those I met on the Pre-Conference Tour, I felt as no stranger when the Rock Garden Plant Conference opened on Sunday, July 18, in Seattle. I was greeted with friendly 'Hellos' when I came to the informal reception. My American friend had told me in a letter, long before I came over to the States, that 'All the ARGS people are nice people.' How very right she was about this."

The conference was, in fact, a delightful social gathering of like-minded people as well as an intense educational experience.



The Olympic Mountains trough in Vancouver

William E. Brown

More on keep-outs. Dr. Wherry returns to the fray.

This is not a "keep-out" warning, but a chronicle of what once happened. At the Bowmans Hill Pa. State Wildflower Preserve we have a sand-barren bed, into which I transplanted some of Lincoln Foster's favorite, *Aster linariifolius*, selecting individuals with large ray-size and pinkish color. These promptly produced seedling offspring, but alas the heads had unattractive small rays of dull gray color! So the experiment will not be repeated.

And Anita Kistler to the rescue of a splendid plant.

Under "Invaders in the Rockery" (Vol. 34 No. 3, page 102), Elmer Baldwin says "Do Avoid", and then lists five plants, including *Potentilla verna nana*.

I wonder what plant Mr. Baldwin grows under this name. The true *Potentilla verna nana* is a choice plant — far from invasive! It is a glorious mat plant with typical 1/2" yellow potentilla blooms — well spaced just on top of, and around the edge of the mat of dark green 5-parted leaves. The whole plant never gets higher than 2", nor over 12" across.

As the plant is quite woody, I find it helpful to tease the plant apart every third year, and start new plants — either by using these pieces as cuttings and putting them into the sand bed, or in very early spring, by just tucking each stem directly into the ground as Dan Weaver wrote in his article on "Vegetative Propagation in Situ" (Vol. 30 p. 32).

My original plant came from Doretta Klaber's lovely rock garden about 10 or 11 years ago. It has been divided and propagated regularly for plant sales, gifts and sundry other reasons. I even have a plant in a trough, so it can not be too invasive!

I have never had a self-sown seedling, so it is not invasive from seed either. Owing the plant, I have never had occasion to get seed from any of the Seed Exchanges to check the seed being distributed, but I can assure readers the true plant is a welcome addition to any Rock Garden.

Floyd McMullen sends in the following sad intelligence:

The Portland Oregonian's death notices for October 11, 1976, listed "Berry-Rae-Selling." Thus ended the near legendary career of Mrs. A. C. U. Berry.

Oldtimers in our rock garden circle don't need a recap of her gardening accomplishments. Newer members would be deeply impressed by a listing of awards in the fields of rhododendrons and primulas as well as rock gardening. But what can be said of this exceptional gardener that would do justice?

Her silent world had a truly "extra dimension" — an enthusiasm for plants that inspired those privileged to gain entrance into her often rather exclusive world. If a single symbol of an extraordinary life could be chosen, what could it be? In her case an equally exclusive aristocrat of the plant world, *Primula cusickiana* or "cooky", as she so affectionately called it.

WELCOME TO OUR NEW MEMBERS FROM JAPAN

Early in June there appeared in the garden section of the Japanese equivalent of our Wall Street Journal an account of our Society and of its seed-exchange. As a result we have approximately one hundred new members from Japan; before, we had had a total of fourteen.

This is a happy development. Our new members of course want access to our seed-exchange and *Bulletin*, but I am certain that, like rock gardeners all over the world, they are just as eager to give as to receive. And they have an enormous amount to give. Japan has been the source of many new treasures in the past fifty years, from families as diverse as the ericaceae and the crassulaceae, from plants as difficult as the choice *Dicentra peregrina* to plants as easy, but no less choice, as the scabra gentians — the glory of our October gardens. There are probably more to come, but, even more important, our new members from Japan must collectively possess an enormous amount of lore about special cultivars and strains which is unknown to us. And we would all surely profit by that expertise in the culture of difficult subjects for which the Japanese are famous.

And so may our new Japanese members write for us about the treasures of their woodlands and gardens, and about how they grow them. We yearn for accounts of the exquisite dwarf elms, of the forms of *Primula modesta* or of *Gentiana scabra* or of the cultivars of schizocodon — or must we say “shortia” now-a-days. Most of all, we yearn for accounts of plants of which we know nothing at all.

Let no man hesitate to write because he is insecure about his control of idiomatic English. That would be to admit a linguistic barrier where it does not belong, namely the world of plants and of plantsmanship. Any contribution will be recast to the extent that seems advisable and returned to the author for his approval.

It is only right that the rock gardeners of Japan and North America should co-operate, for there are curious and inexplicable affinities between the flora of Japan and that of Eastern North America that have intrigued and puzzled botanists for a century or more.



Rhododendron keiskei 'Yaku Fairy'

TIARELLA

H. Lincoln Foster, Falls Village, Conn.

Tiarella cordifolia should find a welcome in every garden as it combines handsome foliage, beautiful airy flowers, and ease of cultivation.

It takes a while to appreciate the fine qualities of this plant, innocuously called Foam Flower, as it occurs in the wild in the rich woodlands of northeastern United States. It occupies that familiar range from New Brunswick to Michigan and south to the mountains of North Carolina and Tennessee, a range a bit more constricted than some of its forest companions. It is a shy member of that community. It is the Little Red Hen of our eastern natives, serviceable, somewhat retiring, always fittingly but not flamboyantly adorned. Given the right situation and a modicum of appreciation she flourishes, gracing rather elegantly the pleasant, congenial combinations we bring together in our woodland gardens.

The foliage, not too large nor too small, is heartshaped at the base and shieldlike in outline with points and indentations around the edges. Hairs scattered on the upper surface and thickly downy beneath add a touch of softness to the foliage. From plant to plant the firmness and depth of green color in these leaves varies considerably, so that one may choose to propagate, if he pleases, a heavy textured plant that asserts a foliage dominance or a less assertive, thinner textured and lighter green clone if he wishes to pay less attention to leafage and more to flowers.

The flowers are arranged in a spike that rises from the leafy carpet from eight to ten inches. The flowery portion itself, closely set with spidery white to pink tinged blossoms, makes up the upper three to six inches. Belonging as it does to the Saxifrage Family, the individual flowers have five petals, many conspicuous graceful stamens, and two central styles. The shape of the pistil, with a fancied resemblance to a small turban or crown, accounts for its botanical name: the diminutive of the Latin "tiara." The common name, Foam Flower, does suggest the total effect of a well flowered clump of *Tiarella* as it blooms in late spring in rich woodlands. The plant sends out copious leafy runners throughout the growing season and soon makes large swatches. In the wild the blossom spikes may be rather sparsely scattered over the carpet. In rich garden soil, relieved from the incursions of invasive neighbors, even in considerable shade but especially in sunnier sites than it favors in nature, the blossom spikes become more numerous and larger. In fact this is one native wildling that responds splendidly to cultivation and fertility.

Moreover it is very readily propagated by the simple separation of rooted runners from the mother plant. In this manner one may rapidly provide for his own garden or for that of friends divisions of superior strains; those with especially handsome leaves (like one form I discovered by chance when I stopped to relieve myself along the Mass. Pike) or those with particularly full flower spikes or flowers of pinkish suffusions. The plant may be propagated also from the shiny black seeds that are produced abundantly in boat-shaped capsules with an upper lid, or hatch, covering the boat for about half its length.

There is a closely related plant found in the southern portion of the range of *T. cordifolia*, from Virginia to Alabama and Mississippi. This



Tiarella wherryi

Laura Louise Foster

was first named by Dr. Edgar T. Wherry as *T. cordifolia* var. *collina*, but is now generally recognized as a separate species quite fittingly called *T. wherryi*. In this species the leaves are more deeply and irregularly indented, overall much longer than broad and frequently with a conspicuous long terminal segment. Moreover, this plant, unlike its close relative, does not send off stolons, increasing only by fattening its main rhizome. The flower spike tends to be more slender and is more commonly tinged with pink and blooms later in the season. An additional character, not conspicuous, I'm sure, in herbarium specimens, is the autumn coloring of the foliage. As the deciduous leaves of *T. cordifolia* go into the winter there may be a touch of red in some of the heavy textured clones, particularly if grown in sun. With *T. wherryi* all the leaves, even when grown in fairly dense shade, in late fall assume intense shades of reddish brown and purple.

T. cordifolia has long been admired in England and has been widely used in gardens there and on the Continent. There appeared, reportedly at Nancy, France, in 1917 a bigeneric hybrid between *T. cordifolia* and *Heuchera sanguinea*, Coral Bells. This sterile hybrid, known as *Heucherella x tiarelloides* has carmine flowers and is somewhat stoloniferous. A similar cross with a white flowered *Heuchera*, *H. x T.* var. *alba*, has pure white flowers on a tall scape and is completely non-stoloniferous. Both these handsome clones may be propagated by division.

In the mountain woodlands from Alaska to Oregon are two western species of *Tiarella*, there called Coolworts: *T. trifoliata* with leaves composed of three separate toothed leaflets, and *T. unifoliata* with lobed, cordate leaves about 4 inches across. Both carry narrow panicles of white petalled flowers with spidery stamens, similar in effect and usefulness to the eastern species. *T. polyphylla*, similar to the last species, is found in the Himalayas.

HOW TO GROW: *CYPRIPEDIUM REGINAE*

Norman Deno, State College, Pa.

No group of plants has suffered more at the hands of collectors and gardeners than the hardy orchids. I have encountered members at ARGS meetings who insist that hardy orchids should not be attempted and that collection of them be forbidden. This viewpoint is understandable when one considers the numbers of collected orchids that are buried (not planted) each year. Yet the answer is not to fence off preserves for orchids for as I recorded in a previous article ("Disturbing the Environment," ARGS *Bulletin*, April 1974), just such a procedure had a detrimental effect on *Habenaria nivea* in NJ. Orchids are "children of disturbance" and are generally not climax vegetation. Maybe the day will come when our understanding of this group is sufficient for us to manage them in the wild and to create conditions conducive to expansion of their numbers.

There is no better place to start the culture of hardy orchids than with what may well be the most beautiful of all, *Cypripedium reginae*. There is no need to describe it or promote it as its beauties are well known. It is a sad fact to record that there are now only three stations of this plant in Pennsylvania.

Before starting to grow hardy orchids, it is best to read Summerhayes'

magnificent *Wild Orchids of Britain*. To repeat several key facts from this book, seed of hardy orchids does not develop cotyledons above ground, rather they kill invading fungal mycelia and feed on them. In this indirect saprophytic manner, they build up a fleshy protocorm and when sufficient food accumulates, they appear above ground as mature (and usually flowering) plants. Experiments conducted here show that this can occur in as short as 12 months with *Epipactis helleborine* and *Spiranthes cernua*. Summerhayes suggests that the time may vary widely with species and conditions.

The second place to go is Fred Case's *Orchids of the Western Great Lakes Region*. This gives a detailed account of the habitat of *C. reginae*. The key factors are (1) a neutral soil, for *C. reginae* is a limestone plant, (2) at least 50% sun as it will die out in the shade, and (3) absolutely continuous moisture. Case records two other curious facts which are that *C. reginae* has been reported from China and that seed does not germinate unless buried 1-2 inches.

C. reginae is grown here at the base of the north slope of a limestone ridge. The soil is black and friable and is continually moist, even after a three week midsummer drouth that occurred some years ago. There is fair drainage in that water never stands and the soil is never of a pudding consistency, yet moisture seems to well up from below. Attempts to supply continuous moisture by frequent top watering have not led to good growth and I am afraid that the welling up from beneath may be necessary for some reason that is not as yet understood. Possibly such welling up and evaporation cools the soil and it is certainly true that *C. reginae* is restricted to cooler soils and that its survival at the southern edge of its range may depend on such surface cooling. At least it chooses cool soils.

It is evident from the above that *C. reginae* can grow in quite ordinary neutral loam providing the cooling and moisture are present. There are probably many sites where it would grow naturally if it were not for competition from grass.

The plantings here are vegetatively propagated although seed sets naturally and who knows, maybe the nearby low ground and marsh will be filled with *C. reginae* long after I have gone. The vegetative increase is 2:1 or 3:1 each year in the form of new eyes. It takes a stout heart and strong hands to tear up these clumps separating each eye or group of eyes with minimum breakage of roots. Fortunately, the eyes are remarkably tough and strongly attached or it would be total disaster. These divisions are made and reset in the fall. A most important point with all cyripediums is to barely cover the octopus like roots as they must be no more than an inch deep.

When all is said and done, be prepared for the most outrageous misfortune and whims of fate. One of our largest clumps precipitously disappeared, probably due to rot. On visiting the Cases, we went out to get a start from his pure white *C. reginae* only to find it all dead after having grown well for several years. With hardy orchids, one will suffer the most supreme horticultural delights and the bitterest failures. Yet we must try and learn their secrets, for their survival and our enjoyment of them must ultimately rest on comprehension rather than a flight to ignorance.

SOME ELEGANT ERIOGONUMS

Roy Davidson, Seattle, Wash.

Not every one of the false buckwheats can be said to be of equal attraction (in fact, some are outright gawky, dowdy weeds) but the refined ones among them are elegant indeed and constitute such gorgeous plants in themselves that flowers can be distracting. Accordingly, wise old Mother cast them only low-key, with that subtlety only the great artists can manage.

Few American genera suited to rock garden uses are quite so rich in first rate polsters, and few are quite so perplexing. As to selecting which to try to grow, Gabrielson put it this way: "To dive into the tremendous welter at random expecting to find anything satisfactory would be hopeless," adding that while there were plenty of worthwhile subjects among them, the trick was as much adapting them to garden ways of life as determining which were best of them to try.

From observations of their growing in nature it is easily divined that Eriogonums are best suited to arid conditions, even to those harshly so. No exceptions are the alpines among them, for the immediate proximity to exceptionally xeric conditions certainly is relevant. Soils are commonly dry and stony, highly mineral but with frequently a top strata of fine humus, partially composed of their own decaying foliage. The majority are possessed (to a lesser or greater degree) of a protective hirsuteness, variable too as to its distribution within the plant parts, and this adds considerably to the rich overall impression they give. Roots are deeply penetrating and ordinarily kindling-brittle with little fiber to them. Almost without exception they insist on blazing sunshine, and it goes without saying that such plants will thrive only in the hottest and driest parts of the garden, and are possibly best suited to the trough or alpine house where controls are more definitively possible. They may be as exacting in their cultivation as is the most demanding of the bonsai artist's subjects, and certainly it is safest to allow them water sparingly. In the wild there is moisture for them only in the melt seasons, and this moisture diminishes to the merest cooling amounts by summer.

Perhaps because William Robinson had been attracted to some western American Eriogonums, Farrer was prepared to be quite underwhelmed by them and wrote, "An interesting rather than brilliant race, suggesting clustered everlastings" — of course quite true, but perhaps a bit understated for one who wrote so glowingly of Castillejas "flaming out of the bushes", certainly the ultimate contrast.

There are perhaps 150-200 species, mainly of western North America. They are confusing to anyone who would attempt identification in the wild without some warning; they seem to intergrade as if the elves had been at games, but in reality this is the mark of an unusual degree of natural plasticity which allows survival under variable conditions. Unless it is possible to select one's own wild forms to perpetuate from seed (the only really satisfactory way of obtaining them), the gardener should be wary of what he plants lest he end up with a collection of merely "interesting" things. For example, a tiny seedling of *E. umbellatum* in the Columbia Gorge — felted-beige-and-brown, heart-shaped leaves of an inch — seemed so irresistible it was pried out and put in a seemingly suitable place on

the rockwork, from which in a year it had to be hauled in barrow-loads; it was too, too happy, didn't remain compact nor so provocatively downy with its covering of soft tints, and become an unwelcome lush, with leaves to six inches.

Those who do seek out the good, better and best would certainly want the following species from the northwest.

E. ovalifolium is one of the more variable and, as might be supposed, also has a greater range of distribution: into the Great Basin and to California, and in fact, almost throughout the west but not on the humid Pacific Slope. Although it is always dusty-miller-white with its lanose-wool-covering, those of the higher places are more compact, forming close rosettes of vegetable-sheep appearance, above which leafless stalks to a few inches bear pompoms of pale cream to soft yellow, most often blushed with pale rose. As this grows at Craters of the Moon in southeastern Idaho, it is probably at its best, and every effort ought to be made to obtain as good a form as that. There are two recognized small and compact varieties that should be sought for in seedlists, *nivale* and *depressum*; both ought to give superior plants. The leaves are quite marcescent, staying lifelike for several seasons and then, blackening in decay, by which time a series above them have taken over life support functions, the younger and centermost the pale, luscious green of the honeydew melon. This is possibly one of the easier and certainly one of the loveliest.

From a similar range, yet only infrequently co-existent and more commonly met outside the Northwest, is the almost equally variable *E. caespitosum*, forming cushions of densely hairy (though silky and never lanate-woolly) leaves, also marcescent, but purplish brownish in this species. The mat has a distinct appearance, therefore; the individual leaves are more inclined to be oblanceolate, giving a looser look to the plant, all else being equal. Flowers are yellow, also on leafless stalks, sometimes rusty or rosy-tinged, and in the finest forms for highest places they are appressed right into the cushion, as stemless as the best ovalifoliums. In intense light the plants may be as burnished as the flowers, creating a lovely glowing autumnal effect that is both unforgivable and unforgettable. Alpine forms of *E. caespitosum* have been called *E. andinum* (or Var. *andinum*), and seed may be so designated. Though the description sounds rather similar to that of *E. ovalifolium*, the two plants create the most beautiful contrast when found together, as in the White Cloud peaks of Idaho, and when so found cannot be confused with one another.

Highest places in the northern Rockies will yield to the searcher *E. androsaceum*, also a congested bun, forming a domed, rosy-tinted mound with brown-marcescent leaves below, the fresh ones pallid green cobwebbed with hairs, turning prettily pinkish and then to a soft brown-rose. Above this the flowers are a strong yellow, of mustard-richness, and also with a rosy glow, topping off short stalks with a midway interruption of small leafy bracts. This might be sometimes found listed as a taxonomic ally of *E. flavum*, from which it is said to differ markedly in its compact habit and consequent greater appeal to the gardener; certainly it is rich reward in itself, a fairly glowing polster.

Eriogonum pyrolaeifolium from the northern Cascades and south to Lassen and Shasta, east to the Bitterroots, is always on high ridges or on talus,

forming loose, shrubby mats of glabrous leafage in rosetted clusters and short-stalked little umbels of whitish flowers with bluish or violet anthers, in a self-and-pepper fashion. The handsome var. *coryphaeum* has leaves white-felted on the reverse and a somewhat lanose inflorescence. The complex species *E. umbellatum* flaunts about as much variation as is possibly allowable; it is found in a variety of habitats, ranging from foothill-sagebrush to topmost summits of the western ranges, on cliff and in crevice. Leaves may be glabrous to quite felted, or only marginally so (or even medially and marginally), and consequently the list of names that have been given is a long one. The connoisseur will seek out the one called var. *hausknechtii*, which sprawls freely, branches frequently, and clothes itself in glossy green, inch-long rather oblong leaves, very woolly-white beneath and given to little flower-balls of white to cream. This one is from the northern Cascades, and others of its ilk are larger, looser and not so contrasty in leaf.

Quite as desirable, yet not at all a cushion of such congestion, is the fascinating *E. thymoides*, found on the Columbia Basin's basalt plains and ridges in shallow sage-brush association with *Viola trinervata* and *Pentstemon gairdneri* and other such treasure, all rather difficult to make happy removed from the natural scene. This forms the most beautiful little natural bonsai-bushlets, with manzanita-brown papery bark and tiny rolled leaves which turn to most fantastic glowing metallic hues in summer, about the time the sulfur-yellow flower heads become red-tarnished from the intense sun, and then the effect holds until the first snows. Leaves appear slimly needle-like, but are actually inrolled at both margins and finely and densely tomentose, therefore, rather obscure in detail. This is sometimes confused with the rather similar, but far coarser *E. douglasii* with which it may sometimes be found growing, in which case their contrasts are quite apparent. Roots reach deeply into subterranean, cool crevices, and in cultivation it seems most unrealistic that it must be given a trace of summer water, for its habitat in nature's scheme seems the harshest possible. This might prove true with other Eriogonums too, but excesses of water are certainly death seals at any time, other than the first day of spring. This may be transplanted at that time, with great care taken; at any other time there is no use making the effort, no matter the pains. It is possible in winter to pry out a chunk of its frozen desert, using a crowbar and first extracting the surface stones that are inevitable. Roots will come out unhurt, but it is frankly a considerable task!

Still another concept of what is "good" among the false buckwheats comes with those few actually grown for the flower effect, especially the good old-rose colored forms of *E. niveum* which are found in a variety of waste places throughout the Columbia Basin. From an attractive loosely packed, gray mound arises, in late summer or even up to mid-autumn, a branched and rebranched, woolly stalk, bracted conspicuously at each node, and then pop-corning in a profusion of whitish (typically) papery flowers, going to blush, or occasionally opening pinkish going to the lovely faded color once called "ashes-of roses" in describing a gladiolus. The effect is a staying one until the fall rains or the first snows commence the decays of age. This might be found listed as *E. decumbens*, in which case it is to be avoided as it will flop, and a yellow form has been called *E. strictum*; it could scarcely be as lovely as the rose ones, surely.

Although this selection by no means covers anywhere near the total of the best species of this rather wondrous, xeric genus of "clustered everlastings", those discussed would never be a disappointment, even though in cultivation they might not keep such hard and beautifully colorful domes and stemless shows of flower. Someone may want to experiment with added light to more nearly approximate nature's harshness.

There are equally attractive species from further south; Margaret Williams discussed a few of her favorites in the Harrogate conference proceedings, among them the most stunning, possibly *E. kennedyi*, white-lanose and rose-to-raspberry red in flower; she also is most admiring of the densely tomentose, oval-leaved *E. lobbii*. By all means, if the seed of Wyoming *E. acaule* is offered, take it and marvel at one of the truly most fantastic of all western American rock plants.

We look forward expectantly to the treatment of this almost totally North American genus (one or two go into South America) as forthcoming in the Intermountain Flora, where they will be treated by Dr. James Reveal. ■

THE PLANT COLLECTOR SWOONED

John M. Watson, E. Sussex, England

Turkish cuisine is renowned for its scattering of creatively named dishes to tempt the gourmet: Kiz Parmagi (Girl's Fingers), Imam Bayaldi (The Imam Fainted), Kadin Gobegi (Ladies' Navels). These are so much more alluring than bald recitals of ingredients. Such a bill of fare is intended to stimulate the appetite in prospect and thereby to encourage greater extravagance from the purse.

Suppose one such as myself should be contemplating a plant-hunting feast sometime in the future. How might a similar approach to describing Turkish alpine work out? After all, *Vavilovia formosa*, *Lamium cymbalariifolium* and *Jurinella moschus* ssp. *pinnatisecta* are so much Latin gobbledygook to those who have not seen them, that is apart from students of the flora and a handful of others at most. Everyone else, in the meantime, can only take my word for it that so far from being rank weeds, these three alone are well worth a slice of your life savings to obtain! Farrer justly condemned all self-conscious attempts to manufacture "popular" names. So, *pace* Farrer, with tongue firmly in cheek and without intention of permanence, let us seek inspiration in the names or natures of a selection of desirable plants to embark upon a fantasy menu fit to arouse the most jaded of sultans . . .

Pearls of the Harem (*Convolvulus compactus*)

Rounded, swan-white Favourites, flushed with a hint of pink, reclining languorously on silvery cushions. The cushions export well. The challenge is to coax those sensuous Favourites to blossom outside their native land, a challenge that has exercised the ingenuity of the Infidel across many centuries!

Midas' Purse (*Linum arietoides*)

A priceless gleaming mound of golden coinage for us all to covet. A few were once snatched in passing by the intrepid Dr. Peter Davis



John M. Watson

Convovulus compactus

a couple of decades or so ago. Alas, they were quickly squandered and have now passed into legend. Our shaky western economies could do with ample bolstering from this source.

Sugar Paws (*Lamium armenum*)

From limestone screes. Hooded and stemless flowers, very downy indeed; in bud like kittens' paws the colour of pink confectionery. It will accept cultivation, but our previous introductions suffered neglect through people thinking, "Ugh! Why on earth have they collected Dead Nettles?!" Nowhere could the menu idea be put to better purpose than in extolling the beauty of this, arguably the loveliest alpine we saw.

The Cat Sneezed Twice (*Tchaihatchewia insatidea*)

Refers to what Farrer calls the "murmuring sound" of Count Tchaihatcheff's daphne-looking, daphne-scented crucifer. But beware when the cat sneezes thrice! For Tchaihatchewia, being monocarpic, disappears. Now we must obtain it again to try and find a happy ending to this fairy tale from the 1001 Nights: how to coax it into leaving behind seed for us so that we may pass on the story to our children.

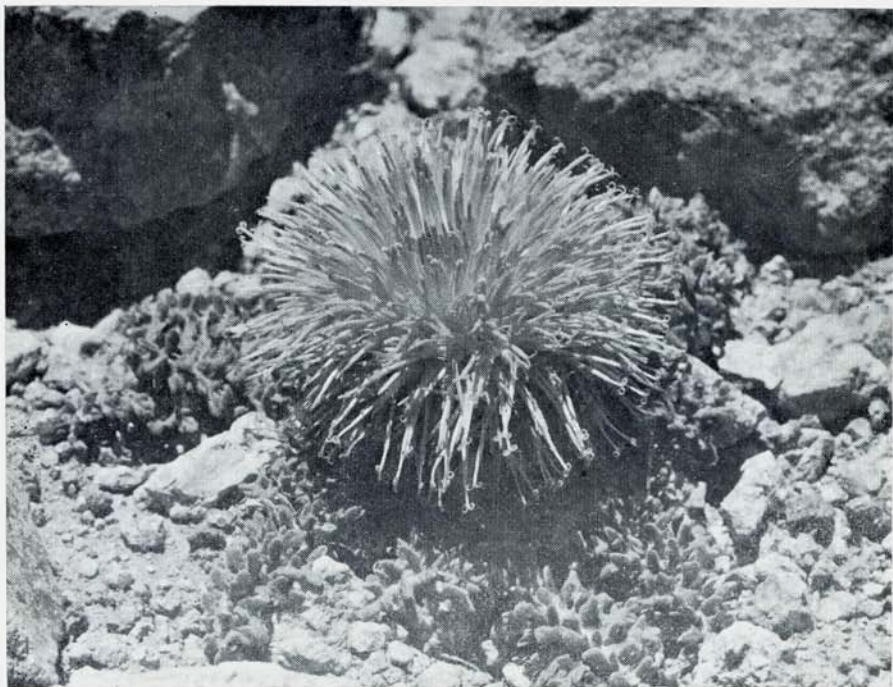
A Perfumed Lisp (*Thlaspi kurdicum*)

Becomes a double lisp when you hear it from Nicola, our three-year-old! Only she could make it sound as delicious as it is; a dense huddle of tiny leaves topped with heads of pale lilac. From the topmost rockflakes of Mor Dag it floats on the breeze a waft of fragrance as elusive as the plume of a dormant volcano.

Tears of Heaven (*Onosma* species)

At once Delight and Despair: pendants of as startling and unearthly a blue as you will ever see in a plant: (whoever chose to name the genus 'Golden Drops' had clearly not set eyes on this one). In 1964 my companions incarcerated me in the back of the Volkswagen to prevent me holding up our progress still further with too much wretched plant-collecting. I was all but asleep. As we drove over the pass, the blue pierced into my consciousness and had me hammering in vain against the windows, like Ulysses tied to his mast. It is that sort of colour. (Naturally we did go back for it.) The Delight is obvious. Why the Despair? Only that Heaven may cloud over when you try to reach for it. We heard of one plant that flowered; it turned out a dull slaty colour. So do we have any alpine gardener of such a saintly disposition that for them will bloom pure blue Tears of Joy? Another challenge!

Those six are no more than hors d'oeuvre. From our own experience we can offer Omlettes a la *Macrotomia cephalotes*, likened by Peter Davis to Golden Eggs in the globular yellow flower heads; or Seafood Delight of *Jurinella moschus* ssp. *pinnatisecta*, a great plumed Sea Anemone stranded on the arid mountainsides of Anatolia when Noah's Flood subsided; or salvers of salvias; or canteens of campanulas; . . . oodles of omphalodes . . . There remain still more we have not seen ourselves as yet, whose whereabouts we know: *Linum empetrifolium*, the exact counterpart in blue of *L. aretioides*. Or how about this from Volume 4 of Peter Davis's Flora of Turkey? *Potentilla oweriniana*: a dense greyish cushion alpine with



Jurinella moschus ssp. *pinnatisecta*

John M. Watson

heads of large bright pink flowers from purple calyces, originating from the moister northern mountains. After hundreds of unrelieved, dispassionate technical descriptions, the stern botanist melts and adds for this one, "A beautiful plant". Surely anything capable of drawing forth such wild paeans from a disciplined scientist must possess a quality to ensure that, on first glimpsing it, . . . The Plant Collector Swooned?

Editorial Footnote: In a more serious, indeed deadly serious vein, John, dearly wishes to organize a further collecting trip to Turkey to bring back these plants (to which many more of equal glory could be added). Accumulated knowledge of the Turkish flora since John's prior trips of the 60's would contribute certainly to an emphasis on quality, fewer but even better subjects. Unfortunately the problems involved seem formidable: they may yet not prove insuperable. Essentially everything boils down to finance. There is the current world economic outlook which does nothing to favor "frivolous" plant-collecting, though maybe people like to console themselves with hobbies and interests when times are harder. Then, with family responsibilities, John rightfully feels an ever increasing need for some guarantee of security as inflation bites and traditional forms of self-protection rapidly lose effectiveness. We all dream wistfully of a bygone era, one of private patronage, for which we yearn, though not at the expense of the poverty and exploitation that so often seemed to underlie it. And yet, who knows what the future may hold? Perhaps a miracle? Even without miracles, there may be sufficient people eager to support a collecting trip to Turkey so that it could be quite possible to make such an itinerary, even as soon as 1977. Therefore, we are unashamedly kite-flying here. John needs to know how many would be interested in taking a share in a Turkish collection, and asks them to get in touch with local chapters, or write him directly: John M. Watson, Mill Farmhouse, Whatlington, BATTLE, E. Sussex, TN33 OND, England.



IMPORTANT ANNOUNCEMENT

The 1977 Annual Meeting of the ARGS will take place at the Holiday Inn, Valley Forge, Pa., on May 6th, 7th, and 8th. The featured speakers will be Boyd Kline, of the Siskyou Nurseries in Oregon, on American Alpines in the Wild, and Catherine Hull, of Manchester, Mass., on Gardening on Limestone. These will be heard in the evenings. By day there will be garden visits, including one on Sunday morning to the Henry Foundation and the garden of the late, and fabulous, Mrs. Henry, a plant show, and a sale, including some *Hudsonia* and *Pyxidantha barbulata* rescued from the path of a bulldozer. There will be a mailing in early March, but if you don't receive it by March 30th, get in touch with either of the co-chairmen, Marny Flook, Box 3748, Greenville, Del. 19807, or Anita Kistler, 1421 Ship Road, West Chester, Pa. 19380.

TRAVEL IN SOUTH AMERICA

Margaret Williams, Sparks, Nev.

South America offers the venturesome unspoiled open spaces with fascinating plants — genera that are not found wild in our country and unusual cousins of familiar genera — challenging plants that defy cultivation. This article is not intended to tell about the plants, but instead, to offer some suggestions for making exploration for them as easy as possible. If you have unlimited time, speak Spanish fluently, and are prepared to rough it, read no further. But, if you have considered a trip to the Andes and have some doubts, this article may answer some of your questions. The recommendations offered are based on experiences we had during four weeks in June and July of 1974 and three weeks in January of 1974. We spent the most time in Peru, but also visited Ecuador, Chile, and Argentina.

Is it essential to be able to speak Spanish? No, but it really helps if you can read signs and understand a bit. In the better hotels, at travel agencies, and at the airlines usually someone can be found who can speak English. Customs officials invariably only spoke Spanish but they are unfailingly patient and extremely courteous. We simply produced all our papers, the officials examined the ones they wanted, and passed us through quickly. Plants that they politely removed from our luggage when we entered Ecuador were held and returned to us when we left the country a week later. There were no more regulations or restrictions on travel than there are in European countries or in entering the USA. We never saw anyone having difficulties with the police, though the police were definitely in evidence and fully armed.

The average person on the street paid little attention to us. Someone suggested that we should "try not to look like American tourists." Ignore that advice, it was neither possible nor necessary. Being American was no disadvantage, we were always treated with consideration. When rarely we tried to ask directions, the response was invariably polite, sometimes simply, "No entiendo." Other times the answer was so long and involved and so rapid-fire that it was impossible for us to comprehend. If the South Americans have any faults, they are their eagerness to please and their unwillingness to admit that they cannot be of assistance. A friendly service station operator struggled for half an hour to change a flat tire before he confessed that he didn't have the proper tools to do the job, and in fact, he had never been able to change a tire. Another time, a native by the roadside concluded very complicated directions for getting to the other side of the valley with the simple statement, "But, senora, it is not possible to drive from here to there, the bridge is washed out." This man was unusual, most could not have brought themselves to give us bad news, and would have let us find the missing bridge for ourselves. In the high Andes, often the shy natives only spoke a local dialect. Occasionally curiosity made them bolder, and interest in plants expressed with sign language gave us a common bond. Not being able to communicate can be frustrating. Brush up on your Spanish, if possible, or better yet, Quechua!

Is traveling expensive in South America? In the large cities you can find meals and accommodations in a wide range of prices. Even their best hotels were not expensive by American standards. In the better hotels they will be more likely to deliver messages and it will be easier to retrieve

left luggage on your return. And, most importantly, there will be a greater possibility that they will have a room to match your reservation. In outlying areas there often was little choice of accommodations and the facilities sometimes were primitive. At resort areas they were used to dealing with tourists, but hotel accommodations were scarce and it would have been difficult to get a room without a reservation. Write for a reservation well in advance (mail is slow), but do not send a deposit unless it is required.

Doubtless it is possible to buy anything you desire in the cities, but finding where can be frustrating. Also precious time is wasted in even the simplest shopping for things you can easily bring from home. Stores were open short hours, the siesta was inviolable. Something as simple as plastic bags seemed to be used extensively, yet we could not find out where to buy them. You could buy an inner tube at a Sherwin Williams paint store in La Oroya, and every gasoline station in Peru sold toilet paper, but where do you buy kleenex?

Probably the hotel will pack a lunch for you, in the high country you will be on your own. Our lunches were dried fruits and nuts, salami, jerky, chocolate, and cheese brought from the USA supplemented with crackers, avocados, and fruit bought in the cities, often from sidewalk vendors. A thermos was a good investment. We didn't have any internal disorders from anything we ate or drank, but we were careful. In many places the food was unusual and delicious and reasonably priced. We avoided raw fruits and vegetables unless we could peel them ourselves. If we were not sure of the water, we treated it with tincture of iodine. However, using crystalline iodine is now considered better (see Appendix).

Don't schedule your time too closely, their poor communication systems invariably cause delays. Time is not important to most South Americans. Reservations and schedules are only a statement of intent and are not a guarantee of performance, so leave yourself some alternatives. Go window shopping, the bargains are irresistible. Or visit another museum, the treasures they contain are fabulous. Or, as the Avis agency lady said when she didn't have a car to match our reservations, "Go have a cup of coffee, things won't seem so bad." When all else fails, read one of the paper-back books that you brought to press bits and pieces of unfamiliar plants. There's no problem bringing dried pressed plants through customs and they will be worth their weight in gold when you are back home again trying to identify the plants you saw.

Do you want to bring plants home? Import permits may not be essential, apparently customs officials can issue them on the spot, but they are easily obtained in advance. (See Appendix) As far as I could determine, a phytosanitary permit from the country the plants came from is only necessary when you want to bring plants into the United States and you do not have a permit. Some people who did not have phytosanitary permits had their plants confiscated. Yet, the USA officials wouldn't even look at the phytosanitary permits that we held out so proudly. Without the help of a Peruvian friend it would have been impossible to unravel the intricacies of obtaining a phytosanitary permit in Lima. On the other hand, an English speaking agricultural inspector in Quito was most efficient and accommodating. One thing seemed certain, the plants had to be bare root, with all the soil washed off. The first time we came through customs there was no delay, the inspector looked briefly at the plants, and we

brought them home with us. The second time, the plants were taken, later inspected, and much later mailed on. Luckily, they were orchids and could stand having their pseudobulbs completely exposed for ten days. The plastic bags the orchids had been in were carefully packed in the same box, empty. So, if you are bringing plants back, choose indestructible ones, and, if possible, be prepared to wait at your point of entry into the US until the inspectors have had time to check your plants. The inspectors seemed to keep banking hours, it was impossible to get anything accomplished evenings or weekends.

What's the best way to travel? From one city to another, it is best to go either by plane or train. Use a colectivo if all else fails, buses are not recommended. Large cities have car rental agencies and the cars we rented always were in good operating condition. But rental cars had to be returned to the place of origin and it is not safe to leave any car unattended on a city street at night. A rental car suitable for our needs was not always available. If your time is of any value, I would strongly recommend that you rent a car with a driver. It will not be much more expensive, if any more, you will get far more for your money, and it will save wear and tear on your nerves. A travel agency will rent you a car with a driver and sometimes with an English speaking guide. But a more advantageous arrangement often can be made with one of the taxi drivers who park at the better hotels. These men own their cars and keep them in good operating order. The ones we dealt with spoke English, were eager to please, took us twice as far in a day as we had been able to manage on our own, and added immeasurably to our enjoyment of the country. These men were accommodating, dependable, and unbelievably prompt. Traffic in the cities was hectic. Driving outside the cities was easy enough, there were few cars on the roads, the dirt roads were reasonably well graded, not too steep, but were often quite narrow. Meeting a truck was no more of a problem than it is on our own mountain roads in the back country. The main difficulty was the lack of maps and both street signs and road signs. On our own, finding our way out of Quito took a harrowing 2½ hours. A taxi driver whizzed us into the country in 15 minutes, unbelievable! He supplied us with odd bits of folklore and historical facts, scrambled up slippery cliffs after out-of-reach orchids, and marveled with us at the beauty and delicacy of the tiniest plants.

Where's the best place to go? Obviously this depends on many variables: the amount of time you have to spend, the time of year you are free to go, and the kind of plants you hope to see. The high Andes can be reached in a day's journey by car from the cities listed below. Because we had such good fortune at the few places we visited, I feel sure that the plants will be equally exciting wherever you get high in the Andes. If plants in general interest you, you will find fascinating plants at all elevations.

If you are only interested in plants that you possibly can grow, then by all means go to Chile or Argentina. From Santiago, Chile, it was easy to get high in the Andes because of the nearby ski areas. This was also true of Boriloché, Argentina, on the shores of beautiful Lago Nahuel Huapi. The plants should be at their peak of bloom in those areas in mid-January. If it is seed you want, go 4 to 6 weeks later. The plants in these areas are more like those of our latitude. You will even find

some of the same weeds brought from Europe that we have in the USA. Quite a few German and Austrian people have settled in these areas, German is widely spoken.

If the plants in either of Weberbauer's books (see the Appendix) fascinate you, or if you want to see the ultimate in cushion plants, then go to Peru. The best time for traveling in Peru is after the rainy season is over. The rains usually begin in January and last into early April. If the rains are heavy, the dirt roads become impassible and even paved roads become buried in mud slides. Men clearing the roads with shovels are slow and can cause long delays. We found quite a few late flowers in July, but May would have been a better time. Arequipa is a good place to begin in Peru because it is so easy to get high into the mountains from there. Mr. A. G. Holley, an Englishman with a Land Rover and an intimate knowledge of the high country around Arequipa, organizes individualized tours, and we highly recommend him.

A paved road east of Lima crosses the Andes at Anticona Pass (4943 m elevation). It is a long day's drive to the pass and back to Lima that night, but the marvelous plants you will find right by the road on the summit are well worth the trip. You can breathe at that elevation, but take it easy! There are other roads east of Lima which have unique plants at lower elevations. Tarma, Huaraz, and Puno on Lago Titicaca are convenient centers for exploration at 4000 m and above. However it is doubtful that the plants from Peru will be fully hardy — they certainly will be a challenge to grow, few are in cultivation.

Quito, Ecuador, was definitely one of our favorite places. Spectacular scenery and exotic plants were along all the roads out of town. Andean plants were within a short drive of Quito to the north, south, or east. The tiny plants in the bog at the statue of Ave Maria on the Papallacta road, where it crosses the eastern cordillera of the Andes, were especially appealing. Even the most dedicated rock gardeners will be enthralled with the tropical jungle vegetation along the road west of Quito leading to the Pacific. There are no seasons, plants were as floriferous in January as they had been in July. However, the rainy season is to be avoided. Ecuadorian plants are lovely to look at, but because of their proximity to the equator, even at 4000 m elevation, they are even less likely to be hardy than those of Peru.

Your pleasure in the Andes will be in direct proportion to the planning you do in advance. Read as much as you can, a list of the books we found interesting is appended. Brush up on your Spanish, or at least carry a simple phrase book. Allow yourself ample time for planning, mails are unbelievably slow, and remember, reservations are recommended. I cannot emphasize too strongly how much better it was having a car with a driver. Tell him your problems and what you hope to see. We were well equipped with plastic bags on the second trip when we realized how helpful a driver could be! The driver we had in Quito could have shown us *Frailejones* (*Espeletia* sp.) if only we'd had the wit to ask him when we first arrived there. But then, not seeing them is a marvelous excuse for going back! Above all, pack an extra supply of patience. You will have the adventure of your life if you are prepared to accept whatever happens and if you expect South America to be quite different from the USA or Europe.

Recommended Books

- Clay, Sampson — THE PRESENT DAY ROCK GARDEN
Darwin, Charles — VOYAGE OF THE BEAGLE
Fries, R. E. — ZUR ZENNTNISS DER ALPININ FLORA IM NORDLICHIN ARGENTINIEN
Greenberg, A. & H. — SOUTH AMERICA ON \$5 AND \$10 PER DAY
Goodspeed, T. H. — PLANT HUNTERS IN THE ANDES
Gunter, John — INSIDE SOUTH AMERICA
MacBride, J. F. — FLORA OF PERU (partial, issued by Field Mus. Nat. Hist.)
McHamish, L. — GARDENING IN LIMA (The American Women's Lit. Club, Lima, Peru)
Munoz Pizarro, Carlos — SINOPSIS DE LA FLORA CHILENA
Niles, Blair — PERUVIAN PAGEANT
Ruiz, Lopez H. — FLORA PERUVIANA ET CHILENSIS
La Sociedad de Horticultura de San Carlos de Bariloche — FLORA DEL NAHUEL HUAPI
Tinajero, J. R. — PLANTAS COMPUESTAS (Ecuador)
von Hagen, Victor — HIGHWAY OF THE SUN
Ward, R. T., and M. J. Dimitri — ALPINE TUNDRA ON MT. CATEDRAL IN THE SOUTHERN ANDES (near Bariloche, Argentina) (N. Z. Jour. of Bot., Mar. 1966)
Weberbauer, August — DIE PFLANZENVELT DER PERUANISCHEN ANDEN
Weberbauer, August — EL MUNDO VEGETAL DE LOS ANDES PERUANOS
Wilder, Thornton — THE BRIDGE OF SAN LUIS REY
Woodcock, George — INCAS AND OTHER MEN

Recommended Travel Agencies

- Alunca Tours, San Carlos de Bariloche, Argentina
Turismo Cocha, Casilla 1001, Santiago, Chile (They can arrange a trip for you from Santiago to Bariloche via Puerto Montt through the beautiful lakes district)
Metropolitan Touring Agencia de Viajes, P.O. Box 2542, Quito, Ecuador
Lima Tours, P.O. Box 4340, Lima, Peru
A. G. Holley, Arequipa, Peru (See advertisement in *ARGS Bulletin*)

Permit to Import Plants

Apply to:

United States Department of Agriculture
Plant Protection and Quarantine Programs
Federal Center Building
Hyattsville, Maryland 20782

In the application list the names of the plants you wish to import, the countries from which you wish to import them, and your port of arrival in the USA.

PLANT HUNTING IN NORTHERN GREECE

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When I mentioned this trip to Harold Epstein and indicated that we were going to Greece in June he said, "It's too late — everything will be burned up."

In a way he was right. Southerly and coastal Greece was quite dry but we were headed for the north where some rain fell almost daily and where the land was lush and green. In fact, we saw a number of fish hatcheries which supplied trout for the frigid streams emerging from the northern Pindus range. This mountainous backbone of Greece extends from Albania south to the Gulf of Corinth.

First let me explain our arrangements. My wife Doris and I flew to Athens and joined a group from England lead by Mrs. Patricia Hodgkins of Peregrine Holidays. The tour title was *Mountain Flowers of Northern Greece*. Our very competent botanist was Peter Broussalis who was accompanied by his most charming wife Maro. But more about these fine personalities later.

After all baggage and members were accounted for we were whisked through Athens, got quick glimpses of the Acropolis and were soon in the countryside headed for the mountain town of Arachova. On the way we passed the famous road junction, The Triple Way. Legend tells us it was here that Oedipus killed his father, Laius, King of Thebes.

Arachova is perched on the side of a mountain in a most spectacular way. There are distant views of still higher mountains while far below the valleys are silvery with olive trees. Delphi is barely discernible about six miles ahead.

Our two day stay here was devoted to one day in Delphi and another to Mt. Parnassos. Delphi of course is one of the touristic jewels of Greece — always included in the classical tour. I had been there in 1952 at which time I had the place to myself. This time there must have been at least fifty tour buses representing most of the countries in Europe. Every monument had one or more groups being lectured in every language imaginable. Still, the place is big enough so that one doesn't feel crowded. Besides, why worry about tourists when there were such wonderful plants to behold. *Campanula rupestris* — in full bloom — grew out of the cracks between marble blocks with no soil apparent. *Stachys swainsonii* and *Teucrium polium* were growing in the walls of the stadium. The latter does quite well in my own rock garden. A unique aroid, *Biarum tenuifolium*, caused quite a commotion as did the cucurbit *Ecballium elaterium*.

Then it was back to the clear, cool air of Arachova with its wonderful church and quaint shops selling the woolen handicrafts for which the area is noted. We were enchanted by the goat bells and bought two of them.

Even on the approach to Mt. Parnassos the flora started to excite the group. Here we found *Daphne oleoides* which we were to see in other parts of Greece and the enchanting *Prunus prostrata* which we must introduce into our rock gardens.

Greece has been called One Enormous Rock Garden and most of it is limestone or marble. It was here on Parnassos that this became quite evident. We passed groves of *Abies cephalonica* under which grew *Helleborus cyclophyllus*, *Arum maculatum* and *Digitalis ferruginea*. Also in the area



Nickolas Nickou, M.D.

Daphne oleoides

grew *Juniperus oxycedrus*.

When the bus came to a halt at the alpine hut we were surrounded by *Geranium subcaulescens*, *Laminum garganicum* and *Doronicum cordifolia*. As we started up the mountain which was wreathed in mists we encountered *Ajuga pyramidalis* and *Aethionema saxatilis* var. *graecum*. Still higher was *Asragalus parnassicus*, *A. lacteus*, *Polygala nicaense*, *Iberis sempervirens*, *Corydalis solida* and *C. parnassica*. By this time it was getting quite cold and we were in the clouds. The summit was invisible. Our last finds were *Crocus sieberi* growing in a moist area and *Pterocephalus parnassi*. The latter also does well in my rock garden.

It would be nice to make this trip daily over a period of time, striking out in various directions and, if the day is clear, attempting to reach the summit. Organized tours make no provision for this. One can only say, "I'd like to come back alone some day and do this right." This was something I repeated many times during this trip.

The next day was a long haul to Ioannina in the northwest corner of the country in the province of Epirus. On the way we passed such places as Itea, Messalongi, and Amphiloia — all reeking with history and legend. Of the several lakes we passed one had the familiar name of Lysimachia.

As we descended the mountains from Arachova toward the Gulf of Corinth we passed extensive olive groves. Along the shores of the Gulf it was quite dry with *Euphorbia dendroides* in evidence as well as the ubiquitous *Phlomis fruticosa*. A resinous fragrance pointed out to us by Peter was contributed by *Inula viscosa*. Other woody plants noted were *Juniperus phoenicea*, wild olives and some handsome pomegranates, *Punica granatum*.

In the gulf itself rested a small fleet of supertankers waiting for an improvement in petroleum demand.

On approaching Ioannina we waited out a rain storm in a wayside restaurant where we sampled the local cheese and wine. Ioannina is a fair sized city located on an attractive lake. To the east can be seen several of the higher peaks of the Pindus range — principally Peristeri, 2183 m. One could spend weeks exploring out of this center.

It was here that we got to know our leaders better. The vivacious Pat Hodgkins did her job cheerfully and conscientiously. She mother-henned us in expert fashion. She wined us and dined us and entertained us to a point where on some days she was near exhaustion. Her pickup lunches — enjoyed in the shade of a grove of plane trees or on the slope of a mountain or along the shore of a stream or sea — were a delight. Generally they consisted of the local breads, cheeses, olives, wines, and fruits.

Dignified, capable, and all-knowing was our botanist-guide, Peter Broussalis. As a retired shipping executive he now devotes his time to the study of the Greek Flora and to many nature conservation efforts. He spoke excellent English and is an expert photographer. His enthusiastic and friendly wife Maro also contributed to a memorable trip. It was she who told me that my command of the Greek tongue had improved tremendously during our short stay together. As a child I spoke Greek at home but in the ensuing years I'd become quite rusty. A visit to the native turf did wonders for my confidence so that I could order a meal almost with the aplomb of a native.

Thirteen miles southwest of Ioannina is Dodona — seat of an oracle dating to ancient times. Although not as well known as the Delphic oracle Dodona does boast a magnificent amphitheatre which looks out onto a dramatic countryside. Behind the theatre we found a most spectacular orchid, *Himantoglossum hircinum caprinum*. The extremely long, twisted lobes of the floral lip made for a spidery appearance. Needless to say, the photographers really lined up for pictures of the nicer specimens.

On another day we were scheduled to visit and botanize the area of Papingon high in the Pindus Mountains but our bus could only go as far as Aristi — itself a delightfully situated hamlet overlooking a deep valley. From there we walked and botanized along a dirt road to the still smaller hamlet of Vicos sitting on the crest of the immense Vicos Gorge. The view was spectacular — nicely complementing the quaint old stone buildings with shale shingled roofs. The old church was a stonework masterpiece.

Along the road grew numerous trees of *Paliurus spina-christi* in bloom, a member of the Rhamnaceae. From a distance the tiny flowers have a light airy aspect similar to those of our spice bush, *Lindera benzoin*. Also along the road we saw *Trifolium fragiferum*, the ubiquitous *Tordyllum*, *Nigella*, *Euphorbia myrsinites*, and a pretty little orchid, *Anacampti pyramidalis*. Still more impressive was a fine specimen of *Salvia sclarea* which must surely be used as a garden ornamental.

A faunal contribution to the scene was a Greek tortoise plus several very active dung beetles rolling their burdens endlessly.

None of us could identify an attractive purplish-spired plant until Peter

came to the rescue — as usual — with *Lysimachia purpurea*.

Back to the main road going north to Konitsa near the Albanian border we made another stop at the exit of the Voidomatis River from its deep gorge. The river was spanned by a graceful old Turkish bridge. The water was frigid. Several men with fly rods were encountered on their way upstream looking for ideal spots to catch trout.

The walls of the gorge and some of the larger boulders were covered with plants of *Ramonda myconi (serbica)* but only a few flowers were found. We were late for the big show. Still, it was exciting to see this famous hardy gesneriad.

The river emerged into a flat valley with ripening grain, *Papaver rhoes*, *Tordylium*, and a pretty black-headed bunting enlivening the scene. In the near distance reared the mountains of Albania.

Monodendri was another delightful mountain town with an old monastery perched on the crest of the Vicos Gorge. In the town is located a small eating establishment noted for a tasty cheese-pastry concoction which along with the usual olives, bread, and salad made for a wonderful lunch. Growing nearby were some choice specimens of *Saponaria calabrica* and *Convolvulus cantabrica*.

At this point I'd like to say what a pleasure it is to travel with the English. As on other trips we found them to be a delightful, enthusiastic, and intrepid group. Mr. Herbert Crook in particular was a very well informed plantsman.

Returning from Konitsa we noted several large white flowers at the top of a road cut. An exploratory stop was most worthwhile as we found a dozen or so plants of *Lilium candidum* growing among clumps of *Helianthemum graecum*. Believe me — the cameras were really clicking. A mile or so further still more were seen along the road. I don't believe this



Verbascum undulatum

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Nickolas Nickou, M.D.

Saxifraga scardica

lily is found in the wild too often. I don't know whether these plants were natives or naturalized but I do know that it was exciting to see them.

The next phase of our trip took us through the Pindus Mountains east toward the Aegean. We stopped to visit Metsovon, a larger mountain village where the inhabitants still wear the unique local costume. The men — particularly the older citizens — wore a dark ruffled skirt, pompoms on their shoes, and a black fez-like hat, the latter a reminder of 400 years of Turkish occupation. The overhanging second stories of the houses and stacks of firewood reminded me of the Swiss and Austrian Alps.

A short distance beyond, in a moist meadow, was a plethora of orchid species plus masses of other plants. Yellow was supplied by *Rhynanthus pindicus*, pink by *Scorzonera rosea* and a scattering of lavender, pink, mauve, and white by *Orchis coriophora fragrans*, *Gymnadenia conopsea*, *Orchis maculata saccifera* and on and on. Just below the Katara Pass, 1700 m., were stately spires of the white *Asphodelus albus* along with *Peltaria emarginata* and *Pinguicula hirtiflora*.

Following a quick visit to Meteora with its monasteries perched inaccessibly atop high rocky pinnacles, we crossed the fertile plains of Thessaly. Larissa, a prosperous agricultural center, remains in my memory because of the imaginative use of *Albizzea julibrissin* as a street tree. From there on to the Aegean shore I noted the extensive use in roadside plantings of our own black locust, *Robinia pseudoacacia*, Spanish Broom, *Spartium junceum*, and oleander, *Nerium oleander*. We stopped for the night in the resort town of Platamon. Nearby was a Crusader Castle but still more impressive was the bulk of Mt. Olympus hovering in the distance.

It was a short trip by bus to Litohoron on the slopes of Olympus. Then a small flotilla of cabs took us to the start of the trail at the

1100 m. level. Six of us hiked to the alpine hut at 2100 m. To attain the 2917 m. summit would require an overnight stay at the hut followed by a long following day to get up and all the way down to the start of the trail. Again, this for another year.

Within a few minutes we encountered one of the Olympian endemics, *Jankaea heldreichii*. The plants were in full bloom, perched on large, house-sized rocks and adjacent cliff faces. They were always on vertical surfaces. The flower color was royal purple. Peter said he had never seen the plants so floriferous nor so colorful in numerous previous trips to the famous mountain.

We saw no Gods nor any of their lesser minions on the trail but we did see *Viola delphinantha*, *Iberis sempervirens*, and *Aquilegia amaliae*. Further along we encountered two pretty orchids — *Cephalanthera damasonium* and *Orchis pallens* — plus a bizarre relative, *Neottia nidus-avis*, the Bird's-nest orchid. Still further along was the dainty *Fritillaria messanensis*.

As the woodland opened up and areas of rubble and scree became apparent we found *Chamaecytisus demisus*, *Saxifraga scardica*, *S. sempervirens*, and magnificent clumps of *Viola heterophylla*. Here and there was a scattering of *Draba azoides* and a single plant of *Globularia cordifolia*.

Tired, hungry, and thirsty and with the hut in sight we were given one final lift by drifts of *Gentiana verna* which were of an excellent color. Refreshments served to climbers were available so after a bowl of soup, a beer, and a sandwich we started down. The mountain deserved more of our time but as I've said before, "Next time."

Mount Pelion dominates a peninsula which projects into the Aegean and is dotted with tiny villages almost lost in extensive groves of chestnut and beech. The area was green and lush and watered by numerous streams — some of which were diverted via ditches which ran through the villages themselves. This is a fruit growing area and the cherries we bought along the roadside were excellent.

Our hotel was located in Tsangarada which boasted an enormous plane tree, *Platanus orientalis*. It shaded a large square near the church. It was one of the largest deciduous trees I have ever seen.

Walks in the nearby woods and down to the shore added new plants to the list — *Acanthus spinosus*, *Dracunculus vulgaris*, *Colutea arborescens*, plus several handsome *Verbascums* of which Greece has a multitude.

On the cliffs facing the sea was the caper, *Capparis spinosa* and the fantastic *Campanula incurva* with immense pale blue flowers resembling mini brandy snifters.

Little deserted beaches along the shore boasted the clearest water ever plus an occasional eating place where we could get fried fish plus the usual excellent bread, cheese, and olives. The swimming was a delight. This was touring and botanizing at its best.

In the gardens of many homes, restaurants, and hotels grew fine specimens of camellias and gardenias. But none of them grew in the ground. Most of them were in tubs made of petroleum drums. They were grown in leaf mold scraped from under the chestnut trees. They were propagated by air layering but with a most unusual technique using the neck and attached portion of a plastic bottle.

On our last day a hurried run up Mt. Parnes on the edge of Athens will be remembered for a new genus — *Thymelaea tartonraira*. We also saw *Caphalanthera rubra*, *Inula candida*, the beautiful and architectural rosettes of *Verbascum undulatum*, and the shrubby *Berberis cretica*.

The rest of the party returned to England while we stayed another week and visited relatives and friends. We walked all over Athens to “do” the sights and visited some of the nearby islands.

This was a well planned trip. The company was excellent and for me — to put my Greek to use was a thrill. I’d love to go back — to improve my speaking proficiency and to look for more wildflowers in the Gigantic Rock Garden called Greece.

CARL S. ENGLISH

Carl S. English, Jr., died of a heart attack at the Government Locks in Seattle on August 11. Carl had retired as Horticulturist at the locks in June 1974 after 43 years of service, and shortly after his retirement the gardens were named for him.

Carl was born in Camas, Washington, October 22, 1904. He graduated from Washington State University with a Bachelor of Science degree in Botany in 1929. The same year he married Edith Hardin, a botanist and zoologist. He came to work at the locks in 1931, and in 1941 was placed in charge of the gardens and given the title of Horticulturist. For many years he collected seeds of native plants through the Western United States. He made one collecting trip to Australia, New Zealand and Tasmania and brought back many interesting plants from there. Most of the plants now growing in the gardens were grown from seed which he collected, or which he obtained from the many seed exchanges to which he contributed. Very little money was ever spent on plant material.

Carl was a past chairman of the Northwest chapter of the American Rock Garden Society. He received many awards from botanical and horticultural societies for his work, and he was particularly proud of the joint Award of Merit presented to him and Edith by the ARGS in 1966. He was a recognized authority on our native plants here in the Northwest, having discovered and named several.

Carl was not only a great plantsman, he was also a great person. I was privileged to work with him for about ten years before he retired, and have tried to take his place since then. I thoroughly enjoyed those years. Mention was made at his funeral about what a gentle man he was. I can testify to that. I have seen him spend fifteen or twenty minutes trying to capture a stray bee which had wandered into the greenhouse and was trapped there, so that he might release it outside. He had a wonderful sense of humor too. At his retirement party he remarked that “Old gardeners don’t die, they just go to seed.”

Many of us will be able to remember Carl by plants in our gardens which came from him. To mention just a few, I have *Pinus balfouriana*, *Castanopsis chrysophylla*, *Quercus sadleriana* and *Lithocarpus echinoides*, all from seed which I got from him in 1956.

Carl is survived by his wife, Edith.

— Walter L. Lyon

BALKAN HARVESTS
Zdenek Zvolanek, Prague, Czechoslovakia

Like prospectors in search of gold, rock gardeners set out for little-known and remote paths into the Balkan massifs to make them yield their flower secrets. The family of Czech rock gardeners can be divided into two tribes. The first, the larger, invades the mountains as soon as the thaw has set in, hung with all available cameras, films, and sharpened small spades. The second one is so small that its members could easily be counted on the fingers of one hand, but they also do their bit. You can see these fans setting out in the fall, bringing only paper bags of various sizes which they fill with seeds (or sometimes fail to fill, as the harvest is dependent on the weather). They do not meet the most marvelous combinations of esthetic enjoyment provided by vast plains of alpiners in full bloom during the spring, but they avoid meeting with the changeable spring weather and the storms typical of this region. Only the fall brings settled weather in the South European mountains. What better could one ask for seed collecting? For the enjoyment of spring bloom is substituted the feeling of utility, not only for the collectors themselves but also for their friends living all over the world.

As amateurs and owners of small allotments, we search for nice, low, slow growing species. We leave to botanists the "rare" and "unusual" plants which make rockeries poorly dressed. The novelty of our expedition this year was based on fruitful cooperation with one of the spring groups. Their leader, Mr. Pangrac, had agreed that they would map each of the localities they visited. Thus our collecting trip started with the knowledge that the first group had obtained on their spring tour. We got handmade maps of the localities and complete photographic documentation of the surroundings of the particular plant stations.

The expedition of the first group had been excellent for about three days. Then they had met with a thunderstorm and with lightning and peals of thunder such as Mr. Pangrac, an experienced leader, had never seen before. The group had been escaping in strong hail from the top of Mt. Kutelo (2907 meters, Pirin Mountains, Bulgaria). They hurtled down as if they had been on ball-bearings in order to reach a shelter. It was really a battle for life. Thunderstorms come suddenly here and if you are in a safe shelter you can see real horror on the stage of wild scenery. On this occasion a layer of hailstones inches thick had broken the alpiners, including their sexual organs — an event that certainly influenced this year's seed harvest.

As we were able to spend only one week in the mountains (we are all married) we had to choose the most advantageous traveling plan to make full use of our four days' stay in the Pirin Mountains in Bulgaria. To fulfill the plan we had to take a taxi from Sofia up to chalet Banderitza and back. The collecting itinerary prepared in advance according to the information of the first group saved us much time and trouble in the unknown terrain we had to pass through. The photographic documentation made possible the collection of seeds of species that are hard to find if not signaled by the colors of their blooms.

Seed harvest in the mountains is not as easy as pie. We had to overcome difference in heights of about 1000 meters and if we take into

account sidesteps, bending our backs, kneeling down, etc., it was an arduous hike. I could hardly describe the continual seeking for collecting bags, reaching for pencils, writing of remarks, labeling bags, and smoking cigarettes. Here and there were places where one could collect the seed only by one method — crawling.

Ideally what the collector should do is as follows:

1. The collector should study all available literature on the plants occurring in the region in order to get a first idea about where to concentrate his efforts.

2. The collector should make notes of altitude, position, neighbors, soil, and, if he cannot determine the genus, he should also plumb the root system. This is especially important for the transplanting of seedlings. The failures that occur in transplanting seedlings with taproot, or planting a crevice plant into the usual composts attest to the need for proper study of the plants during the collecting trip.

3. The collector should know the shape of the seedpods and seed of all the species he collects — otherwise he might bring home only empty seed pods, as we did this year with *Gentiana pyrenaica* L. whose seeds fall out soon.

4. The collector can collect even unripe seeds (in this case we collect seed pods with stalks). The seed will ripen in plastic bags and give normal seed that will germinate.

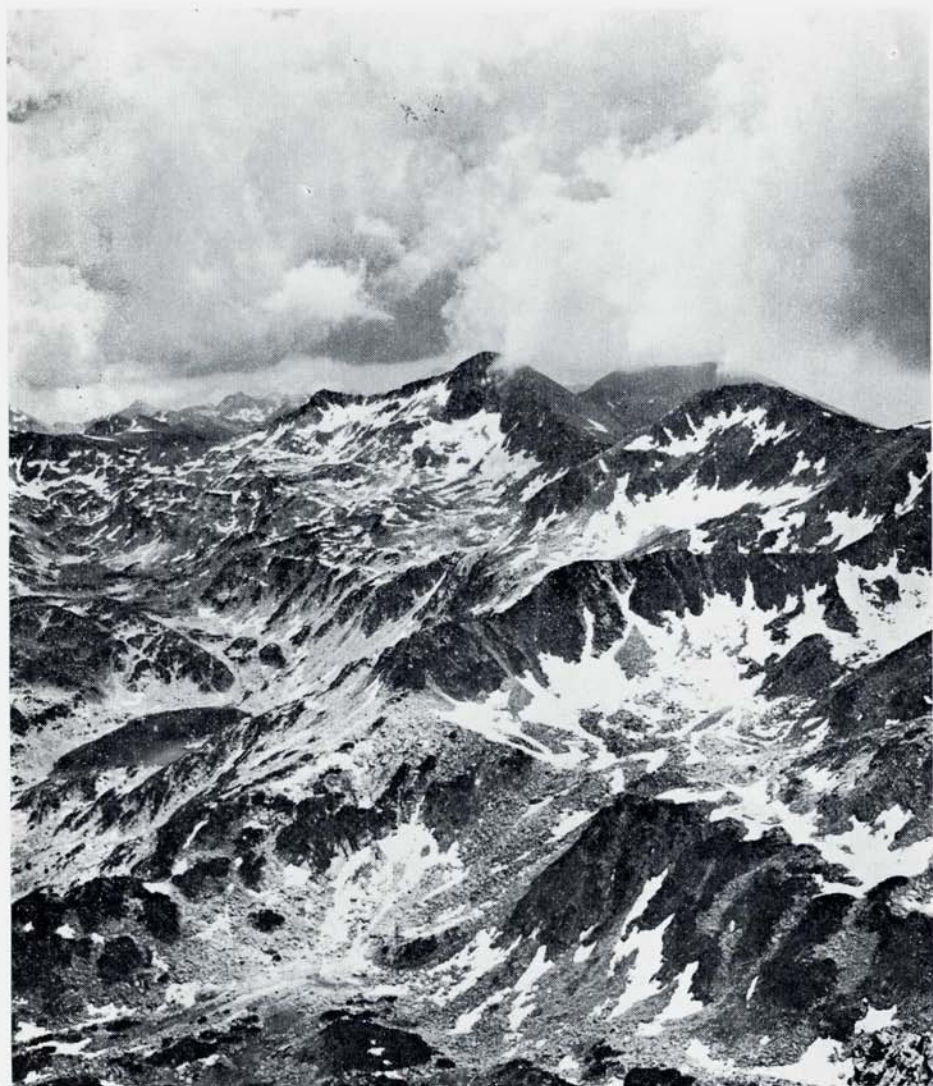
5. If the collector is not sure about the determination of a botanical name, he should collect the stalks of other typical parts of the plant. This may help in identification later.

6. The date of the collecting trip is a matter of chance. The choice depends on the altitude of the region, on the weather during spring and summer, and on many other factors.

Seed collecting is hard work, as I mentioned above. But collecting the seeds we also met many flowers that were eye-catching because our eyes were not overfilled by the spring revel of colors. Let me describe briefly what was in flower in the Pirin Mountains on September 10, 1975.

Linum capitatum Kit./Syn: *L. elegans* Dav. non Sprun./ was in full bloom at the altitude of about 2500 meters. There were a few dozens of clusters the size of a bun, resembling lumps of gold, in front of props of broken-off marble pieces, the smallest of which must have been 10 tons or more in weight. The marble stone brutally thrown about and the bright yellow flowers 2 to 3 cm in diameter borne on stems about 5 cm in height created a dramatic scene for man who, beaten by civilization, had an opportunity to let into his soul all the tenderness, purity, and thousand-years elegance symbolized by the flowers and the heathen splendor of the stone structure. But we were too practical to look at such a scene for long. After a while we were calculating: we had collected seed of this species from plants reaching 15 cm in height in shady places and that certainly would be its height in our rockeries.

The north basin of Mt. Vichren was the only place where we saw a few wonderful plants of *Dianthus microlepis* Boiss., almost in full bloom. The flowers were bigger in comparison with common types and dark rose in color. We can state that *D. microlepis* is a plant of small fields, screes,



Jaroslav Randa, Prague
A view of the granitic section of the Northern Pirin Mountains

and meadows, so that it is not suitable to plant it into crevices where the plants would suffer from hunger and would not be so floriferous. Its variability in creating various shapes of leaves, sizes and colors of flowers gives us the opportunity to select cultivars of the highest quality. It is interesting that some types do not bear seed at all.

We were pleasantly surprised to see a series of delicate lilac-rose flowers of *Armeria alpina* Willd. and the wonderful violet-flowered big cushions of *Veronica satyroides* Vis. var. *kellereri* Deg. et Urum. We found *Helianthemum nummularium* /L./Mill. var. *stebianum* /Ten./Jenchen with soft greenish, rounded elliptic leaves and unusually big flowers (about 3 cm in diameter) which were yellow with a light red ring. Fortunately some plants had

set seed and now we are looking forward to their introduction into our rockeries. *Papaver degenii* Kuzm. which is endemic to the Pirin Mountains was in full bloom at the highest altitudes. The shiny yellow flowers on the stems 3-8 cm high were big and lovely. *Saxifraga discolor* Vel. posed in open north-facing crevices. It occurs rarely here and everybody is charmed by its attractive appearance. Small cushions are made of leaves resembling those of *Primula minima* and plenty of rose, red, and white flowers flowering at the same time on densely hairy stems. Unfortunately, the plants had not set seed. Some authors consider the species as biennial (*S. adscendens* L. var. *discolor*/Vel./).

It would be suitable to mention the alpinics almost finishing their bloom because the flower sample is wonderful for humble autumnal visitors having a bit of imagination and experience, too. *Erigeron alpinus* L. var. *rhodopaeus*/Vierh./Stoj. et Stef. (Syn: *E. uniflorus* Vel. non L.) only 5 cm high was the striking species with its pretty rose-violet flowers 1½ cm in diameter. We found the plants growing on marble screes at altitudes over 2600 meters. *Jasione orbiculata* Grsb. Var. *balcanica* Urum. creating adpressed clusters with big light blue heads of flowers on stems 5 cm in height, looking like an outstanding globularia. The *Aster alpinus* L. var. *dolomiticus* Beck. we saw was rose and only 6 cm in height. I was surprised to discover a few creamy white flowers 2 to 2½ cm in diameter with a light yellow eye on a trim small cushion. I met *Arabis alpina* var. *flavescens* Grsb. face to face. *Leontopodium alpinum*/L./Cass, called here "Balkan Star" appears in two outstanding forms. *L. alpinum* var. *crassense* Derganc has densely widespread leaves and its stems, which bear big flowers, are about 5 cm in height. The plant is splendidly silvery-hairy all over. *L. alpinum* var. *nivale*/Ten.DC. (Syn: *L. a. var. perinicum* Vel.) is a really small jewel of pirins which I met (and 14 days after me also the great English mountain explorer Mr. Gilbert Barrett) only at the south saddle of Mt. Vichren. Cushions about 2 cm in height are created from tiny spoon-shaped lanceolate leaves densely silvery hairy. Flowers are about 2 cm broad sitting between or on the leaves. Mr. Barrett was in despair because he had not found one seed on the locality — this is a proof of my thorough harvest.

I had the pleasure of looking at *Alyssum cuneifolium* Ten. ssp. *pirinicum*/Stoj. et Acht./ which is still not in cultivation. Creeping short stems that turn upright at the ends bear a prettily arranged globose inflorescence composed of 10-16 mm dramatically yellow flowers on equally tiny stalks. The plants in seed are graceful objects 5-15 cm in height. South-European *A. cuneifolium* ssp. *cuneifolium* differs from the subspecies mentioned above in having pale yellow flowers and bigger stalks slightly broadened at the top; there is also a detailed difference in sepals and in its habit, which is not so robust and compact. The last plant having shown its last flowers was *Aubrietia gracilis* Sprun. var. *pirinensis* Stoj. et Acht. with blue-violet quite big flowers on cushions 10 cm in height.

To conclude the story I list the species seeds of which I have collected especially for all flower lovers: *Alyssum cuneifolium* ssp. *pirinicum*, *A. repens* Bmg., *Arabis alpina* var. *flavescens*, *Aster alpinus* var. *dolomiticus*, *Astragalus depressus* L., *Aubrietia gracilis* var. *pirinensis*, *Campanula orbilica* Panc., *Daphne oleoides* Schreb., *Dianthus microlepis*, *Draba lasiocarpa* Koch., *Dryas octopetala* L., *Erigeron alpinus* var. *rhodopaeus*, *Genista depressa*

M.B. var. moesiaca Vel., *G. involucrata* Spach, *Gentiana verna* L., *Geum montanum* L., *Helianthemum canum* /L./Bmg. var. *balcanum* Janchen (Syn: *H. canum scardicum* (Grsb.) *H. nummularium* var. *stabianum*, *H. nummularium* var. *tomentosum*/Scop./), *H. alpestre* DC., *Jasione orbiculata* var. *balcanica*, *Juniperus sibirica* Burgsd. (Syn: *J. nana* Willd.), *Linum capitatum*, *Leontopodium alpinum* var. *crassense*, *L. a.* var. *nivale*, *Minuartia recurva* Sch. ssp. *orbelica* Koz. et Kuzm., *Oxytropis campestris* DC. var. *sordida*/Pers./Hayek, *Primula elatior* Jacq., *Saxifraga cymosa* W.K., *S. ferdinandi-coburgii* Kell. et Sund., *S. oppositifolia* L. *S. spruneri* Boiss, *Silene graefferii* Guss. var. *latifolia* Adam., *Soldanella alpina* L. var. *hungarica*/Smk./ *S. pusilla* Bmg., *Viola grisebachiana* Vis. (Syn: *V. pirinensis* W. Becker), *Varonica saturoioides* var. *kellereri*.

The seeds of outstanding mountain plants of the Pirin Mountains such as *Daphne kosaninii* Stof., *Centaurea achtarovii* Urum., *Gentiana pyrenaica* L., *Arenaria biflora* L. and *Thlaspi bellidifolium* Grsb. were fallen out.

The Piatra Craiului Mountains is a massif only a few kilometers in length but well known for the wonderful scenery of limestone outcrops and, of course, for its endemic plant *Dianthus callizonus* Schott et Kotschy. Piatra Craiului is easy to reach from the Rumanian town of Brasov via Zarnesti. The best starting point for walks is chalet Curmatura (1550 meters) which has a spring of excellent water.

It had been early September in 1974 when I had started to prepare my special bags for seed collecting (my wife's grandfather had been a confectioner), and *Dianthus callizonus* had been almost in full bloom. I collected a few green seedpods which ripened in a polyethylene bag and I was sorry I did not collect more. Most alpiners occur at elevations of about 1700 meters in this district on the by-pass range Piatra Mica. I found a station of *Eritrichium nanum*/All/Schrad var. *jankae* on an almost south-facing open outcrop, which surprised me. Of course, the plants occur on north slopes more often, but this is the proof of a certain adaptability of plants. Collected seed germinated well, but slugs made an end of the seedlings. I had collected the seeds of the following species on Piatra Craiului: *Androsace villosa* L., *Dianthus callizonus*, *Campanula carpatica* Jacq., *Dianthus spiculifolius* Schur., *Rhododendron myrtifolium* Sch. Nym. et Kotschy, *Dryas octopetala* L., *Eritrichium nanum jankae*, *Gypsophylla petraea*. If only I had had time enough to investigate the north part of the mountain range, which is familiar to our alpine gardening champion Mr. Josef Halda!

If you get off the modern cabin funicular at the altitude of 2000 meters on the vast planes of the Rumanian Bucegi massif you at once can start by filling your bags with seed pods of *Rhododendron myrtifolium* Sch. Nym. et Kotschy (Syn: *Rh. kotschyi* Smk.). There are plenty of seed pods, together with a few pretty rose blooms there at the end of August. *Dianthus gelidus* Schott, Nym. et Kotschy is a little known pink, but it is the real King of Bucegi in August. Its rose-red flowers suggest a close relationship with *Dianthus glacialis* Haenke but they are bigger, almost 2½ cm in diameter. Old plants create compact green cushions about 10 cm across, bearing sometimes 15 flowers. Some flowers are held on stems about 1 cm in height, some stems are 4-5 cms long. It occurs on limestone screes and small meadows; exceptionally it is an inhabitant of rock crevices. *D. gelidus* certainly can be ranked among the best half-dozen or so of dianthus species.

It would be selfish not to share my knowledge of magic *Oxytropis jacquini* Bunge ssp. *carpatica* with other colleagues for it is a real aristocrat in this genus. Spring visitors to the mountains do not know its elegance because the plants start to bloom halfway through August. It occurs in crevices of limestone at elevations over 2200 meters, where it creates tiny fascinating cushions with tidy, small, light green leaves. It is difficult to describe the color of the flowers, as it is composed of a fine combination of white and azure to blue-violet colors. The flowers are up to 1.6 cm long, tightly packed on adpressed stems. There are plenty of the rose-lilac flowers of *Armeria alpina* Willd. there on stems about 10-15 cm high at the end of August. Also low cushions of *Papaver pyrenaicum* L./A. Kern ssp. *corona-sancti-stephani*/Zapal/Borza are arranged here with their charming big vanilla-yellow flowers dancing in the wind only a few cm in height.

On my list of tips for the collector I failed to list one indispensable thing: a canteen containing water. There is no source of water on the higher altitudes of the Bucegi Mountains, and transport of mineral waters is very difficult. After we climbed the highest peak of these mountains, Mt. Omul, tired and hungry, we found all drinks had been sold out. Fortunately my misfortune did not take long to rectify. I found a hill of bottles beside the chalet from which I poured the dregs until I got an adequate supply of water for further walking. Although nobody saw me, this awkward situation taught me not to be casual about the water supply. I list the seed collected in this area to make clear what one can collect at the end of August: *Draba haynaldii*, *Saxifraga oppositifolia*, *S. luteo-viridis* Sch. et Ky., *Campanula* sp., *Eritrichium nanum* var. *jankae*, *Minuartia recurva* Schinz et Thell, *Rhododendron myrtifolium*.

We met cold winds and a few flowers of *Dianthus gelidus* and *Rhododendron myrtifolium* veiled in clouds during our second stay a year later in Early September. Only the annual *Gentiana nivalis* L. provided a rich show (it is a pity it is not perennial as it has first class appearance) and I was glad to have brought warm gloves with me. Seed collecting in running clouds with beating winds cooling your fingers and trying to take off the bags of precious seeds is not an enjoyment. My two friends, taking this trip from the hiker's point of view, were much disappointed to see this overture of forthcoming winter. I had to take the risk of being damned by my friends while I collected the following seeds: *Dianthus gelidus*, *Eritrichium nanum* var. *jankae*, *Gentiana orbicularis* Schur, *Minuartia recurva*, *Oxytropis jacquini* ssp. *carpatica*, *O. halleri* Bunge (Syn: *O. sericea*), *Rhododendron myrtifolium*, *Silene acaulis*, *Saxifraga oppositifolia*.

Having collected the seed mentioned above, I was sitting with both my friends in chalet Babele eating a big chop roasted directly on an old kitchen range and served with potatoes and excellent homemade Rumanian pickled cabbage. After having drunk a bottle of wine (each of us) we all were in high spirits again, and I could dream about seeds of many wonderful alpine which had not yielded to us before they were covered by lots of snow.

If I had to compose a song of an amateur seed-collector, I would write it in blues. Ladies and gentlemen, be sure it would not do to compose it in the rhythm of a Vienna Waltz.



ASIATIC PRIMULAS: A GARDENERS' GUIDE. By Roy Green. The Alpine Garden Society, 1976. (See AGS ad. p. 197)

The latest in the series of Alpine Garden Society Guides measures up to the high standard set by the Society and its General Editor, R. C. Elliott, VMH. This is the first to have the added distinction of hard covers, an advantage for a book of reference.

Basically, as has been true of most of its predecessors dealing with separate genera of plants, this is a reference book. Its greatest value, perhaps, lies in the keys to the sections and to the species within the sections of the vast number of Asiatic primroses that are presently in cultivation or may be offered as seed in the future. As the author is well aware, most rock gardeners have an appetite for growing anything new offered in the various seed lists. He is also aware that once the seeds have germinated and the plants are thriving we have no way of checking whether what we have is "true to name" or is an imposter, lovely as it may be. To set the grower straight and to assure that he in turn will pass on seeds with a reasonably accurate name, this book should serve admirably.

The keys and written descriptions of individual species are done in clear non-botanical language and are easy to follow. In addition, there are 24 excellent pen and ink drawings of species by Dr. Lionel Bacon plus 25 outstanding black and white photographs.

The major portion of the text is devoted to the diagnosis of the sections and the species of the genus *primula* as found in that primary primula basin from Japan, through China and west to the Caucasus. Packed into it also is information about the synonymy of names, references to the primula literature, hints of culture and propagation, and a valuable glossary of terms.

This is not a casual bed-side book for mere pleasurable reading; it is an essential handbook for the serious grower of those fascinating, varied, and frequently challenging rascals that fall under the general heading, *Primula*..

I cannot wait to see whether what I have been calling *PP. jesoana*, *kisoana*, *tosaensis*, *warshenewskiana*, *et. al.* are really "true to name."

— H. Lincoln Foster

Dear Mr. Editor:

In one of his last official acts as President, Harry Butler announced at the Annual Meeting in Seattle last July the Society's gift to me of a copy of *Hortus Third* when it should become available. It is only fitting that I should now, with grateful thanks, report the receipt of this volume last November soon after its publication. I do this the more thankfully inasmuch as its price (\$99.50) puts the work well into the category of those reference books procurable almost solely by institutions and by such

professionals as might claim its acquisition-cost as a proper tax-deductible business expense. I am not qualified to offer any qualitative judgment on this work. But, so that members may have some picture of it, I am impelled to report on some of the more obvious quantitative aspects of this truly impressive and hefty volume. The simplest way to do this seems to be via the table below. Therein I have incorporated some details of changes as between *Hortus II* and *Hortus Third*. Additionally to show something of the growth-history of the *Hortus* concept, I have added such details as are available to me of the original *Hortus* and its 1935 *Reprint with Supplement*.

	<i>Hortus</i> (1930)	<i>Hortus with</i> <i>Supplement</i> (1935)	<i>Hortus II</i> (1940)	<i>Hortus Third</i> (1976)
Pages			778	1,290
Size in inches			7 x 10 + x 1 +	8 x 11 + x 3
Weight (in pounds)			3¼	7
Genera treated		2,722	2,961	3,301
Species treated		15,552	18,447	20,397
Synonyms listed	3,987		7,962	9,560

Superficial perusal indicates that rock gardeners should find this new edition fully as useful as its predecessors, from *Abelia x grandiflora* Cvs. 'Prostrata' and 'Sherwoodii' right through to *Zizia aurea* (the "Golden Alexanders" that some of us covet). The familiar genera that we affect are not wanting. *Androsace* shows 40 plus entries, vs. 35 in the prior edition. *Dianthus* offers about equal treatment in both this and the preceding edition. But — woe! — we shall now have to learn to speak of *D. pavonius*, instead of *D. neglectus*. There is, however, balm in that *D. alpinus* remains *D. alpinus*. Mere gardeners may give thanks. Under *Phlox* in both editions approximately 60 entries occur. *Phyteuma* offers 25 entries of one sort or another, vs. 17 noted in *Hortus II*. *Primula* fills nearly five pages, as it does in *Hortus II* (with, be it noted, smaller type and smaller pages in the earlier work). *Saxifraga* covers some four and one-half page in each edition. *Silene* in *Hortus II* occupies four-plus columns, in *Hortus Third*, five-plus. And so it goes.

As noted at the outset, for most of us the price unhappily rules this edition out as an immediate acquisition and this may be regretted. However, if you are very persuasive, if your local garden clubs carry weight with public libraries in your own communities, these libraries might be moved to include *Hortus Third* among their budgets for new acquisitions. And that would be distinctly good. I fully expect that future new members will early in their rock gardening careers be referred to this as a landmark reference work that they may ignore at their considerable loss. It will be worth the effort to search it out.

Thank you for the space in which to make a partial discharge of my debt.

M. S. Mulloy

Waterbury, Conn.
January, 1977

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