

Quarterly of the American
Primrose
Society

VOLUME XXVIII

SPRING

NUMBER II



PRIMULA MARGINATA X ALLIONII

"VIOLET CHAMBERS"

American Primrose Society

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Cover: *Primula marginata x Allionii* "Violet Chambers"

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THE PICTURE ON THE COVER: *Primula marginata x Allionii* "Violet Chambers"

Photo by Cyrus Happy III

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President's Message

Dear Members:

First, let me apologize for the lateness of the winter issue and the accompanying seed list. Unexpected difficulties and delays compounded our normal problems.

We would like to publish some regional issues of the Quarterly now that our membership is so widely dispersed. By a regional issue I mean an issue developed and written by the people of a specific region. It would be about the conditions, the people, and the various primula they grow in their region plus any special knowledge these members might have of the species in their region or other species obtained by travel to other parts of the world where primula species grow wild. Commercial growers of the region and their experiences and methods are also of interest and value.

To do this we will need a volunteer from each region who can and will correspond or visit the members in their region to encourage and persuade them to write their knowledge and experience into an article to be published in the Quarterly. This person would assemble these articles and bits of information with photos and drawings for illustration and organize them into a unified theme or plan for one complete issue of the Quarterly. It would be necessary to coordinate with the regular editor for amount and the date of submission for publication.

This is an ambitious idea for A.P.S. If successful, it will take several years to complete. After covering some of the regions in the U.S., we would like to go on to some of the foreign countries where we have members.

Your volunteered services can be a great help to the A.P.S. We must have volunteers to achieve this project. Write to me if you think you can be of service.

The Question Of "Fresh Seed or Old Seed"

With some primula the freshness of the seed is critical. With others the proper care of the seed is more important than age. In the Vernalis and Auricula Sections I get better germination from older seed than I do with fresh seed. I have had excellent germination from seeds of both sections that I knew were nine years old. The important thing is that these seeds be well ripened, dried thoroughly and kept in a completely dry condition until planted. It also helps if they are kept cold. Moisture and heat are the two factors that cause seed to lose their viability. If kept completely dry and stored at a below freezing temperature these seeds should retain their viability indefinitely.

Herbert Dickson

PRIMULA MISTASSINICA

(*Primula maccalliana*-Dwarf Canadian Primrose)

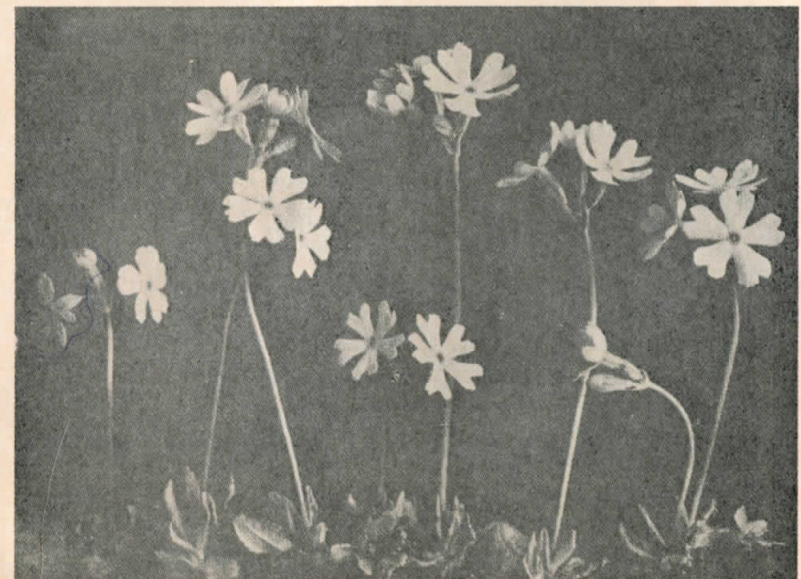
By Art Guppy

I was asked to write a note on this primrose on the basis of the doubtful qualification of having once kept a few plants alive and flowering for two or three years. I don't feel that that was success, but perhaps by describing the plant's natural habitat I can help others to real success.

For those who have not seen *Primula mistassinica*, the picture with this article will give some idea of its delicate beauty. It is one of the smallest of primula—a delightful little plant with one, or often two or three small flowers, each pinkish with a conspicuous yellow eye. In the Rockies it sometimes occurs in large colonies, notably in a bog near Banff and on an alluvial fan at the end Emerald Lake. Both

of these colonies are on loose, gravelly material with their roots reaching into a plentiful supply of cool, moving water.

The Banff bog obviously supplies the optimal conditions for this species. In parts of the bog the plants are growing as patches of solid carpet made up of hundreds of individual plants. In fact, the conditions are too ideal, and over-crowding results in only a few of the plants being able to produce flowers. The bog is formed by a cool, mountain stream flowing through a deposit of a loose, limey material with the consistency of ground-up tufa. The stream, which is big enough to have the occasional trout in it, spreads out into numerous little streamlets which



PRIMULA MISTASSINICA 9/10 natural size Photo by W. C. McCalla

keep the area wet with cool, moving water.

Such success as I did have with this primula was undoubtedly due to my being able to grow them in limestone tufa at the edge of a small natural stream. My eventual failure with the plants was probably the result of winter damage from repeated freezing and thawing. Very likely, protection from this winter damage is the problem to be solved. In their natural habitat the plants would be protected throughout the winter by heavy snow. We cannot supply the snow, but possibly a light mulch would provide a satisfactory substitute.

Another possible explanation for failure with the plants could be that they are by nature short-lived. The fact that they reproduce in such vast numbers may point in this direction. Furthermore the plants tend to flower much better

in the garden than in their overcrowded natural conditions and, consequently, may simply exhaust themselves. Possibly one could succeed with this species only by raising new plants each year from seed.

One thing is certain, this is a charming little primula and the person who masters the technique of growing it will have achieved something very worthwhile.

—Reprinted from *Alpine Garden Club Bulletin of British Columbia*

A PACKAGE OF SEEDS

*I paid a dime for a package of seeds
And the clerk tossed them out with a flip,
"We've got 'em assorted for every
man's needs,"
He said with a smile on his lip.
"Pansies and poppies and asters
and peas!
Ten cents a package and pick
as you please."*

*Now seeds are just dimes to the man in
the store, And I've been to buy
them in seasons before,
But I thought of them only as seeds.
Now it flashed through my mind
As I took them this time,
"You have purchased a miracle
here for a 'dime'."*

*"You've a dime's worth of power which
no man can create;
You've a dime's worth of life
in your Hand."
You've a dime's worth of mystery,
destiny, fate, Which the wisest
cannot understand.
In this bright package, now isn't it odd?
You've a dime's worth of something
Known only to God.*

*"These are the seeds—
But the plants and blossoms are here
With their petals of various hues;
In these little pellets, so dry
and so queer;
There is power which no chemist
can fuse.
Here is one of God's miracles
soon to unfold,
Thus for ten cents an ounce
is Divinity sold."*

—Edgar A. Guest

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The Auricula

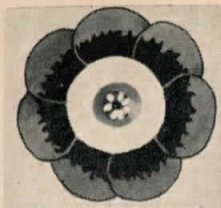
By Ralph Balcom

The Auricula primrose, although not so gaudy perhaps, or so showy in mass plantings as some of the other sorts, is mounting rapidly in popularity among the primrose growers of this country. This is due no doubt, to the fact that each plant is a jewel in itself, an aristocrat in its own right. Also because there is such a variation of form and color among the various types.

Twenty-four different species have been found growing wild, most of all of them in the higher mountain elevations of continental Europe. This classes them as alpine plants and, since they practically grow out of the snowbanks in their natural habitat, they and the thousands of hybrids resulting from crosses between these various species are very hardy. These hybrids are the oldest of the primula genus

and we have records of them being made as early as the year 1544. It is no wonder that some of them especially the show types, are perfection personified when we stop to consider that hybridizers have been working to improve them for several hundred years.

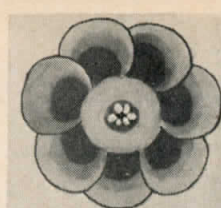
Most of the ones grown in gardens and greenhouses today are the hybrid kinds. The parentage of these we grow now is very hard to establish but there is no question but that many of the original species have entered into their bloodlines at some time or other. This is apparently the reason why they vary so much in form and color. Some of these species are coated with a white or yellow meal, or "farina," while others are without it; some have serrated leaves, others smooth edges; some carry



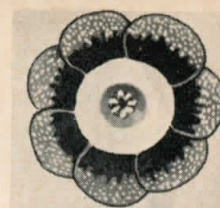
Green Edge



Self



Alpine



Grey Edge

loppy scapes while some stand erect, and so on. It is surprising what a variation one will often get from a packet of ordinary Auricula seed. This is one of the reasons why it is so fascinating to grow them.

Back in the eighteenth and nineteenth centuries, Auriculas became almost a craze among florists in continental Europe and England. Countless shows were held featuring them and standards of excellence were set up so strict that it seems almost impossible that the standards created could have been even approximately approached. Yet many beautiful specimens have been created which came quite near to these standards. There have been many of them so good that they have been formally named. Although interest in Auriculas has declined somewhat in Europe, still there are numbers of shows being held each year with the same

strict standards in effect. Most of the old named varieties have been lost but lately there seems to be a revival of interest in them and new ones are being created that even surpass the old ones.

On the show bench today there are six recognized types or classifications, namely: the Show Auriculas, the Exhibition Alpines, the Border Alpines, the Double Auriculas, the Garden types and the Auricula Species. The elite of the Auricula world and perhaps of the whole primrose kingdom, is the so-called "Show" type, especially the "edged" kinds which are either green, grey or white on the outer edge of the flower depending on the amount of white meal coating them. In the "Exhibition Alpine" type, the coloring of the outer edge can be any color except green, but must shade from a dark to a lighter hue of the same color, and there can be no meal whatsoever on either the flower or on the plant



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itself. The Border Alpines consist of the shaded ones that do not quite measure up to the rigid specifications of the Exhibition Alpines. The Garden Auriculas are, as a rule, what is left of the hybrids after the above are taken out. The Species plants are of course, with a few exceptions, the original sorts that grow wild in continental Europe.

Contrary to what many growers believe, Auriculas, once they are established, are one of the easiest of all primroses to grow. They will stand more extremes of cold and heat and will live through greater periods of drought than most other kinds. The Show types are usually grown inside under glass, not because they are not hardy, but because they have the white meal on the flower and often on the plant itself which washes off in the rain. It is to protect this meal that they are raised under cover. Then, too, Auriculas are bothered very little by the strawberry weevil which is a serious pest to most other primroses here in the Pacific Northwest. Although they will stand more sun than most primroses, they do best if grown in partial shade and will be much happier if given plenty of water, especially in the summertime. If grown outside, they really dislike a muddy

situation, and do require good drainage.

These fascinating little plants are so intriguing, it is no wonder that so many primrose growers who begin with the other sorts, eventually become addicted to growing the Auricula.

National Primrose Show

The Washington State Primrose Society will host the National Primrose Show this year. The show will be held in the Puget Sound Power and Light Company Building in Bellevue, Washington, May 2nd and 3rd. George and Richard Long are co-chairmen.

Nominating Committee's Slate of New Officers

List of new officers as selected by the nominating committee, to be voted on at the 1970 Annual Meeting.

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ANNUAL AWARDS BANQUET

The American Primrose Society's Annual Awards Banquet will be held on Saturday, May 2, 1970 at Brad's Restaurant, 15425 N.E. 24th (off Redmond-Bellevue Highway) at 6:30 P.M. For reservations, contact Mrs. Ralph Balcom, 345 N.W. 88th, Seattle, Wash. 98107. Phone SU 3-2914.

Primula Melanops

By Dorothy R. Springer

Primula Melanops is one of the Nivalid primula, a member of sub-section Eu-nivales.

Several score of species are included in this section. Actually, 45 specific and 69 subspecific names which in turn have been subdivided into one large and three small subdivisions. The majority of these, however, are not known in cultivation. Unfortunately, knowledge of the groups we do know is most limited. We do know that they have great beauty; some of the Section Nivales are among the most beautiful of all primulas.

We know too, the group as a whole has a constant basic chromosome count of eleven.

P. Melanops is but one of the many primulas discovered and introduced by that great plant hunter, the late F. Kingdon Ward. He found it appearing on a number of ranges at elevations from 16,500 to as high as 18,000 feet in S.W. Szechwan.

P. Melanops has been considered as a dwarf colored variant of *P. Chionantha*. In fact, the plants I have were grown from seed . . . packet labeled *Chionantha*!

The plant is a startling one to see, especially to see for the first time; and most especially, if, as I was, you are expecting to see a flower with the pristine whiteness of *Chionantha*!

The leaves are heavily coated with white farina, and are of an extremely firm texture. The scape is also heavily mealed. It has one

or sometimes two umbels of 5-12 flowers each. The flower color is a beautiful blue purple not often found in the floral kingdom (deep Tyrian purple by the chart) and is centered with a large coal black eye. The total effect is almost unreal, so marked is the contrast between flower and foliage.

P. Melanops should have a most peaty soil with excellent drainage so that the deeply buried neck-stock does not decay during winter. It will not tolerate moisture about the crown during the dormant period. Perhaps stone chips would help prevent this.

I have read that *Melanops* is not reliably hardy. My plants came through our very bad Pacific Northwest winter last year without harm and bloomed beautifully in the spring.

I have my plants in a large bed of rhododendron and azaleas. They are toward the back of the bed and I tend to forget them after the growth commences on the other plants. (Perhaps this is why they do so well!). They flower in company with solomon seal and the dusky *Fritillaria camschatcensis*. The solomon seal picks up the primula leaf colors and the *Fritillaria* the black eye color of the flowers.

P. Melanops is a delightful subject, well worth a try in any garden. I have some seed now labeled Blue *Chionantha*. It will be interesting to see if it turns out to be more plants for my *Melanops* corner.

Leaves from the University of Washington Arboretum

The Naming of Plants Part 111

By Arthur R. Kruckenburg*

THERE is no real need to go into the intricacies and vagaries of the *International Code of Botanical Nomenclature*. This is largely the preserve of the expert and need not bother us here. However, a similar code for cultivated plants is of practical concern to us. The 1961 edition of the *Code for Cultivated Plants*, formulated at a meeting in Cambridge, England, makes early reference to the *International Code of Botanical Nomenclature*. It says "this code, the *International Code of Botanical Nomenclature* ("Botanical Code") governs the use of botanical names in Latin form for both cultivated and wild plants." Whereas the Botanical Code encompasses the entire hierarchy of the taxonomic system, the *Code for Cultivated Plants* works only at three lower levels—the genus, species, and cultivar or variety. Article 3 states: "the aim of the present code is to promote uniformity, accuracy, and fixity in the naming of the agricultural, silvicultural and horticultural cultivars (varieties) which are normally given fancy names such as apple 'Cox's Orange Pippin,' barley 'Balder,' *Juglans regia* 'King' and rose 'Peace.' The common names of genera and species, such as beech for *Fagus*, potato for *Solanum tuberosum*, hollyhock for *Althaea rosea*, and rye for *Secale* are not regulated by this code." Article 5 states that "The term 'cultivar, abbreviated 'cv,' denotes an assemblage of cultivated individuals which is distinguished

by any characters (morphological, physiological, cytological, chemical, or other) significant for the purposes of agriculture, forestry, or horticulture and which when reproduced sexually or asexually retains its distinguishing features." Perhaps the most useful and important innovation in the nomenclature of cultivated plants is the term *cultivar*. The Cultivated Plant Code states in essence that the cultivar is an international term for the category known in various languages as "variety" in English, "variete" in French, "variedad" in Spanish, "Sorte" in German, etc. The cultivar or varietal name follows the Latin binominal, as in *Syringa vulgaris* 'Decaisne.' There are several kinds of recognized cultivars. The clone is a cultivar consisting of a genetically uniform assemblage of individuals, derived originally from a single individual by vegetative propagation. A line, however, is a type of cultivar which is derived from sexually reproducing individuals, but these individuals maintain uniform appearance through seed or spore propagation. The rules of the formation and use of cultivar names are rather generous and wide in scope. The name is markedly different, usually, from the botanical name in Latin form. As far as I can tell, there is no restriction as to the language from which a cultivar name may be derived. One insistent rule is that the cultivar name be surrounded by single quotes. Occasionally, the cultivar

name may be latinized: however, it still re-quires quotes. For example, *Lilium maculatum* 'Sanguineum': *Calluna vulgaris* 'Carnea.' The code for cultivated plants puts considerable emphasis on the need for registration of cultivar names. It sets up a procedure and prescribes the rules for registration. For the professional horticulturist, the *International Code of Nomenclature for Cultivated Plants* is an important regulatory reference.

I close these sketchy notes on



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plant names with a word of counsel and encouragement. You should eye a Latin name boldly, pronounce it without hesitation, and learn to use it according to the few simple rules that are now available to you. Your skill in their use will increase immeasurably once you begin using them. During your apprenticeship you would do well to look at some of the source books listed below.

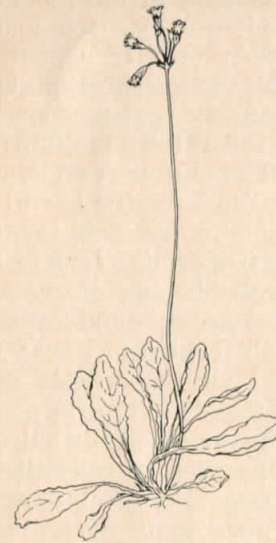
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PRIMULA SACHALINENSIS
DRAWING H. VACKOVA

Primula from Sakhalin and the Kurile Islands

By Ing. Vladimír Vasak,
Pruhonice, Czechoslovakia*

In August and September 1968 I visited three islands in East Asia, namely Sakhalin, Shikotan and Kunashiri. The last two are in the immediate vicinity of northern Japan and belong phytogeographically to the southern Kurile islands. On each of these islands I collected only one species of Primula. On the island of Sakhalin it was *Primula sachalinensis* Nakai near the "mud" volcano Maguntan not far from the railway station of Puga-chevo (August 31st).

On the island of Shikotan, which belongs to the "Small Kurile Islands, practically each day I spent in this beautiful countryside I found *Primula matsumurae* Petitm. It was on September 15th, on the shady rock shore at the Otriadnoe Bay (Matokutan in Japanese) facing the South-Kuril Strait, and on September 16th on similar places in the south of the island, on the rocks of the cape "Krai sveta"

("End of the World") protruding into the Pacific Ocean. Together with Alpine plants *Primula matsumurae* grew on the mountain Shikotan, where I was on September 17th and it also appeared on the extinct volcano Notoro (375 m s. m.) September 19th.

Primula japonica A. Gray grew on the island Kunashiri directly on a path in a bamboo thicket (*Sasa paniculata*/Makino/Makino et Shibata). On September 24th we went, by a path hardly noticeable, to the crater of the active volcano Golovna. Its crater is filled with a blue lake Gorjacheie (in Japanese Itibisinaj). Obviously *Primula japonica*, which grows there, is naturalized. Otherwise it grows only on the islands of Japan.

The whole search of the plants of Sakhalin and the Kurile islands was organized by the botanist Mrs.

*Botanical Institute of the Czechoslovak Academy of Sciences

E. M. Egorova from the Sakhalin branch of the Academy of Sciences of the USSR. Assistant-botanist Miss L. A. Alexejeva also took part in this expedition.

In the region mentioned above one can find, on the whole, six species of *Primula*. One of them, *Primula sibirica* Jacq., I could not see at all, because it grows on the "Central" Kurile Islands, hundreds of kilometers away. But I found it in the vicinity of Lake Baical in 1967. Unfortunately the young plants died during the long transport to Czechoslovakia. *Primula farinosa* L., which is a Eurasian widely spread species and which reaches on Kurile Islands and on Kamchatka farther-most to the east, could not be found. The real *Primula farinosa* I collected only

in 1966 in Mongolia in the mountains Chentej; it was overripe, and seeds had fallen out. It appears quite abundantly in Czechoslovakia on the even, muddy peat meadows at the foot of the Tatra mountains. Neither on Sakhalin nor on the Kurile Islands did I see the beautiful *Primula cuneifolia* Ledeb. (synonym *P. saxifragifolia* Leh m.) with large scented blooms. Perhaps the readers, the growers and lovers of *Primula* will forgive me, that I could not find all the species of nice plants in the short time of one and a half months. Especially since I was also concerned in collecting of *Carex*, *Juncus*, *Poa*, *Salix* and other. The entire "loot" from this botanical expedition was 7,200 sheets of herbarium, over 1,000 samples of seeds, living plants, bulbs and rhizomes.

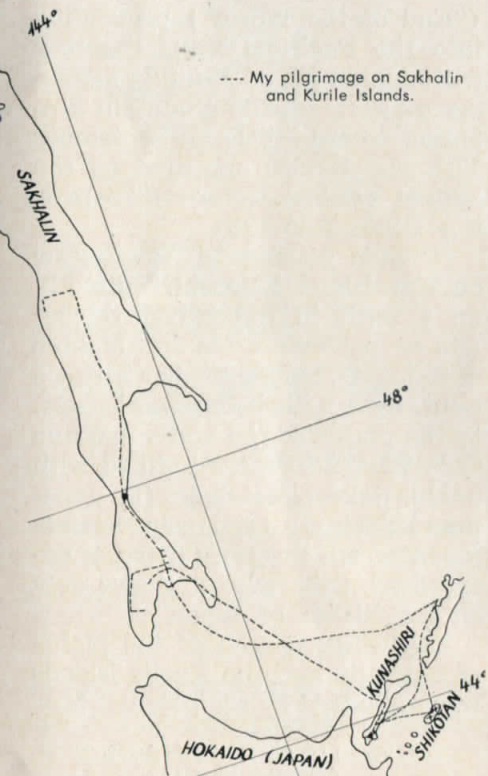
The most interesting and also the rarest, even if not the most beautiful from my three *Primulae* is *Primula sachalinensis* Nakai (synon. *P. farinosa* var. *xanthophylla* W.W.Sm. et Fletsch. non Trautv. et Mey., *P. farinosa* var. *chrysophylla* Trautv. et Mey.) From the botanical point of view from many phases of *Primula farinosa*, *Primula sachalinensis* is the "worst" species with overlapping characters of fundamental species. From the Asian species near to *farinosa* in Western Siberia grows *P. longiscapa* Ledeb., most distinguishable from *P. farinosa*, also *P. sachalinensis* Nakai in the Far East and on the island of Sakhalin, *P. gigantea* Jacq. in Iakutia and to the east of the lake Baical (Fedorov, 1952).

Primula sachalinensis is larger than *P. farinosa*, already at the stage of flowering it is 20-25 cm tall, has clearly petiolate leaves, more or less of rhombate shape.

The ventral side the leaves are so thickly farinose in yellow, that the nerves are often completely obscured. It has violet flowers, roller-shaped long capsules 2.5 times to 3 times longer than the calyx. The pedicels are also longer than on *P. farinosa* and bracts have a smallish sack-like hunch on the lower end. The plant flowers in its environment between June and August. It grows on wooded rocks on Shantar Islands, in the Ussuri and Ochotsk regions, and on one single place on Sakhalin—"locus classicus"—on the "mud" volcano Maguntan.

The region in which it grows on Sakhalin is slightly unusual. It comprises several hectares of clean blue-grey fine clay of the mud volcano. In the very "live" center all

is completely bare, farther from the "bubbling" places there is a slight growth of our precious *Primula sachalinensis* and of two other, narrowly endemic plants-annual, *Gentiana paludicola* and biennial *Artemisia limosa*. On damper places, in puddles grew *Juncus decipiens*, *J. gracillimus*, *J. turczaninovii*, *Eleocharis kamtschatica*, *Equisetum fluviatile*, *Phragmites communis* and *Salix fuscescens*, and at the very edge of the puddles also grew our *Primula*. In its immediate neighborhood one found *Parnassia palustris*, *Allium schoenoprasum*, *Artemisia* aff. *koidzumii* and *Hedysarum sachalinense*. The whole north-western side of the mud volcano was overgrown with *Deschampsia sukaczewii*. Therefore, *Primula sachalinensis* grows in



The bay Otryadnoye /in Japanese Matokutan/ on the island Shikotan /Kurile Islands/, where the *Primula matsumurae* occurs. /Photo of author/

strongly damp surroundings, that means—in the soil with no trace of humus. One could assume, that it could be grown very easy in culture, but it tolerates very badly any transplant of whole plants (Egorova, 1966). However the seeds, of which we collected quite a lot, germinate very well and I hope that in Czechoslovakia, and in the U.S.A., where I sent the seeds, one will be able to grow this rare *Primula*.

On the way to the mud volcano I saw and collected some interesting plants, e.g. *Convallaria keiskei*, similiar to European *C. majalis*, tiny *Angelica maximowiczii*, little resembling its robust sisters from the Sakhalin (*Angelica ursina*, *A. sachalinensis* and others), *Funkia rectifolia*, *Waldsteinia ternata*, *Rubus arcticus*, *Lobelia sessilifolia*—one of the few species of *Lobelia*, growing in Asia. In a thin forest of larch (*Larix kurilensis*) with soil rich in peat also grew nice bushes of *Ledum macrophyllum*, *Spiraea betulifolia*, *Lonicera glehnii*, *Potentilla fruticosa*, *Myrica tomentosa*, *Chamaedaphne calyculata* and two species of spindle tree—*Euonymus macroptera* and *E. miniata*.

Another *Primula* I saw and collected on the “best place” on the Kurile Islands was *Primula matsu-*

murae *Petitm.* (This *Primula* was named by M.G.Ch. Petitmengin after Jinzo Matsumura, a Japanese botanist, the author of “Flora of Japan” 1884). The “best place” is the translation of ainish name of the island of Shikotan, and the best *Primula* was found in this best place, being only 5-6 cm in height, with dark pink flowers. This plant in culture can be quite covered with flowers. One can find as many as 20 flowers scapes on one plant. (Egorova, 1966). However, I saw the blooms only with my mind’s eye, since the flowering season was long over.

First we shall discuss the synonyms, which are so many with many species of *Primula*. *Primula matsumurae* *Petitm.* (1907) was also called *P. modesta* ssp. *ajanensis* (*E. Busch*) *W.W.Sm. et Forrest* (1929), *P. fauriae* *Sugawara* (1940) *non Franch.*, *P. ajanensis* *E. Busch* (1925), *P. borealis* var. *ajanensis* (*E. Busch*) *Hulten* (1948). But Voroshilov (1966) identifies it with *Primula fauriae* *Franch.* In the book “Flora of Japan” (Ohwi, 1965) are introduced two varieties of *Primula modesta* *Diss et Moore*: var. *faurii* (*Franch*) *Takeda* growing on Kokkaido, Honshu (northern district) and on Southern Kurile Islands; var. *mat-*

sumurae (*Petitm.*) *Takeda* appearing only on the island Rebuton and on Hokkaido in the province of Teshio. The differences in their description are minute and therefore I count them as one kind. It belongs as well as *P. sachalinensis* to the section of *Farinosae* Pax., it has yellow farinose on the ventral side of the leaves, a short rhizome with brown thin roots. The leaves are 3-8 cm long, ovate or obovate, with a petiole usually twice as long, as the length of blade. There are as many as 12 flowers in the flowers scape, the pedicels lengthen during the ripening. It flowers between May and August, according to the sea level. It grows in damp meadows, on the slopes of sea terraces, in shady rocky places and on the rocks inland, on the northern side of the rocks. Its home is Japan, Korea, Kamchatka, Sakhalin, Kurile Islands and Ochotsk region. It was described in Japan.

It can be cultivated easily from

seed, but the seeds I collected on the island of Shikotan do not germinate very well. It does not matter, since my friends will send me more seeds and hopefully their germination will improve. After all, it is well known, that in some years some seeds have lower germination, even do not germinate at all. Obviously, *Primula matsumurae* is one of them.

From its neighborhood I shall mention some other nice plants which I found on the island of Shikotan on sea rocks and slopes even on the tops of low but rather steep mountains. On the island of Shikotan at 300 m. above sea level there is alpine vegetation: *Rhododendron camtschaticum* and *R. chrysanthum*, *Potentilla matsumchrysanthum*, *Potentilla matsumfolium*, *Viola biflora*, *Aquilegia flabellata*, *Sedum kamtschaticum*, *Saxifrage reniformis*, *Sorbus sambucifolia*, *Diapensia obovata*, *Leontopodium kurilense*, *Oxytropis retusa*, *Cryptogramme crispa*, *Arnica*

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The crater of an active volcano Golovnina with the Lake Goryatscheye /in Japanese Itibisinay/, on the island Kunashiri /Kurile islands/, where *Primula japonica* occurs /Photo of author/.

unalaschkensis, *Lloydia serotina*, *Toffieldia nutans*, *Pulsatilla taraoi*, *Anemone vilossissima*, *Clematis fusca*. There were other species of plants which would do honor to any rockgarden, garden and park.

Among other plants on sea rocks, *Primula matsumurae* grew in shady crevices, in places where nature arranged the plants in such a way that it would be very hard for any expert gardener to imitate. Together with our *Primula* there were *Plantago camtschatica*, *Saxifraga funstonii*, *Myosotis sachalinensis*, *Mertensia pterocarpa*, *Hedysarum komarovii*, *Asplenium incisum*, *Patrinia sibirica*, *Stellaria ruscifolia*, *Trifolium lupinaster*, *Dianthus superbus*, *Adenophora kurilense*, *Aconitum kurilense*, *Pedicularis resupinata* and other even more beautiful plants. Farrer evaluates *Primula modesta* and therefore also its variation *matsumurae* in the following way: "it is a most pleasant subspecies of *P. farinosa* . . . It has precisely the look, the vigour and heartiness of *P. frondosa* . . . It should soon be a staying guest in every garden".

The last of the three *Primulae*—*Primula japonica* A. Gray is very well known in culture. Its appearance on Kunashiri island is, so to say, second hand it was brought over from the neighboring Japan.

I can appreciate its hardiness as it grows in a thicket of bushy bamboo, in which only few plants survive—and, as it sustains the competition of Kuril and north Japanese species of *Sasa*. Farrer (1938) also mentions its vigor and aggressiveness in gardens with corresponding soil and dampness. I did not find the seeds of this *Primula*, on 24th September they had already fallen and so the only evidence of my meeting with *Primula japonica* on Kunashiri are a few sheets for the herbarium.

From this expedition I brought seeds of many other decorative plants besides the seeds of *Primula*. But I would be fully satisfied if only two species—*Primula sachalinensis* and *P. matsumurae* could grow in the gardens and delight the eyes of nature lovers.

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PRIMROSES and SPRING

By Doretta Klaber



Primula vulgaris seedling

Editor's Note: Doretta Klaber has kindly given the Quarterly permission to use Excerpts from several chapters of her book "Primroses and Spring". For this we are indeed grateful. I am sure many of our members will want to buy this book; if it is not available at your local book store, it can be obtained by writing direct to the publisher, M. Barrows & Co. Inc., 425 Park Avenue South, New York, N.Y. 10010.

NOTES FOR BEGINNERS

Once you start to grow primulas you will read books about them, study catalogs and order plants and seeds. You will read that "primrose" is the English or common name for *Primula*, and that primulas have so many species that the botanists have divided them into thirty sections and subsections. I took a good deal of trouble to learn which was which and why, and now what do you think? The botanists are shifting the names around again for reasons obscure to a mere layman like me. Here we shall consider primroses according to the natural groups that need the same conditions.

First you must decide where you shall grow your primroses, how

you shall grow them, and which ones you shall grow.

Where. If you have a bit of woodland or shady border you can grow the English primrose and its many colored forms; the polyanthus or bunch-flowered primrose and its varieties; the *Juliae* primula and its many hybrids. These all belong to the vernal group. Liking similar positions to the vernal are the so-called woodland primulas. Positions with a bit more sun, but still with some shade, are for the auriculas; needing still more sun are other members of the auricula group, both species and hybrids. In a rather moist spot (quite wet if sunny, but drier in shade) you can grow denticulatas and some members of the *farinosa* group; in bogs or along watersides others of the *farinosa* clan thrive, as do the candelabras and *sikkimensis* primulas. If you have a rock garden you can grow some of the rarer alpine sorts.

In short, if you have any ground at all, you can grow primroses. You can plant them for color harmonies or for splashes of one color. You can have primroses of one sort or another in flower from late March through June, and even lat-

er if you are lucky. They will lift your heart with their gay colors, many will delight you with their fragrance, and most of them multiply readily so that a small investment soon pays interest.

How you shall grow primroses depends on the type, and we shall discuss the culture of each kind as we come to it. In the "how" there is one important consideration. Primulas rarely look their best when they are isolated from other flowers. Most primroses are informal plants that should not be bedded out but should be grown in a natural manner, surrounded by other flowers and ferns and evergreen shrubs that bloom before, with, or after, the primroses. Where many are planted in a Primrose Path, as in my garden, they dominate the scene, but are enhanced by rocks and shrubs, bulbs and other woodland flowers.

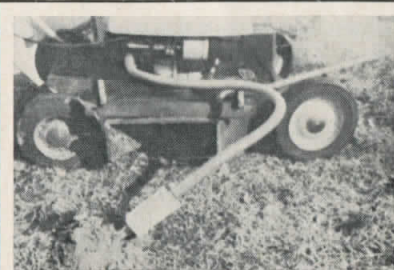
Which primulas you shall grow depends on your climate, your soil, exposure, a amount of moisture available in your garden, and on your gardening ability. I think, if you are a beginner, you should start with the vernal primroses. Given the conditions they like, they are easy to grow and will fill you with pride and joy. Second choice would be the denticulata primroses—they come as a prelude to spring and they are almost sure-fire, as well as being delightful plants.

If you've read my other books, *Rock Garden Plants* and *Gentians for Your Garden*, you know that my garden is for hardy plants only. None are pampered in hothouse or alpine house, and my coldframes are used only to grow seedlings. There is no peat wall here and, alas, there is no constantly flowing stream. So the primroses that I have grown here over the years are the toughies that can stand my conditions.

In this book I do not discuss in detail the primroses grown in hot-houses in the East, some of which are hardy outdoors in other sections of the country; nor do I say much about the difficult-to-grow primulas. Those beauties are for specialists or for gardeners whose local conditions can meet the plants' needs, or for those who can provide alpine house or coldframe, peat wall or sun-heated pit. I do give short descriptions of the appearance and needs of some of these plants and show their pictures so you will have some idea of their forms and manner of growth, but I "testify" only about the perennial primroses I grow here.

Not that I'm through experimenting—no real gardener gives up with but one try, and I can never resist attempting something new even if it is thought to be impossible.

(continued on next page)



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PRIMROSES AND SPRING



Primula acaulis (1/2 natural size)

What lovely words! We have visions of the English countryside though we may never have been there, for when we read of primroses it is usually of the wild flower that blooms in profusion in English woods and under hedgerows. And now my woodland path and every half-shady corner in the garden fairly shout with the joy of primroses in bloom. This is the time of fulfillment in our gardens, when all the thought and work that went before come to fruition. Now frequent tours of the garden, and especially of the Primrose Path, are

in order to marvel anew at the freshly opened blossoms—their colors, their forms—and to inhale the very fragrance of spring.

THE VERNAL PRIMROSES

Some people object to having the qualities of personality and feeling attributed to flowers, but if you are on close terms with your plants you get to know their characteristics, just as you do with human friends. It is not true of all primulas, but to me the vernal primroses exude friendliness and charm. I feel that they rush to meet me in the spring, and am thrilled with something of the feeling I had when the happy child with shining face ran to be gathered in my arms.

The vernal primroses (Section Vernales) are legion. Among them are *Primula vulgaris* (*P. acaulis*) which is considered the true primrose, *P. veris* (cowslip), *P. elatior* (oxlip), *P. X polyantha* (polyanthus), *P. amoena*, *P. Juliae*, *P. abchasica*—and all their forms and hybrids.



Primula vulgaris (2/3 natural size)

The True Primrose

The wild primrose (*Primula vulgaris*) has pale yellow flowers, each one on its own short stem, rising gracefully from a mound of low leaves. It is native to the British Isles and parts of the Continent and is beloved by all who live where it greets the spring by hundreds and thousands in any half-shady spot in which it can get a foothold.

Another wild form, *Primula vulgaris* var. *rubra* (*P. Sibthorpii*), comes from Turkey and thereabouts. It has pretty pink flowers with white eyes. Crossed with the yellow primrose, it is supposed to have started the many colored hybrids we now have in our gardens. These hybrids are usually spoken of as *Primula acaulis* and their flowers may be pink or rose, apricot, pale blue, azure or indigo, lavender or purple, red, bronze, white, or yellow to orange. To catalog the colors doesn't give any idea of the infinite variety of the plants. The eyes may be starry or round or almost non-existent; the stems may be green or red; the leaves vary in size or texture, many being elaborately wrinkled. Most of the hybrids have single flowers rising from the root, but some may have



Primula veris, young plant
(2/3 natural size)

additional taller stems with a cluster of flowers at the top. Of late, some hybridizers have been working toward more prolific, crowded bloom over low firm clumps of leaves, to have solid mats of color. This seems a mistake to me. If we're not careful, we will have bedding flowers, and this is contrary to the very nature of a primrose. As I have said, primroses are informal flowers that look their best when planted freely among ferns and wild flowers, dominating the scene but not making the whole picture.

Cowslips and Oxslips

The cowslip and the oxlip are found growing wild in the British Isles and on much of the Continent, too. The cowslip is native to wet meadows and is much beloved, especially by children. A young Irish woman brought her little girl to my garden once because she



Primula polyantha, Cowichan form

“wanted her to know cowslips.” The oxlip also likes moisture but is usually found in shadier positions than the cowslip. However, both are most adaptable and are at home among the others on the Primrose Path. For some odd reason, cowslips and oxlips have been looked down on as garden flowers and have been valued mainly for the influence of their tall stems and bunched flowers which, crossed with *P. vulgaris*, have produced

the hybrid polyanthus primroses. To me, the wild ones have much to say for themselves.

The seedling cowslip with its fragrant pale yellow flowers in baggy calyxes rises with grace and beauty of form. A well-grown plant will have a forest of 12-inch stems crowded with airy blossoms which, when they are over their shy youth, look boldly at you.

The differences between cowslips and oxlips are that oxlips lack fragrance, do not hang their heads quite so much, and their calyxes are not so inflated. Both have one-sided clusters of flowers, but there is great variety in size and form, as I have tried to show in the illustrations. There is much interbreeding so the colors vary from pale yellow to deep yellow to orange to red or any combination of these.

Both cowslips and oxlips have many forms and subspecies. *Primula veris* var. *macrocalyx*, illustrated, has the typical soft yellow flowers but they are larger than those of either *P. veris* or *P. elatior*, and the calyx doesn't look so big when contrasted with the good sized blossoms.

Polyanthus Primroses

As I said above the polyanthus is a hybrid; the wild primrose, the cowslip and the oxlip are all supposed to have had a hand in it, if that is the right word! Its principal characteristic is the tall stalk, 6

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Primula acaulis, Jack-in-the-green form (2/3 natural size)

to 8 inches high, tipped with a cluster of flowers. In this country it is no doubt the most popular form of primrose. It is so very colorful and the range of colors has become so extensive that the rainbow itself is not so rich. The hues range from all the pastel tones through brilliant reds and oranges, yellows, sunsets and sunrises, blues of every shade and tone, and the added colors of leathers, coffee, cocoa, bronzes, purple and velvet shades to almost black, and of course white.

There are many forms of polyanthus. They may be miniatures, delightful plants half-way between *P. polyantha* and *P. juliae* (a low plant we will speak of presently) or they may be the so-called Cowichan with 6-inch stems and deep red or purple-velvet colored flowers, without the starry eye so common to most primroses, and always with bronzing of the leaves. New colors are being added, one of the latest being strawberry with a black center.

Or, alas, the polyanthus may be so-called "giants" with heavy sturdy stems and larger and larger flowers, achieving size that calls forth gasps of disbelief but also achieving a certain heaviness and lack of grace; these are intended for gardeners to whom bigness outweighs all else.

Another form of polyanthus, grown abroad more than here, is called Garryarde. It was first raised in Ireland, has the same reddish-bronze color to the foliage as have the Cowichans, and the plant may look like either a low polyanthus or a very dwarf-stalked Juliana—darlings, all of them.

Old-Fashioned Forms

Some of the old-fashioned forms of primroses, to my delight, are again available. One of these is Jack-in-the-Green. Each blossom has an Elizabethan ruff closely framing and contrasting with the face of the flower, which distinguishes these plants and emphasizes the colors.



Primula polyantha, hose in hose form (2/3 natural size)

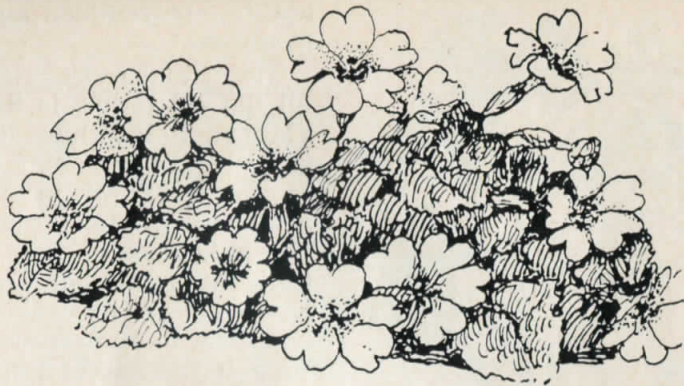
Then there is the form called Hose-in-Hose. The calyx has taken a flower like form out of which the flower itself grows. I illustrate one of the most old-fashioned forms, with a dark red flower and a golden center, still growing in many old gardens. My neighbor, a Pennsylvania Dutch native of this part of the country, has shared some of hers with me. From this appealing old form, new large-flowered hose-in-hose primroses have been developed in many colors. To me, they have not quite the attraction of the old ones, but when this form (that appears to be one flower growing out of another) is carried to the Julianas the result is fascinating. Both Jack-in-the-green and hose-in-hose forms may be found among the

acaulis, polyanthus and Juliana primroses.

Third, and perhaps the best of all the old forms, is the so-called Florist's Polyanthus, the gold-or silver-laced primrose. It was called the florist's flower in England and Scotland, where florists are so named because of their interest in floriculture and not because they have shops, as here. Many of them happened to be weavers by trade. As you walk around your garden and look at your polyanthus plants, really *look* at them; you will see that some have odd markings and dots and edgings. Plants like these must have been segregated and worked on by those English and Scotch enthusiasts, and the gold-or silver-laced polyanthus gradually evolved. Hybridizers seem to be able to do anything they really set their hearts and minds to! The special quality of the laced polyanthus flower has been a dark color, deep red or even near-black, each half-petal neatly edged with a narrow gold or silver line so that the flower has the look of having ten petals with a golden center. Though other colors are now being introduced, the dark-flowered ones are still the most distinctive. They grow 6 inches high and are quaint with the attraction of old china or old engravings.

Primula Amoena

Another of the vernal species is called *Primula amoena*. It has lavender-to-purple flowers that grow on 4- to 8-inch stems from a clump of low narrow leaves. The plant more nearly resembles *P. veris* var. *macrocalyx* than it does the polyanthus or cowslip. The clustered flowers have narrower and more spreading petals than the others, giving the plant a light and airy



Primula Juliae (natural size)

look. I have been able to secure seed of it only once and then the seedlings did not survive the winter. *P. amoena* comes from the Caucasus and is most desirable but, judging by its rarity, others, too, must find it difficult to grow. If you can get it, it is worth experimenting to find its needs which may be different in your garden than mine.

Primula Juliae and Hybrids

Primula Juliae is a low creeping plant with small (1/2- to 3/4-inch) rounded, glossy, rather kidney-shaped leaves. Its flowers just a bit taller and no wider than the leaves, are bright and glowing like a glass of red wine seen against the light.

P. Juliae, too, was discovered in the Caucasus, and needs moisture and some shade to prosper. It is one of the parents of the so-called Juliana hybrids, which are a wonderful addition to the primrose clan. Gradually all the colors mentioned for *P. acaulis* are being introduced in the Julianas, but the form varies. There are the mat-forming, creeping types that take after *P. Juliae* (the best of them having the small leaves), while others have 2- to 3-inch stalks surmounted by airy sprays of flowers. The latter are called stalked Julianas, or sometimes (when a bit larger), miniatures.

From seed the Julianas may have large leaves and flowers and be

very similar to *acaulis* hybrids. You can never be sure what you will get from a packet of Juliana seeds, but the choice plants are those that have retained the *P. Juliae* dwarfness and delicate appearance. The typical *P. Juliae* has a creep-

ing rootstock near the surface of the ground, so frequent top-dressing with good gritty soil is advisable.

In the summer Quarterly there will be more excerpts from Doretta Klaber's fine book "Primroses and Spring."

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Dear Mrs. Nelson:

Your kind post card was full of questions. Here are a few answers. I am a Professor of Chemistry at Pennsylvania State University. Can't attribute my interest in plants to anything but being born with it. Grew lilies from seed when I was 10. Was a Director of the North American Lily Society, never did much, bugged out when a member started pressure to increase dues, have bigger annual shows, more cups and prizes, kill the seed exchange (too many good plants given away), etc.

The garden is a little over an acre of steep north facing hillside. Summer temperatures never go over 92° and night temperatures never fail to go below 70°. All of that is good. What is not so good is sometimes -18° in winter with no snow cover. Generally, no snow cover means that it won't go below -5°. Lots of snow cover means -15°. Many primula are simply not hardy, but it is virtually impossible to find out anything about hardiness limits from the available literature. Actually, there has been little written on this. For example, a good stand of *Primula chungensis* went down the drain with winter-kill. It wasn't drainage or any of the usual bromides, it was just too cold.

As for gardening interests, they are rather varied. Saxifrages are good here and even the kabschias bloom out doors. The encrusted and mossies approach sedums in vigor and the ease with which they can be tucked in anywhere provid-

ing it is moist and cool. An attempt is in progress to naturalize the *Lilium auratum x speciosum* hybrids of Woodriff. Fair success so far. Gentians are reasonably good. Rhododendrons and azaleas are grown to some extent and even self sow, but the winter temperature is a severe limitation. Although much is devoted to cool north slopes with alpine plants, there are also hot south banks where the Iris from Asia Minor do very well. For example, *Iris danfordiae* blooms every year and *Iris histroides* is a crashing success. The species tulips like *linfolia* and *chrysantha* are also great successes.

As for the Primulas grown here, here is the census. *P. vulgaris*, *Juliae*, and *polyanthus* of the vernaes section are reasonably successful, though many dwarf polyanthus and some Juliana hybrids, seem to be too winter tender. *P. Juliae Wanda*, of course, is great. *P. auricula* is excellent. *P. marginata* is hardy but not vigorous as yet. *P. calycina* is very good and keeps excellent winter foliage even in exposed windy places. *P. hirsuta* is fairly good, and certainly hardy. *P. x pubescens* is quite vigorous in the form here. *P. parryi* has germinated but quickly dies. Exactly what is the trouble? *P. cortusoides* is very good with 30-40 flowers on many scapes. *P. Sieboldii* is very good as everywhere. More work should be done on breeding with this splendid primrose. *P. saxatilis* may be among the *P. cortusoides*? *P. kisoana* is good. *P. bulleyana*, *P. japonica* and the hybrids related to

these do well enough in artificial bogs. *P. florindae* grows very well, but the flowers are really small, a deficiency that is only partly made up by the leaves. *P. darivalica*, *P. farinosa*, *P. frondosa*, and *P. laurentiana* have all flowered. The old plants of *laurentiana* lasted three years and now we must depend on self-sown seedlings which haven't appeared yet though much seed was set. *P. luteola* bloomed well but it is a question whether it will regularly survive our winters. *P. rosea* and *P. x kleynii* are excellent. *P. denticulata* is easy from our own fresh seed, but believe me it was a while getting a few stock plants. These primula seed should really all be refrigerated.

As you can see, I have all the standard stuff and can't grow the rare ones. I need information of hardiness most of all and first hand (none of that second hand and third hand stuff) information on what people grow and how they grow it.

We do not have a greenhouse though there are some cold frames. Both regional and international round robins would be of interest. I am 48 years old.

You might be interested in what is blooming today, April 5: *Iris reticulata* in light blue, deep blue, and violet. *Iris danfordiae* and *his-*

troides just about gone, *Galanthus elwesii*, *Eranthis hyemalis*, *Helleborus niger* (a spring bloomer in the strain here), *Draba aizoon*, *Draba demissorum*, and assorted Crocus. Again, all standard stuff.

With kind regards,
Norman C. Deno
139 Lenor Dr.
State College, Pa. 16801

Mrs. Thelma Nelson
Dear Members:

My wife and I have just returned from a week's vacation in Pennsylvania. How we envy the people in that area. They have natural rock-garden settings; slopes and streams in abundance. I received the Robin letters the day before we left. Read them hurriedly, and noted that Norm Deno was interested in obtaining a *P. Mistassinica*. We decided to include State College on our itinerary and take him a few plants, even though it is getting late in the season to transplant them. We regretted that he wasn't at home, but enjoyed looking around briefly at his garden. He has a wonderful site, on quite a steep slope.

Read all the letters twice again, on returning home. Have enjoyed them very much. Now for the Thomases. Our home is on a 100'x 150' corner lot. The back yard (south of the house) is surrounded by a perennial border varying from 8 to 12 feet wide. The south (rear) border is shaded by a big pine and Norway maple. This is where we have our rhododendrons, azaleas, a laurel, wildflowers, and our shade-loving primulas.

When we moved here, from Huntington Woods, Michigan, in December, 1963, the east boundary had four big soft maple trees with trunks 2 to 3 feet in diameter. We

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RUTH S. BARTLETT

soon had these removed. What a job digging out the maze of roots and working-in peat moss, in order to make a 10 foot border. This is where we now have our iris, lilies, roses, delphiniums, etc.

Three years ago we became interested in rock gardens and al-pines, joined the ARGS, and have gradually been building a spot in view of our dining room windows. We have to *buy* rocks and gravel here. Have built a series of four pools; varying from the upper one which is about 18x18 inches to number four which is 4x6 feet. Am using vinyl film to line the pools, and a submersible pump for recirculating the water. Three of the pools are connected by miniature streams approximately 3 feet long, from which there is considerable water loss. It is in this area that *P. Mistassinica* have thrived, even though in full sun. They have self-seeded well from the original six plants collected two years ago at the cottage of a friend at the Straits of Mackinac, Upper Peninsula of Michigan. They were growing there on the shore in sand and gravel just above the high water line—very moist. I should add I lost quite a few of these seedlings this past month due to heat and no rainfall—they weren't in the damp area.

P. saxatilis has thrived in the shade of the south border, along with *P. japonica*, and both have self seeded into large colonies. We've given many surplus plants to

friends this summer, and dug up more lawn to make room for new seedlings raised from the APS seed exchange. Between the fox squirrels and neighbors' cats enjoying digging in our nice soft dirt, and the slugs eating the seedlings, the mortality rate is quite high. Also, the blue-jays and grackles like to lift out the labels from the plants—I've watched them do it! Consequently, I quite frequently don't know what kind of primula it is when it blooms. I thought I had a group of 10 abshasticas, but I'm not sure. They have bloomed two years now. Mine don't sound like Norm Deno's description, so maybe I'd better take his hint and buy some of Alice Baylor's.

I succeeded in getting one plant of *P. parryi*, out of six, to bloom last year. They were in the damp gravel near one pool. They have since disappeared.

Many primulas are quite difficult in this area because of unfavorable climate—hot, dry spells in summer, and alternate cold and mild spells in winter. We seem to quite often have an extended cold spell, zero to minus 10 F with no snow on the ground, then warming to 40 F. Our annual precipitation is 32 inches. However, this summer we had no precipitation from August 17 to September 15 and one-half inch the rest of September. Consequently we have lost quite a few more primula seedlings which were planted out in early September—to heat and drought this time, instead of slugs! Under these climatic conditions *P. Sieboldii* is particularly useful because it goes dormant in summer.

Best regards to all of you,
Wm. S. Thomas
1805 Greenleaf Dr.
Royal Oak, Michigan 48067



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The Primrose

*Lilies are both pure and fair
Growing midst the roses there.
Roses, too, both red and pink
Are quite beautiful, I think.*

*But of all the bright blossoms—best
Purest—fairest—loveliest—
Could there be a sweeter thing
Than a Primrose blossoming?*

—James Whitcomb Riley

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