

*Quarterly of the American*  
**Primrose**  
*Society*

VOLUME XIX

WINTER 1961

Number 1



*Primula Carniolica*

## OFFICERS—AMERICAN PRIMROSE SOCIETY

President—Mrs. John Siepman.....3616 N.E. Bellevue-Redmond Rd., Bellevue, Wn.  
 Vice President—Mr. Herbert H. Dickson.....13347 56th Ave. South, Seattle 88, Wn.  
 Rec. Sec'y.—Mrs. O. Miller Babbitt.....7200 S. W. Benz Park Drive, Portland 1, Ore.  
 Treasurer—Mrs. Orval Agee.....11112 S. E. Wood Avenue, Milwaukie 22, Ore.  
 Corresponding Secretary—Mrs. P. B. Charles.....1013 84th N. E., Bellevue, Wn.

### REGIONAL VICE-PRESIDENTS

Mr. Robert Putnam, Pres. Washington State Primrose Society,  
 .....11811 N.E. 73, Kirkland, Wn.  
 Mr. Benjamin L. Hoag—Pres., Onondaga Primrose Society, 101 Cedric Ave., Nedrow, N.Y.  
 Mr. Claude Shutt—Pres. Tacoma Primrose Society.....10429 So. Brayton, Tacoma, Wn.  
 Mrs. F. J. Macey—Pres. Canadian Primula & Alpine Society,  
 .....4020 Marine Dr., West Vancouver, B.C., Canada  
 Mrs. Raymond Elmstrom, Pres., Oregon Primrose Society,  
 .....8715 S. E. 36th St., Milwaukie 22, Ore.  
 Mrs. John Siepman, Pres., East Side Garden Club.....Bellevue, Wn.  
 Mrs. Marion Hannah—Pres. Emeritus; Friday Harbor Primrose Club Friday Harbor, Wn.  
 Mrs. Reuben Stohr, Pres. Lewis Co. Primrose Society.....1512 Grand Ave., Centralia, Wn.  
 Mr. Robert Saxe.....166 Eleventh Ave., San Francisco 18, Calif.  
 Mr. Robert W. Fleming.....3100 Leighton Ave., Lincoln, Nebr.  
 Mr. Chester K. Strong.....526 Grant Ave., Loveland, Colo.  
 Mr. Robert Luscher.....Thedford P. O., Ontario, Canada  
 Mrs. Richard Wetzel.....1001 Reading Blvd., Wyomissing, Penna.

### DIRECTORS

Mr. Douglas W. Duncan...Vancouver, B. C. Mrs. Mary E. Henricke.....Milwaukie, Ore.  
 Mr. Dale Worthington.....Portland, Ore. Mr. Orval Agee.....Milwaukie, Ore.  
 Mr. Robert Putnam.....Kirkland, Wn. Mr. Ralph Balcom.....Seattle, Wn.  
 Mrs. Robert M. Ford, 2406 Boyer Ave., Seattle Wn., *Editor of Quarterly*

### QUARTERLY

FLORENCE BELLIS — *Editor Emeritus*

Editor—Mrs. ROBERT M. FORD 2406 Boyer Ave., Seattle 2, Wn.  
 Regional Editors—  
 Mr. Roland E. Cooper....."Blythwood" 40, Grosvenor Rd., Westcliff, Essex, England  
 Mr. Leo Jelitto.....(14a) Stuttgart-N, Hoferstrasse 2, Stuttgart, Germany  
 Mr. Aymon Correvon....."Floraire" Chene-Bourg, Geneva, Switzerland  
 Miss Alida Livingston.....Remsen's Lane, Oyster Bay, Long Island, N. Y.  
 Mrs. Doretta Klaber.....Rt. 1, Quakertown, Pennsylvania  
 Mrs. Anita Alexander.....11848 S.E. Rhone, Portland, Oregon  
 Mr. Elmer C. Baldwin.....400 Tecumseh Rd., Syracuse 10, N. Y.  
 Mrs. Grace M. Conboy.....5846 S. E. Marine Dr., Burnaby 1, B. C., Canada  
 Mrs. William E. Standing.....8825 N. W. Bailey, Portland 9, Oregon  
 Miss Loretta E. Dehler.....Rt. 1, Box 136, Mt. Angel, Oregon  
 Mr. Charles E. Gilman.....16320 Burton Rd., Los Gatos, California  
 Mr. Ralph W. Balcom.....345 W. 88th St., Seattle, Wn.  
 Editor in Charge of Translations—  
 Mr. Robert Luscher.....Thedford P. O., Ontario, Canada  
 British Research Editor—  
 Captain C. Hawkes....."Brown Roof", Stapeley, Nantwich, England  
 Seed Exchange  
 Mr. Elmer C. Baldwin.....400 Tecumseh Road, Syracuse 10, N. Y.  
 Slide Chairman  
 Mrs. Dorothy Dickson.....13347 56th Ave. South, Seattle 88, Washington  
 Membership Chairman  
 Mrs. Ruth E. Smith.....12936 72nd Ave. N. E., Kirkland, Washington  
 All material for the Quarterly should be sent direct to the Editor's Office,  
 2406 Boyer Avenue, Seattle 2, Washington  
 British Subscription price (including membership): 1 pound per year  
 British Representative and Treasurer—  
 Mr. Norman Lawfield.....17 Quarry Rise, Cheam, Surrey, England

## Quarterly of the American Primrose Society

VOLUME XIX

WINTER 1961

Number 1

### CONTENTS

	Page
Primula Seeds.....	Roland E. Cooper 2
Dr. Walter C. Blasdale.....	Charles E. Gilman 7
Primroses In West Wisconsin.....	Joyce Graewin 8
Primula carniolica, Subsection Brevibracteata.....	Anita Alexander 9
People and Flowers In The News.....	10
With Apologies—No Primroses.....	Florence Bellis 12
Show Dates .....	16
Seed Exchange.....	Elmer C. Baldwin
My Garden.....	Laura Jezik 17
Twixt Anther and Pistil.....	Wesley Bottoms 20
Life Membership to Roland E. Cooper.....	Anne Siepman 22
Rotted Alder For Starting Primula Seeds.....	J. E. Mason 26
Another Successful Seeding Method.....	Beth Tait 26
The Question Box.....	28
Introducing Alice Hills Baylor, Sky Hook Farm.....	Inside Back Cover

THE PICTURE ON THE COVER: *Primula carniolica*, a rare plant grown by Mrs. Orval Agee. See Mrs. Alexander's article on page 9. Photograph courtesy Orval Agee, Milwaukie, Oregon.

*The Quarterly of the American Primrose Society is owned solely by the Society, which is incorporated under the copyrighted name AMERICAN PRIMROSE, PRIMULA AND AURICULA SOCIETY.*

*Subscription price (including membership): \$3.50 per year, \$10.00 for three years paid in advance. Old Quarterlies available at Editor's Office — see Index in Winter 1959 issue. Treasurer, Mrs. Orval Agee, 11112 S. E. Wood Avenue, Milwaukie 22, Oregon. (Free cultural chart with new memberships.)*

The editor is Mrs. Robert M. Ford, 2406 Boyer Ave., Seattle 2, Washington  
 It is published at the Seattle Printing & Publishing Company, Seattle, Washington.  
 Published four times a year: Winter, Spring, Summer, Fall.  
 Copyright 1948 by American Primrose Society.  
 Entered as second-class matter at Seattle, Washington, under the Act of March 3, 1879.

# PRIMULA SEEDS

Take a few polyanthus primrose seeds in the palm of the hand and . . . . just look at them. If you have enough curiosity and a hand lens look at them a bit closer. Then get some seed of another kind of primula and look at that. CONSIDER THE SEEDS AS THEY LIE. Then you may realize that you are on the threshold of an enthralling study which will keep your interest all your time.

ROLAND E. COOPER, Essex, England

The underlying point is this. When any primula realizes from a subtle change in the local climate that the time approaches when it cannot grow actively and must go to sleep and rest, it slows down its activities, turns some of them to foliage reduction and the formation of resting buds and others to storage. To the seeds it sends a dope to stop their conscious activity. It must be taken that the plant has flowered during the season and the seed capsules are developing.

The plant hastens to perfect its seed embryos and to provide a sufficiency of food for their awakening. Also it has to get rid of all material which won't be wanted under any pretext. It has to get rid of a lot of fluid also.

The time for this is short, maybe only two or three days. It spews all outer cells of the seed-coat.

If it has much surplus those cells are swollen to a comparatively tremendous size, even as long as a third of the length of the seed, in the process and when it is done they collapse. The surplus arises in the case of Nivales primulas which grow in moist open mountain meadows, rich in humus, from the activities of their system of strong, deep-driving, fleshy roots which draw quantities of food from the deeper pockets of humus.

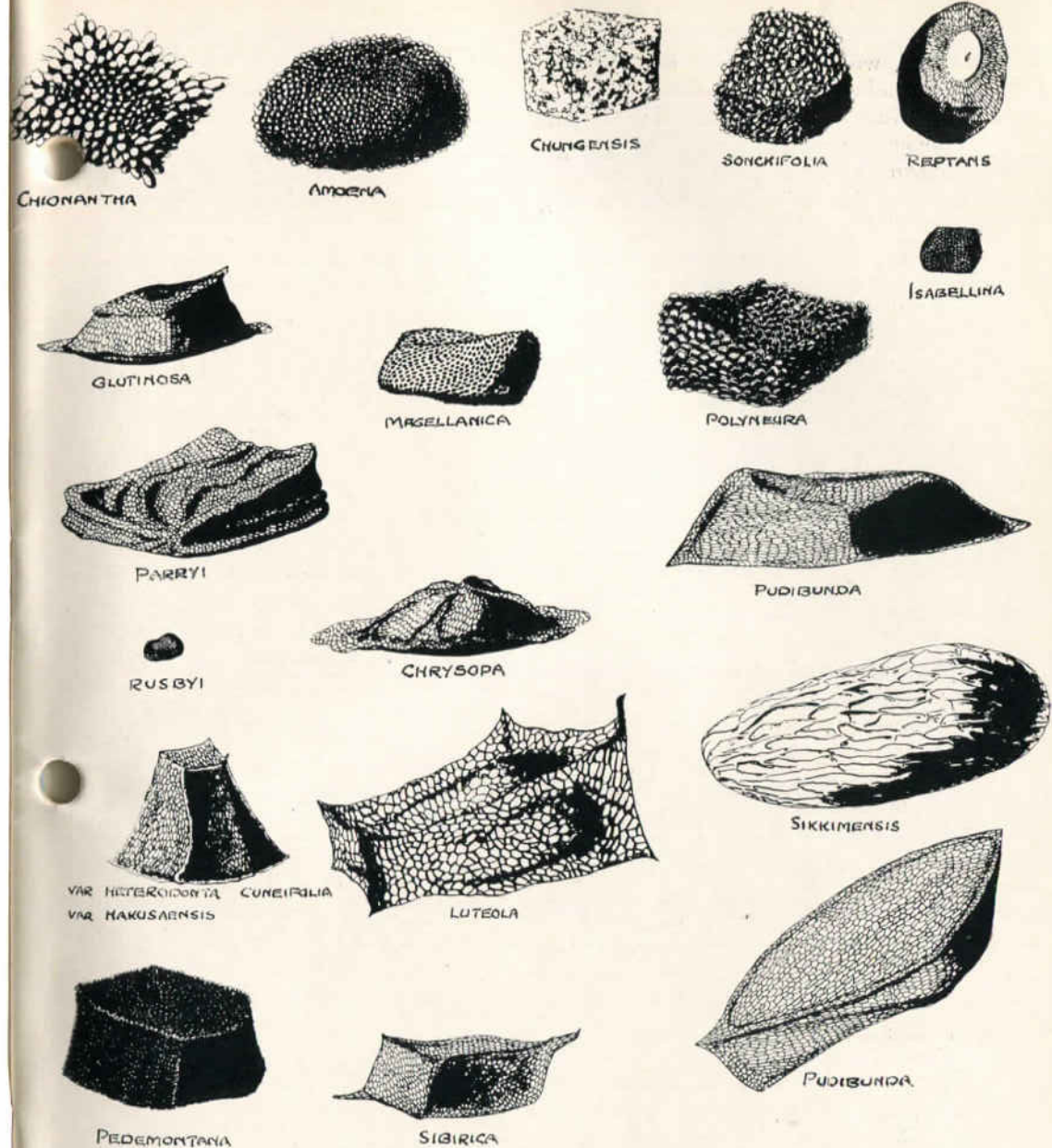
If the plant has been living under conditions pertaining to hard living it won't have much surplus to discard. Consequently the outer cells of the seed-coat will not be strained through

the discard. They may swell a little but nowhere near to the stage of making long tubes so that instead of collapsing into craters they simply dry up as it were, leaving slight ripple marks on the seed-coat.

The species of the Farinosae which live in the far north of the continent ranging from Greenland and Labrador to Alaska, *P's ajanensis*, *borealis*, *egaliksensis*, *parvifolia* and *sibirica* live under the most austere conditions and their seeds are smooth, or obscurely linear-reticulated. Yet their associates *P. intercedens* and *P. incana* have angled and reticulated seed, but grow on calcareous gravels.

Now it happens that I've played this game before and in my study of primula seeds have found that every seed can be judged as one of a number of expressions. It doesn't follow that each type of seed-coat is particular to any section. The Sections are artificial in any case for some bear the name of a country, others a feature of the leaf or of its covering, or of where the plant grows (i. e. in the snow), of a latin adjective \*bella or of its colour Amethystinae which, incidentally, doesn't apply through it . . . in fact almost anything goes. It seems about time, since by now it can be assumed that practically all the primulas of the world have been found, that plantmen got together and worked out a proper set of names to the Sections. Our study of the seeds will undoubtedly help.

The main types of seed-coat elabor-



Various Primula Seeds. Drawings by Miss B. G. Watt 1936-7 R. B. G., Edinburgh, at the instance and choice of R. E. Cooper.

ation may be stated as 'covered in a mat of long thin tubes usually glossy with their tips collapsed into craters'; the tubes shortened and the craters collapsed to make an even-surfaced glossy, honeycomb of cells all over the seed, the same even honeycomb filled with a white floury substance (clois-

sonné); an open honeycomb of dull brown paper colour and rough texture, the cells tending to lengthen along the axis of the seed; the general surface of the seed smooth or minutely low wrinkled, the long axis of the seed diminishing to make a boat shape, a stubby boat shape, cuboid or rhom-

boid, with tiny flanges along the obloid sides and the ends i.e. a crater of twelve flanges always associated with smoothish surfaces; obscurely flanged down the sides but with a prolonged flange at each end; prominently flanged and covered with a glossy large meshed low honeycomb and globular or orange shaped seed covered in dark conical small tubes their apices collapsed into oblique craters.

It will be a really technical job to reduce the types into associated groups swinging one into the other and give them a single word name. Many pairs of eyes, heads and hands will be required.

There are of course gradations of each kind but they are obviously within their class.

As an instance, the seeds of most of the Vernales Section, the primrose, cowslip and so on are roundish globular, the biggest in the genus, and covered with a dense array of distinctive, dark, conical swellings which have collapsed tops. Only the Bullatae resemble them. The smallest, incredibly small, is *P. Inayatii*, a Farinosa.

The species of Section Candelabra are all good garden plants *P. helodoxa*, *P. pulverulenta*, *P. japonica* and the Beesiana - Bulleyana hybrids. Their seed-coats have a complete uniform covering of a fairly deep honeycomb network of cell edges standing above the collapsed cells. This is usually glossy but there are certain species localised in China where this honeycomb is filled with a white farina-like substance so that the seed-coat with its cellular dark pattern outlining showing through the white filling gives it the appearance of cloisonné work. So far, no Indian or Himalayan species has this deposit on the seed. It is truly on the seed because it is seen to be there no matter how carefully the capsule is opened. I know no other set of seed which has that particular

character. The late Dr. Blasdale discusses farina in Vol. 2, #4, Primrose Quarterly.

Seed with a comparable honeycomb is developed by members of the Cortusoides Section but with this difference: The honeycomb is not shiny or glossy but has a dull brown papery look about it. Moreover, the honeycombing is not so regular all over the seed as it is in Candelabra. It has larger or longer cells at the ends of the seed. Cortusoides includes *P. Sieboldii* and the like.

The Section Petiolares I've always looked upon as more primeval than any other.\*

Its seeds often fail to dry and the capsule to dehisce or split for the plant growing in moist shade just slimes away the would-be-capsule tissue allowing the seed, which is quite green and unripened although matured, to fall upon the moist dankness of the mixed tree forest floor, beneath rhododendrons, and germinate almost without check to its development. With any other plant this would be called vivipary but it is not quite that. Consequently the cells of the seed-coat seem to have swollen and burst along the usual honeycomb lines but with the cell edges very rough and apparently furnished here and there with a kind of crystalline matter, as though the natural humidity of the environment's air had prevented proper evaporation and dispersal. This type, while uncommon in the genus, could be associated as an earlier stage of the more elaborate Nivales, the smoother, even honeycomb of Candelabras being reckoned a more sophisticated condition of it.

So far the general run of the seeds are shaped like stubby oblong boxes—cuboid is one term, rhomboid another

\*Journal Scottish Rock Garden Club, No. 15, 1954, pages 119-124.

—but the major point is that there are no sharp edges. One word of warning. The hilum or umbilicus by which the seed was attached to its placenta shows as a smooth little patch quite devoid of any elaborations of the seed-coat. That is universal and natural.

A seed-coat type of just a few seeds consists of wings about one axis of the seed (or flanges) which together with the body of the seed are embossed with a large-celled open, shallow and semitransparent reticulation; the mark of *P. rosea* and *P. luteola*.

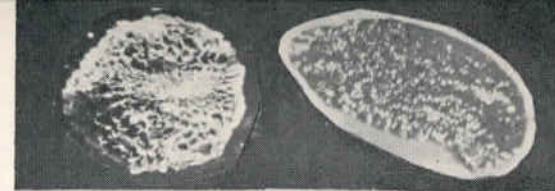
Now we come to the seeds which are flanged along some of their edges. Some have flanges extending from opposite sides of the ends of the seeds. Others are crated as it were in an open framework of twelve flanges. Flanges go with a smooth or merely rippled seed-coat.

So, a smooth coat with flanges extending from opposite ends is the mark of some of the Section Farinosae, *P. involucrata*.

Then there is the chip-shaped seed of *P. sikkimensis* (and some of its allies) which is covered in a small-celled low rippling or reticulation. It has a tendency to pronounced winging at the ends and swings so much toward the normal smooth Farinosae types that, viewing the smaller species of Section Sikkimensis, it has been suggested that the Section could be absorbed into Farinosae.

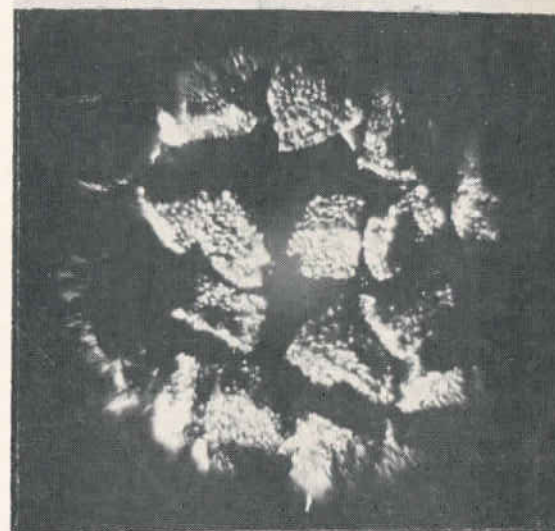
There is a smallish cuboid seed which has its twelve edges extended into small flanges of regular depth. Both seed coat and its extension flanges are covered in a low network of very small seed-coat cells. This type is common in the Section Auricula and appears also in the seed of the allied Section Cuneifolia from Japan. The native American Section Parryi is also allied to the Auriculas and agrees in having a fine-celled low reticula-

Seed photographs courtesy the author.

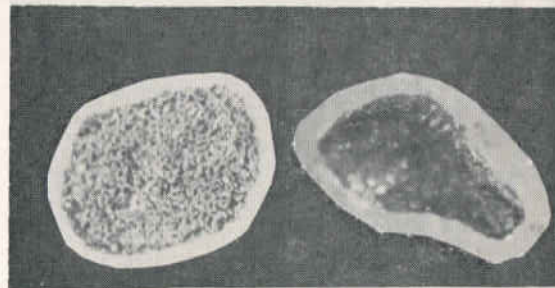


*P. polyneura*

*P. sikkimensis*

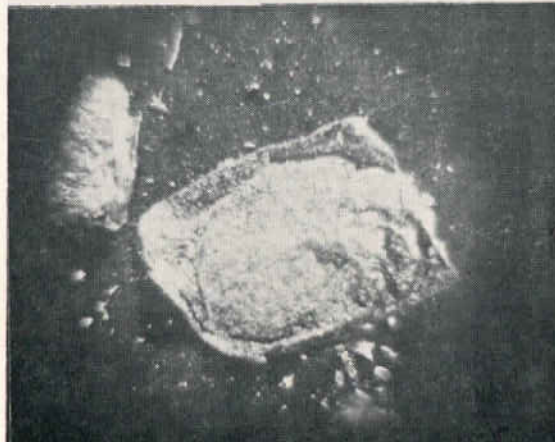


*P. sonchifolia*



*P. stellata*

*P. involucrata*



tion. The manner of their flanging gives the clue to the reason for all flanging of seed-coats in *Primula*.

Mr. Chester K. Strong most kindly sent me a fine lot of capsules of *P. Parryi* which I suspect he had gone especially hunting for me. Many were still green and I noted their odour and wondered why it should be so at all. Others had split and I sent some of them to be photographed. Then I sat down to watch, hour by hour, the final ripening and opening of the capsules—pencil and paper and a lens nearby. I noticed that the capsule did not split straight up. There was a patch of tissue round the base of the dried style which started the dehiscence. About the base of the style this little patch cracked little teeth which in turn allowed the segments of the main capsule to separate from it and so unfold a little from the body of the fruit. There lay the seed beautifully neat and tidy, coloured a lovely pale green and set in little rows from the base to the apex of the placental column. As I watched they separated their little flanges away from each other and began to turn a russet brown. Then they fell off and as they lay began to dry out their flanges, darken in colour, and shrivel a little.

I can describe the seed and the setting of its behaviour by a much larger example. Take a full hundred-weight bag of dry soil and empty out enough to slacken the tightness of the sides. Lean the sack against the wall where it will slump a little with the bottom edge protruding a little and the top folded slackly over towards the wall. Then take another similar sack and lean it against the first one and observe what happens. The sides touching flatten, the base settles into the shape of the first sack, the bottom protruding a little and the top settling the other way. Those two top and bottom seams are making coarse flanges. Add

several other similarly filled sacks to determine the points. One row of sacks being thus made add another row to each side and notice what the touching sides do. They also flatten but there is a tendency for the lateral side corner edges to take the shape of blunt flanges.

The result is a large example of the shape of a *Parryi* seed from the centre of a row; the seed at the top and bottom will be modified from this a little. The oblique setting of the seed upon the main placental areas can only be due to a divergence of perpendicular pressures between the outer capsule and the inner placenta. This in turn may be caused by a shrinkage of the capsule tissues or of an elongation of the central matter. Maybe, in truth, a little of each. Only observation of other long capsules will disclose the truth. The problem of round capsules such as those of the *Candelabra* remains to be studied and reported upon.

The ripening of a *primula* seed is of the greatest interest and this is what I found. The seed-coat has three layers of cells. As it ripens, the embryo and its store of food shrinks through the loss of discarded material. Two of the layers consist of larger cells able to shrink one against the other in direction. By doing so they take up any play in the coat and become skin tight. The lowest layer of cells is infused with the dormancy inducing dope. *There is the seed.*

Further study of all the processes outlined in the above lie open to those who wish to be interested and be kept vigilant all the days of their life.

To prepare *primula* seed for study under a hand lens or a microscope take an ordinary glass microscope slide and in the middle put a smear of Canada balsam about half an inch across. Seed should be absolutely true

*Continued on page 7*

## Dr. Walter C. Blasdale

*Reference to your Index issued with the Winter 1959 Quarterly will help you find Dr. Blasdale's writings in the Quarterly.*

CHARLES E. GILMAN, *Los Gatos, California*

With the passing in May of Dr. Walter C. Blasdale, The American Primrose Society has lost another dedicated *Primula* lover with the ability to pass on his love and culture to the members. Dr. Blasdale's book "The Cultivated Species of *Primula*" is as useful to the lay *Primrose* grower as any book on the subject in print today.

I think it was on our first visit that Dr. Blasdale, in answer to the usual question, told us of his rides with his doctor father by buggy through the countryside on Long Island. His father had that interest in native and growing things and the meticulous attention that sees everything, which he passed on to his son. On these trips Walter Blasdale came to know and love the native flowers, an affection which never wavered throughout his long life. We might have had much more in the way of *Primula* culture from Dr. Blasdale if he had thought he could afford to devote his life to Botany instead of Chemistry.

One regret we have in the loss of Dr. Blasdale is that we did not become well acquainted with him until his health had brought to a halt his work with the *Primula* species. Our first visit some years ago was, fortunately, before the death of Mrs. Blasdale whom we enjoyed. But Dr. Blasdale's health was already impaired and his work with *Primula* had come to an end.

Dr. Blasdale produced many beautiful photographs during the compilation of his book, all of which have been given to the Society, together with numerous monographs and a set

of the Smith and Fletcher writings on *Primula* as published in the Transactions of the Botanical Society of Edinburgh.

Dr. Blasdale was a life member of the American Primrose Society and *Primrose* lovers in America should be forever grateful to Dr. Blasdale for his contribution to their knowledge and appreciation of *Primroses*.

### **Primula Seeds (cont.)**

to its name and should have been obtained from holders of authentic stocks such as botanic gardens, herbaria and reputable trade suppliers. A little practice is necessary to be sure of putting the seed on the smear neither too widely scattered nor too close together. The seed should be applied to the balsam while the latter is soft—which is within a few minutes for it hardens upon exposure to the air.

When the seed is fixed in the balsam the slide should be labelled with special labels made for the purpose giving its name, Section, date and source of origin. The slides of seeds set in the balsam are far from delicate and can be stored away in an ordinary microscopic slide holder which will permit the slide to be held for observation without any danger that the seeds will be rubbed off.

The American Primrose Society may be able to form a bank of such slides for ready reference and study. It is a good thing.

*When buying anything advertised in these pages, please say you saw the ad in the Primrose Quarterly.*

## Primroses In West Wisconsin

*This writer has succeeded with primroses in a difficult climate where early winter brings constant freezing and thawing.*

JOYCE GRAEWIN, Norwalk, Wisconsin

A few years ago after we moved to town I tried to grow my first primroses. After trying to grow other flowers in our shady yard, I ordered a packet of *P. polyanthus* seed from a mail order seed house along with the vegetable seeds. The blooms of the first few plants were so beautiful and fascinating that they have started me on a wonderful hobby. After searching for information in garden books and our small town libraries I joined the American Primrose Society to learn more about these lovely plants. This has opened up a whole new world of enjoyment.

My collection of primroses is not large. I have *P. polyanthus* growing with spring-flowering shrubs in a border around the house. They have shade during the warmest part of the day and filtered sunlight until about 9:30 A.M. and again after 3:30 P.M. I keep them mulched with very old sawdust and some pine needles. On the northeast corner of the house I have a small bed of about a dozen auriculas. These are very new to me. I saw the first blooms this fall. Two were lovely plum colored and two were bronze-tan.

A few *P. japonicas* have a corner by the porch. They bloomed for the first time this past summer and to my husband they were the best of all. They were tall and a bright rose pink. There are a few *japonicas* "Postford White" planted under a flowering crab tree in the yard. They should both bloom next spring.

This summer I set transplants of *P. japonica*, *denticulata* and *Sieboldii* in the perennial border. This border is in full sun, but I'm hoping the taller plants will provide enough shade. Other flowers in the border are tulips, iris, delphiniums, phlox, lilies and chrysanthemums. Petunias and white alyssum form an edge.

Our soil is a very good loam. When planting, I dig in some compost and a little sharp sand. So far, I haven't used fertilizer, but after the primrose beds are older I would like to try the *Blue Whale*.

Our Wisconsin winters are long and cold. There is a lot of freezing and thawing in early winter, so I usually cover, rather early, with leaves tucked around the plants, then a few pine branches to shade the plants. I add more after Christmas when I collect the neighbors' discarded Christmas trees.

Nearly all of my primroses are raised from seed. I start them in coffee cans in early winter after freezing and thawing the seed for a week or ten days. Later I transplant them into flats or pans and set them outside in the spring.

Many visitors have come to see the border at primrose time. As my collection has grown from seed saved each year. I have given many *P. polyanthus* plants to friends in the hope of arousing more interest in these favorites of mine. There are so many species that sound so beautiful. Each year I want to try growing kinds that are new to me. This year it is *P. acaulis* and *P. elatior* that are planted. Maybe my "beginner's luck" will run out, but certainly not my enthusiasm for the primrose.

## Primula carniolica, Subsection Brevibracteata

*We may look forward to further articles from a new Regional Editor.*

ANITA ALEXANDER, Portland, Oregon

This beautiful species of the auricula family, originating in the Julian Alps, has not been included in many American collections. One of the few examples is that of Mrs. Orval Agee of Milwaukie, Oregon, who has had this rare jewel six years.

It carried five or six beautiful rose-pink umbels of bloom this year. Mrs. Agee has kept it in a cold greenhouse with her other choice auricula species and hybrids. Native dogwoods screen the well-kept little greenhouse whose interior is always a visual and aromatic delight. Even during the grey winter months the scattered blooms and many fragrant leaves scent the air and beckon auricula converts.

The *carniolica* gets about the same amount of moisture and light as the other auricula species. The greenhouse has good air circulation. When the gentle Oregon mists curl away and the "wet rains" of winter come, the plants need an occasional little paint-brush dab of sulphur to prevent mold. A top dressing of tiny pebbles helps keep the pots tidy. The *carniolica* has been in the same pot for six years, and has increased from one crown to six.

The soil is a mixture of leafmold, sand, and granite chips, "I don't know just what proportions, I mix my dirt by feel. You can advise them to take a good auricula mix and add more granite chips." Mrs. Agee had a lot of good granular leafmold in that pot. Her plant has been a dependable bloomer, and set seed readily one year when she self-pollinated it.

It is an almost completely glabrous perennial with a stout rhizome and thick, fleshy roots. The smooth, bright green, slightly wavy leaves have entire margins, and the forms are obovate to oblanceolate. They narrow to a distinct petiole. It flowers here in April on stout six-inch, slightly reddish, scapes above the loose rosette of four to six-inch leaves. The lovely pink blooms are centered with an eye thick with white meal. In the native Alps, the corolla varies from soft pink to lilac, with an eye of white farina. There was a white form in cultivation, but it is believed to be lost.

Several references enlarge upon the fact this is one species that does better in cultivation than in the native haunts, the Idrian or Julian Alps just north of Trieste, along the Italian-Yugoslav border. "It grows in rocky, moist, shady places on limestone formations." (1). Farrer speaks of it growing "frail and straggly in the moss and damp rocks beneath the densest shade of firs. In the garden it proves everywhere a species of the most perfect adaptability and charm, in any cool rich soil." (2). MacWatt says "It flourishes best in its native habitats in dense shade among moss, and in woods and copses under cool conditions everywhere, or even on shady, damp rocks, although not a saxatile species. In grass or among stones it is unhappy-looking." (3). The shiny evergreen foliage and white-centered pink to lilac blooms have been enjoyed in English gardens for more than a century.

*Continued on page 11*

# People And Flowers In The News

## Woman of Achievement for Year . . .

Our National A.P.S. President, Mrs. John Siepman, was given this honor by Kirkland Business and Professional Women for her outstanding community achievements. She is not a member of BPW herself. During the year that she was civic improvement chairman for the East Side Garden Club Mrs. Siepman conceived the idea of a miniature park containing a rest shelter on Kirkland Avenue. Funds to start the shelter were realized from an East Side Garden Club Primrose Show. Greater Kirkland Inc. matched garden club funds to start construction. Harry Cummings donated his services as architect.

Prof. T. C. N. Singh, head of the department of botany in Annamali University, India claims that the sound of an electric bell causes some seeds to germinate faster. This is reported in *Forest and People*. Furthermore he reports that tapioca and sweet potatoes showed a 40% increase in yield when grown in fields under constant bombardment of recorded music. Indian classical music was played to rice and yields were increased 50% while tobacco was treated to broadcast violin music and showed a similar increase. Dr. Singh's explanation is that the vibrations in the plant cell agitate the sensitive protoplasm and nuclei in such a way as to accelerate growth. Who said there's nothing new under the sun?

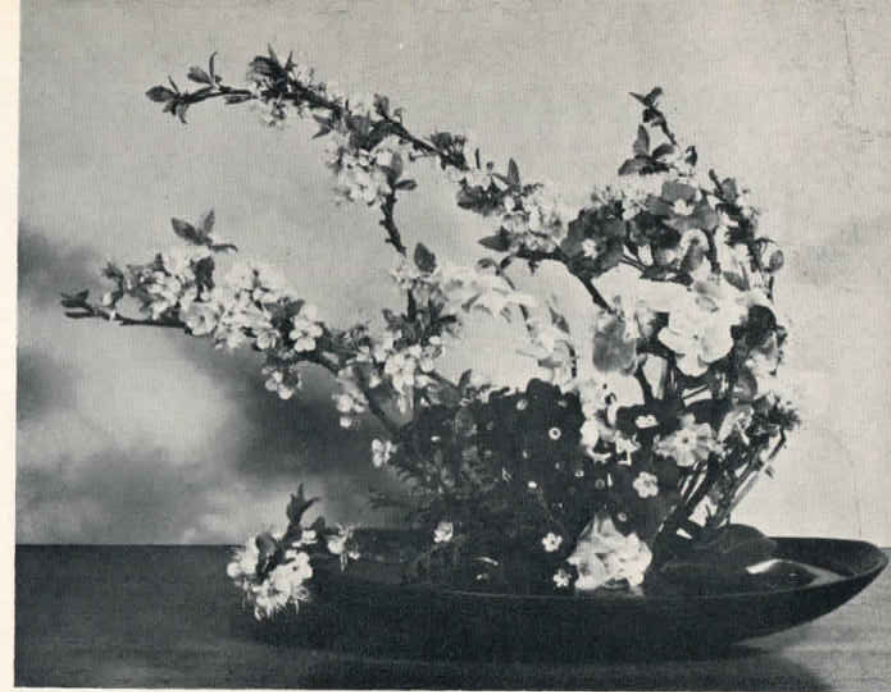
*Reported in the Horticultural Newsletter*

The above may be interesting to try on difficult primrose seed. With stereo and hifi, Beethoven and Bartok to experiment with who knows what the results may be?



**Captain C. Hawkes**

Captain C. Hawkes, British Research Editor, in his Alpine House potting up his favorite plants. Note his perfect gardener's hands. His wife Gwendolyn took the picture, her favorite snapshot of him.



Primroses and spring blossoms artfully combined by Anita Alexander, new regional editor, 11848 S.E. Rhone, Portland, Oregon. Photograph courtesy of Orval Agee.

## PRIMULA CARNIOLICA (continued from pg. 9)

When *carniolica* provides the pollen for crossing with *P. auricula* the resulting cross is x *P. venusta*. It occurs in natural form in the Idrian ranges and "differs from *P. carniolica* in having farinose leaves, and from *P. auricula* in having rosy flowers. It is fertile, and has been crossed with *P. marginata*, producing the beautiful *P. x Marven*, with leaves like those of *P. carniolica* but with dark violet flowers with a white eye." (1). "A garden cross of good substance and magnificent color—full bloom in mid-April—one of the most striking of all Primulas." (4).

We would like to hear from other gardeners who have had experience with this, and hope that more enterprising connoisseurs will try this rare plant and its lovely hybrids in their gardens.

I am indebted to the following reference sources:

- (1) *Transactions of the Royal Society of Edinburgh*, Vol. 61, #22, pp660-2.
  - (2) *The English Rock Garden*, Reginald Farrer, p117.
  - (3) *The Primulas of Europe*, John MacWatt, M.B., pp91-2.
  - (4) *Primulas for Garden and Greenhouse*, E.H.M. Cox and G. C. Taylor, p47.
- The Cultivated Species of Primula*, Walter C. Blasdale, pp88, 110-11.  
*Primula in the Garden*, Kenneth Charles Corsar, pp42-43.  
*Pictorial Dic. Quarterly of the Amer. Primrose Soc.* Jan. '54, p11.

## With Apologies—No Primroses

*Our editor emeritus sent this article from Samarai, New Guinea, a little island like a pendant pearl to the mainland of New Guinea. This is a continuation of her article on Scent, Color and Form which appeared in the summer 1960 Quarterly.*

FLORENCE BELLIS, Barnhaven, Gresham, Oregon

Color in the South Pacific lives in many scenes and forms. In flowers, of course, and in brilliant shrubs. Weird, wonderful and indescribable in the fish, coral and shells of the Barrier Reef and Islands of the Coral Sea. In the emerald, teal and peacock blue of the water, shallow where reefs lie. In flaming, momentary sunsets quickly drowned in total darkness that is as quickly lighted by stars and constellations new and, therefore, strange. In the bird of paradise headdresses of village headmen in the Highlands of New Guinea. In exotically colored cockatoos and parrots squawking through the trees or held captive by one foot bound to a shoulder pole of some ebony-skinned Tolai man walking down a jungle road.

Having talked previously of plumerias, known as frangipanis or frangis in the tropics, special attention was given them in the ports and Highlands of Papua and New Guinea. By the time Rabaul, the sixth and last port of call had been reached, it became apparent that frangipanis were sensational where rainfall could be sensational. It also became apparent, as colored forms appeared, that the more highly colored the flower the less heavily scented it was. Now here were the frangis as magnificent in size and as varied in color as in New Britain. In and around Rabaul, which is approximately four degrees south of the equator, plumerias could be considered small trees, limbs at gracefully awkward angles and great bouquets of lush or light fragrances. The most heavily perfumed are the paper white ones

with a gardenia accent. Next in order are the cream, lemon, chrome, peach, pink and rose. The scent lightens with the peach shades, turning to delicate lemon-spice fragrances in the pink and rose.

In Madang and Lae, on the eastern coast of New Guinea and the rainy side of the two and three mile high Owen Stanley Ranges, frangipanis are mostly cream or rose with the exception of one, a sullen, bloodstained red. This dark one was barely scented and none was as tall as those in Rabaul. Since the cemetery in Lae, as the cemeteries in Rabaul and Port Moresby, was landscaped since the war it could be assumed that none of the frangis could be more than fifteen years of age. Lae's finest specimens, some fifteen feet high and twenty feet across, are in the plot reserved for the men of the Indian Army . . . all of the headstones carrying the same identification and epitaph: "A Soldier of the Indian Army, 1939 - 1945, is honoured here."

In these rainy sections of New Guinea and New Britain rainfall can reach three hundred inches annually, but in Port Moresby, on the southern coast in Papua and the opposite side of the mountains, the climate is dry. Here rainfall is around sixty inches but picks up about fifty miles back in the mountainous inland. Temperatures of the coastal areas range from 75 to 86 degrees and humidity varies from 75 to 90 percent. There is no winter or summer. There is the wet and the dry, five months of each, preceded by one month of the doldrums

In Moresby the plumerias are rose or cream as in Madang and Lae, but not as spectacular. I have read that the frangipani blossoms, which fall and bloom anew each day, are worn by the native men in their hair for the aphrodisiacal effect the flower is supposed to transmit. In the Papua - New Guinea Territory only a few frangis are worn. The favorite hair decoration of the coastal boys is scarlet hibiscus . . . if you consider the vava leaves carried for betel nut chewing necessary rather than ornamental. Feathers, carved wood and grasses (of which there is a handsome pink plumed variety) are also used for hair ornamentation on the coast. It is extremely difficult to stay with the flowers and not stray to native customs or the highly entertaining New Guinea pidgin English which is a concoction of native, German, English and pidgin Cantonese. Or native legends and dress . . . the laplaps, grass skirts, head to foot tattoos, and the pulpuls made of hibiscus fibre rolled in mud and pig fat and worn as a small but graceful curtain fore and aft. Perhaps most difficult of all is to pass by history when Japanese and allied landing barges, ships and various other relics of war are scattered together, rusted, tilting at startling angles half in and half out of the waters of every harbor. Hurting the most were American helmets lying among the coral in Madang waters. Flower-like fish drifted in and out while native women sat motionless in their outrigger dugouts with hook and line.

Out of Rabaul, stopped by two flat tires and a crowd of little black dolls offering grindelias (gum-plant), papaws\*, pomelos, bananas, pineapples and zinnias, was a coconut palm . . . one of millions of coconuts on New Britain . . . with ten orchids growing on its trunk. Nothing remained of

that particular tree but the orchids and forty feet of stump. Like so many still standing, the upper part had been bombed or machine-gunned away. Against the base of this one sagged the rusted remains of a Japanese anti-aircraft gun, nose in the ground.

\*Also spelled papaws. The Carica Papaya; also *Asimina triloba*.

Scarlet, pink and rose hibiscus are everywhere and all are scentless. One double pink, the size of four carnations, had eight complete sets of reproductive organs. Bougainvilleas, like multiple haystacks piled one on the other, bloom in lavender, purple and magenta, red, rose and pink — sometimes coral. These are not petals, but colored bracts as are the poinsettias. An unforgettable experience was the sight of scores of brilliant blue butterflies the size of bluebirds pollinating such a pink mountain. Gardenias perfume the air from ten foot heights. Bouvardia, taller still, in Chinese red; and vines with electric blue flowers describable only as a cross between a morning glory and sweet pea, drape everything within reach. Neither is fragrant. This same strange trailing vine was seen in Goroka, an administration settlement of a few hundred Europeans and 160,000 natives barely removed from the Stone Age. Here on a mile high plateau, about two hundred miles back in the Highlands of New Guinea, was a deep, deep purple variety. Here, too, were intensely scarlet poinsettias, each bract three inches wide. Equally brilliant were the crotons.

In Goroka many things were of a different world: coffee trees, a rum drinking talkative cockatoo, natives clad in tapa bark, pulpuls, necklaces of white cowrie shells, blacklip pearl, and chambered nautilus . . . The headmen in bird of paradise feathers and bone nose ornaments. Some wom-



en with cassowary quills fastened in sockets pocketed in nose tips. Just one of these strange sights would have erased the discomforts and apprehensions of the trip. Inaccessible only by planes operating from miniature, mountain-bound airstrips, a concerted sound of relief accompanied each take-off. There were times when the old army DC3 had to fly at 12,000 feet and the nonpressurized atmosphere grew tense as forty sardine-packed, leary passengers slid their eyes down to the tangle below.

In the coastal towns are the giant tulip trees of South Africa with tangerine flowers settling like clouds of birds among the upper branches. And each bloom, when it falls, is like a bird in shape, intact, unspoiled and not fragrant. There are Japanese rain trees planted on either side of the main road both in Lae and Madang. A furlike growth of stubby fern clings to trunk and main branches which arch and meet overhead making the roads cool, shady tunnels along which grass skirted women — frequently with peroxidized hair — move with bicycles, jeeps and trucks. Globular, feathery, scentless pink flowers sit on top of the smaller branches much like Oregon's wild roses arrange themselves.

A truly ridiculous caricature of a tree is the kapok. A scarecrow tree with a half dozen or so pair of arms outstretched at wide intervals leaved with an adolescent fringe along the arms from which dangle, at odd spaces and lengths, the kapok pods which are of the same size, color and spiny skin of the wild cucumber.

The kapok is a cartoon. The cacao is an exotic, beautiful cartoon. In full growth it is about the size of a well grown, mature filbert tree, and attached to most unlikely parts of the main trunk . . . sometimes not more than

three inches from the earth, or along the three or four main laterals . . . are pods the size, shape and texture of Danish squash. Unlike the squash, however, only the occasional pod is green. The appearance is such that someone could have stood back and thrown at random a basketful of Chinese lanterns which fastened themselves to the bare bark at odd angles . . . orange, red, rust, purple, yellow, magenta, purplish-green pods all on the same tree. From thirty to fifty large beans crowd themselves into each pod, the beans coated over with a sour-sweet, white, slick substance, pleasant to eat, packed tightly together like brains in a skull. Three months from the time the cacao's tiniest of flowers have been pollinated by ants and other insects, the heavy, strangely beautiful pods are ready for harvest. The flowers could be likened to a delicate flesh or cream, filamented babys-breath embroidered on the brown bark.

A cacao grove is heavily shaded in its infancy, youth and early maturity for the protection of the flowers as well as the tender, silken new growth of oblong leaves which are beige, copper and bronze before attaining their permanent glossy green. For shading, a leguminous shrubby tree rather like laburnum is used, and the technique of planting and gradual removal is most interesting. Cacaos, or cacaoes as they are often called here, begin to bear in three or four years. The trees flower three times a year, never in unison, so that the harvest and the fermenting, drying, sacking and shipping of the beans go on constantly.

Wise cacao planters alternate two rows of cacao trees with one of coconuts for shade and cash—cash which amounts to the American equivalent of twenty million dollars a year in the pockets of white, native and Chinese

plantation owners. Coconuts ask for nothing more than to have their feet in or near salt water and to be no farther inland than the breeze can carry the salt air. They give food, drink, fuel and a lazy grace which has come to typify the islands of the South Pacific. On the tiniest of coral atolls they are the first plant life to appear. With fronds glistening in the sun or streaming in the wind, trunks curving toward the sea, they can never be forgotten. However, since this is a post-script to the relationship of scent to color and form, and not a paper on coconut and cocoa, nor on natives and the watery life of the reefs, too much space has already been taken.

In summing up, after comparing the abandoned extravagance of tropical flowers with primroses and the sub-tropical plants of the Monterey Peninsula, the conclusion still holds . . . that the more brilliant the color the less pronounced the scent.

### Winter Warning

Four of the likeliest ways to lose hardy Primroses in the winter are through mice, weevils, rot, or drying. Mice are much attracted to Primrose roots and crowns and will follow mole runs to feed, or will burrow under snow and leaves on the surface. Entire nests can be wiped out by placing balls of rodent poison in runs or under Primroses leaves. There are poisons on the market that are non-injurious to other animal life.

Rot is caused by poor drainage or by moving plants too late in the season. English Primrose types and evergreen Asiatics seem especially susceptible to late moving. In sections where winters are fairly open to encourage late planting, a great toll of Primrose life is taken in this way and the

trouble is usually diagnosed as loss by freezing instead of loss through rot.

The dormant Asiatic Primulas, those losing their leaves in the Fall, seem to stand replanting should accident occur to necessitate such action.

Regions of scant snowfall and high, freezing winds are the hardest on evergreen vegetation. Under such conditions roots are unable to replace moisture sapped from the leaves. A protection of evergreen boughs, hay, cornstalks, or such material that admits air and yet breaks the force of the wind will prevent damage. If placed after the ground has frozen, the plants will not be heaved from the ground with each thaw.

From APS Quarterly, Vol. 1, p. 25

## Use **BLUE WHALE** Rich

Soil Builder and Conditioner for:



**More and longer bloom**  
(Both growing and as cut flowers)



**Beautiful, Healthier Plants**  
(Proven by professionals)



**More Water Retention**  
(Blue Whale holds most moisture)



**Best lawn, last years**  
(A resilient Irish Green carpet)



**Constant, Prolonged Feeding**  
(Nutrition as long as humus lasts)

All the balanced elements from the whole whale (only the fat is removed) are available to the plant. The bone and baleen have been emulsified.

USE LIQUID WHALE for all Liquid Feeding Concentrated for Economy — More Economical than cheapest products, when Results are counted. Pure Essence of the Whale (from emulsified bone and red meat)

Send For The Free Flyers:

How to Grow Healthy Virus-Free plants of Trophy Quality, Tips on Effective Foliar Feeding and help with soil problems. Get BLUE WHALE and LIQUID WHALE at your Garden Supply or Send \$1 for postpaid and duty free 12 oz. Liquid Whale Concentrate Plant Food (28 oz. \$2.) and/or \$3.25 for a Bantam Bag (sample \$1.) of BLUE WHALE, the Rich Whale Impregnated Peat Moss. Many of our most grateful customers first got BLUE and LIQUID WHALE from their friends as gifts. Acme Peat Products Ltd., Dept P11, R.R. 2, Richmond, B.C. Canada.

## Show Dates

### National Primrose Show

According to Claude Shutt, president of the Tacoma Primrose Society, the National Show and Awards Banquet will be held in Tacoma on April 15 and 16, 1961. Further details will appear in the spring Quarterly.

### Special Chartered Flight Offered

The American Rock Garden Society has arranged for a chartered flight, New York to London, leaving on Friday, April 14 and returning May 6, 1961, so that its members may attend the Third International Rock Garden Plant Conference in London and Edinburgh at the special rate of approximately \$275 per person. Since the regular first class fare is \$792 and economy rate \$450 this is a most attractive offer.

According to government regulations, the participation in this Charter Flight is available only to bonafide members of the ARGS and their immediate families. If you wish to participate and are not a member now send your application for membership and flight information to the secretary, Mr. Edgar L. Totten, 238 Sheridan Avenue, Ho-Ho-Kus, N. J. The total accommodations are limited to one full plane, so speed is essential in making reservations.

Nominations for the 1961 Hybridizing Award should be sent to Mrs. Florence Bellis, Barnhaven, Gresham, Oregon, chairman of the Award Committee. All information concerning results of the hybridizing should accompany pictures if available.

Details regarding a new perpetual trophy for hybridizing will appear in the April Quarterly.

### The Third International Rock Garden Plant Conference

This Conference has been arranged jointly by The Alpine Garden Society and The Scottish Rock Garden Club to be held in London and Edinburgh from Tuesday, April 18th to Friday, April 28th, 1961.

Any enquiries should be addressed either to C. B. Saunders, Husseys, Green Street Green, Farnborough, Kent or Dr. Henry Tod, Carnethy, Seafield, Roslin, Midlothian, Scotland.

In the show schedule of the Scottish Rock Garden Club Conference Show Section 3 it "invites members to exhibit, not for competition, Plants, Photographs, Sketches or Paintings of Plants, Gardens or Natural Habitats, which will be of interest to Members of the Club and to the Public." With the exception of the plants this may interest United States and Canadian members who cannot be there.

One of the special prizes awarded will be the *R. E. Cooper Bhutan Drinking Cup* for the best Primula — species, not hybrid — in the Show and will be held by the winner for one year.

### 1961 International Flower Show

The theme of the 1961 International Flower Show which is co-sponsored by the Horticultural Society of New York and the New York Florists' Club is "Gardens for Outdoor Living." It will be held in the New York Coliseum, March 4-12.

A record \$119,000 in prizes will be sought after by close to 4,000 individual, group and commercial exhibitors. Requests for entry blanks may be made to Mr. John F. Edwards, executive director, International Flower Show, Inc., 157 West 58th Street New York.

We hope that our eastern members will see that some primulas are in this show.

## A.P.S. Seed Exchange 1961

Our new list again contains both hardy and tender primulas and other genera. Starred (\*) items have been collected in their natural habitat. The names used are those furnished by the donor. Members may select twenty varieties for \$1.00 in postage stamps, check, or money order payable to the chairman. Requests will be filled starting February 15th.

### CONTRIBUTORS TO THE SEED EXCHANGE

A	Ford, Mrs. R. M., Seattle, Wash.	T	Hayward, Mrs. Harry, Scarborough, Me.
B	Baker, Mrs. Alfred, Ketchikan, Alaska	U	Monteith, Mahlon, Alderwood Manor, Wash.
C	Morse, Mrs. H. C., Bremerton, Wash.	V	Davlon, Mrs. Louise, Brookline, Mass.
D	Kartack, R. E., Baraboo, Wis.	W	Bronson, Burr B., Watertown, Mass.
E	Klaver, Mrs. Doretta, Quakertown, Pa.	X	Cooke, Mrs. N. V., Belfast, Ireland
F	Walker, John E., Portland, Oregon	Y	Waterson, Mrs. W. J., Anderson, Ind.
G	Gentner, Mrs. L. G., Medford, Ore.	Z	Wright, Mrs. W. T., East Boothbay, Me.
H	Jackson, Mrs. Frank, Salem, Ore.	AA	Ries, Victor H., Columbus, Ohio
I	Apple, Mrs. Melvin, Marblehead, Mass.	BB	Smith, Annabelle R., Lombard, Ill.
J	Piper, Dr. Raymond, Syracuse, N. Y.	CC	Forbes, H. Stewart, Vancouver, B.C.
K	Allen, Donald G., Barre, Vt.	DD	Ewers, Mrs. D. H., Longview, Wash.
L	Putnam, Robert C., Kirkland, Wash.	EE	Ruffier-Lanche, R., Grenoble, France
M	Crawford, Charles G., Toledo, Ohio	FF	Foster, H. Lincoln, Falls Village, Conn.
N	Jordan, Dr. Fred A., Cortland, N. Y.	GG	Marshall, Mrs. E. A., Portland, Ore.
O	Langfelder, Richard, Chappaqua, N. Y.	HH	Hoss, Elisabeth W., Portland, Ore.
P	Manton, Mrs. R. W., Durham, N. H.	JJ	Day, Mrs. F. M., Eagle Bay, B. C.
Q	Crewdson, Mrs. Cicely, Westmorland, England	KK	Luscher, Robert, Thedford, Ont.
R	McKay, Mrs. F. H., Port Orchard, Wash.	LL	Agee, Mrs. Orval, Milwaukie, Ore.
S	Balcom, Ralph, Seattle, Wash.	MM	Baylor, Mrs. Sidney, H., Johnson, Vt.
		NN	Baldwin, Elmer C., Syracuse, N. Y.
		OO	Goodwin, Allen L., Milford, Tasmania

### SEEDS FOR 1961 SEED EXCHANGE

1	Achillea taggetea	I	13	Allium pulchellum	V, JJ
2	Acidantha bicolor	NN	13	Allium rosenbachianum	JJ
3	Actaea alba	BB	15	Allium senescens	JJ
4	Actaea pachypoda rubrocarpa	NN	16	Allium tuberosum	NN
5	Actaea rubra	BB	17	Alstroemeria pink	O
6	Adenophora deep purple	Z	18	Althaea officinalis	W
7	Adlumia fungosa	N, BB	19	Alysum alpestre	K
8	Aethionema coridifolium	CC	20	Alyssum glabrum	CC
9	Allium	Z	21	Alyssum montanum	W
10	Allium albo-pilosum	R	22	Alyssum saxatile citrinum	T
11	Allium album	MM	23	Alyssum wulfenianum	I, T
12	Allium farreri	X	24	Amorpha canescens	NN

25 *Amorpha fruticosa* NN  
 26 *Amsonia tabernaemontana* M  
 27 *Anacyclus depressus* FF, O  
 28 *Androsace carnea* FF  
 29 *Androsace lactiflora salicifolia* FF  
 30 *Anemone alpina* KK  
 31 *Anemone alpina sulphurea* KK  
 32 *Anemone alpina white* O  
 33 *Anemone baldensis* X  
 34 *Anemone magellanica* FF  
 35 *Anemone mixed species* M  
 36 *Anemone St. bavo* X  
 37 *Anemone sylvestris* W, Y  
 38 *Anemone vernalis* KK  
 39 *Anemonopsis macrophylla* CC  
 40 *Antennaria dioica rosea* JJ  
 41 *Antennaria macrocephala* I  
 42 *Anthemis hausknechtii* W  
 43 *Anthericum lilago* NN  
 44 *Antirrhinum dwarf pink* NN  
 45 *Aquilegia akitensis* O  
 46 *Aquilegia akitensis kurilensis* EE  
 47 *Aquilegia caerulea* NN  
 48 *Aquilegia "crimson star"* EE  
 49 *Aquilegia ecalcarata* X, Y  
 50 *Aquilegia erecta* Y  
 51 *Aquilegia flabellata nana* T, Y  
 52 *Aquilegia glandulosa* Y, EE  
 53 *Aquilegia "hensol harebell"* Y  
 54 *Aquilegia "kahler's blue"* R  
 55 *Aquilegia short spurred* AA  
 56 *Arabis muralis* O  
 57 *Arabis pumila* P, FF  
 58 *Armeria "formosa hybrids"* W  
 59 *Armeria juniperifolia* FF  
 60 *Armeria juniperifolia bevan's variety* CC  
 61 *Armeria large flowered hybrids* M  
 62 *Armeria maritima* W  
 63 *Arnica montana* P  
 64 *Artemisia hausknechtii* K  
 65 *Arthropodium candidum* X  
 66 *Asclepias incarnata* NN  
 67 *Asclepias tuberosa* Z, O, FF, NN  
 68 *Aster alpinus* Z, FF  
 69 *Aster himalaicus* T  
 70 *Aster novi belgii deep pink* NN  
 71 *Aster pappei* X  
 72 *Aster purdormii* X  
 73 *Astilbe "gloria supreme"* BB  
 74 *Aubrieta selected* FF, NN  
 75 *Baptisia australis* O, NN  
 76 *Baptisia tinctoria* BB  
 77 *Begonia evansiana* AA  
 78 *Belamcanda chinensis* W, BB  
 79 *Caladium* NN  
 80 *Calceolaria biflora* EE, NN  
 81 *Calceolaria tenella* NN  
 82 *Campanula carpatica* T  
 83 *Campanula carpatica alba* W  
 84 *Campanula glomerata* Z  
 85 *Campanula persicifolia* FF  
 86 *Campanula portenschlagiana* FF  
 87 *Campanula sartori* FF  
 88 *Campanula saxifraga* EE  
 89 *Campanula species mixed* M  
 90 *Capsicum* NN  
 91 *Caragana arborescens* NN  
 92 *Cassia marilandica* NN  
 93 *Catenanche caerulea* O  
 94 *Caulophyllum thalictroides* NN  
 95 *Centaurea dealbata* I  
 96 *Centaurea jacea* NN  
 97 *Centaurea nigra radiata* NN  
 98 *Cerastium alpinum lanatum* T  
 99 *Cercis canadensis* NN  
 100 *Chaenomeles japonica* NN  
 101 *Cheiranthus cheiri* NN  
 102 *Chrysopsis falcata* P  
 103 *Chrysopsis mariana* FF  
 104 *Cimicifuga Racemosa* BB  
 105 *Cladrastis lutea* NN  
 106 *Clematis columbiana* JJ\*  
 107 *Clematis species* M  
 108 *Clematis verticillaris* FF  
 109 *Cleome spinosa "pink queen"* AA  
 110 *Clintonia borealis* NN  
 111 *Codonopsis clematidea* GG  
 112 *Codonopsis ovata* Q, X  
 113 *Codonopsis tuberosa* X  
 114 *Colchicum* Z  
 115 *Colutea media* NN  
 116 *Coptis trifolia* NN  
 117 *Coreopsis lanceolata fl. pl.* Z  
 118 *Cornus alternifolia* NN  
 119 *Cortusa matthioli* EE FF  
 120 *Corydalis lutea* Y  
 121 *Corydalis wilsonii* X  
 122 *Cyclamen europaeum* KK  
 123 *Cyclamen hardy mixed* X, LL  
 124 *Cyclamen neapolitanum pink* F  
 125 *Cyclamen neapolitanum white* F  
 126 *Cynoglossum nervosum* O  
 127 *Cytissus battandieri* CC  
 128 *Daphne alpinus* EE\*  
 129 *Daphne mezereum* NN  
 130 *Delphinium "pacific hybrid" blue* H, O

131 *Delphinium Tatsienense* O  
 132 *Dianthus allwoods alpine* Y  
 133 *Dianthus alpinus* FF  
 134 *Dianthus arvernensis* JJ  
 135 *Dianthus barbatus* NN  
 136 *Dianthus dark red* O  
 137 *Dianthus deltoides* X, CC  
 138 *Dianthus deltoides albus* W, JJ  
 139 *Dianthus deltoides "brilliant"* W  
 140 *Dianthus deltoides red* JJ  
 141 *Dianthus gratianopolitanus* K  
 142 *Dianthus microlepis* Q  
 143 *Dianthus neglectus* FF  
 144 *Dianthus plumarius* NN  
 145 *Dianthus plumarius loveliness* M  
 146 *Dianthus roysii* X  
 147 *Dianthus sternbergii* JJ  
 148 *Dicentra oregana* GG  
 149 *Dictamnus albus ruber* BB  
 150 *Digitalis mertonensis* V  
 151 *Digitalis "orange queen"* W  
 152 *Digitalis orientalis* NN  
 153 *Digitalis parviflora* EE\*  
 154 *Digitalis purpurea* H, AA, NN  
 155 *Digitalis species mixed* M  
 156 *Digitalis viridiflora* M  
 157 *Dodecatheon cusickii* K  
 158 *Dodecatheon hendersonii* C  
 159 *Dodecatheon meadia* O, BB  
 160 *Dodecatheon puberulum* GG  
 161 *Doronicum plantagineum* I  
 162 *Draba aizoon* FF  
 163 *Dryas octopetala* X, FF  
 164 *Eccremocarpus scaber* X  
 165 *Eccremocarpus carmineus* X  
 166 *Echinacea purpurea* NN  
 167 *Echinacea alba* I  
 168 *Echinops chantavicus* I  
 169 *Echinops ritro* NN  
 170 *Elscholtzia stauntonii* NN  
 171 *Eranthis hyemalis* GG  
 172 *Erigeron aurantiacus* I  
 173 *Erigeron glaucus roseus* X  
 174 *Erinus alpinus* X  
 175 *Eryngium giganteum* M  
 176 *Erysimum asperum* J, MM  
 177 *Erythronium* LL  
 178 *Erythronium grandiflorum* GG\*  
 179 *Erythronium montanum* GG\*  
 180 *Erythronium oregonum* CC, LL  
 181 *Erythronium revolutum* CC, LL  
 182 *Euonymus yedoensis* NN  
 183 *Euphorbia lathyrus* NN  
 184 *Euphorbia species* M  
 185 *Felicia bergeriana* GG  
 186 *Filipendula hexapetala fl. pl.* BB  
 187 *Filipendula palmata nana* BB  
 188 *Fritillaria camschatcensis* L  
 189 *Fritillaria meleagris* Y  
 190 *Fritillaria meleagris alba* P, X  
 191 *Fritillaria meleagris purple* X  
 192 *Fritillaria pudica* K  
 193 *Galium verum* BB  
 194 *Gaultheria procumbens* NN  
 195 *Gentiana acaulis* KK  
 196 *Gentiana andrewsii* O, W  
 197 *Gentiana asclepiadea* M, T, KK  
 198 *Gentiana crinita* O, FF  
 199 *Gentiana cruciata* M  
 200 *Gentiana fetisowii* M  
 201 *Gentiana hascombensis* X  
 202 *Gentiana linearis* T  
 203 *Gentiana lutea* M  
 204 *Gentiana olivieri* M  
 205 *Gentiana pannonica* M  
 206 *Gentiana septemfida* Z  
 207 *Gentiana tibetica* M  
 208 *Geranium armenium* NN  
 209 *Geranium endressii* NN  
 210 *Geranium farreri* N  
 211 *Geranium lancastricense* NN  
 212 *Geranium pratense blue* NN  
 213 *Geranium sanguineum album* BB  
 214 *Geranium sanguineum dwarf* NN  
 215 *Geum chiloensis "Mrs. Bradshaw"* O  
 216 *Geum montanum* I  
 217 *Globularia bellidifolia* X  
 218 *Globularia vulgaris* K, P, X  
 219 *Helianthemum hardy select* FF  
 220 *Hemerocallis hybrids* MM  
 221 *Hesperis dwarf white* Y  
 222 *Hesperis matronalis* J  
 223 *Heuchera rubescens* B  
 224 *Hibiscus trionum* NN  
 225 *Hieraceum bombycinum* I  
 226 *Hieraceum villosum* NN  
 227 *Hieraceum welwitschii* X  
 228 *Hordeum jubatum* X  
 229 *Hosta caerulea* AA  
 230 *Hosta plantaginea* O  
 231 *Hutchinsia alpina* FF  
 232 *Hutchinsia brevicaulis* NN  
 233 *Hyacinthus "fairy"* Y  
 234 *Hypericum pyramidatum* NN  
 235 *Iberis rose-carmine* O

236 Iberis sempervirens T  
 237 Ilex verticillata NN  
 238 Incarvillea grandiflora CC  
 239 Iris Chrysographes X  
 240 Iris dichotoma W  
 241 Iris douglasiana GG  
 242 Iris flavissima X  
 243 Iris Germanica fall blooming NN  
 244 Iris innominata HH  
 245 Iris innominata bracteata mixed G\*  
 247 Iris pseudocorus U  
 248 Iris sibirica M, NN  
 249 Iris sibirica "snow queen" NN  
 250 Iris species mixed M  
 251 Iris tectorum EE, NN  
 252 Jasione humilis W  
 253 Jeffersonia dubia NN  
 254 Juniperus virginiana NN  
 255 Knautia arvensis NN  
 256 Knautia drymeia NN  
 257 Laburnum vulgare NN  
 258 Laburnum watereri NN  
 259 Lantana NN  
 260 Lapeirousia cruenta X, NN  
 261 Lathyrus pannonicus X  
 262 Lathyrus purpureus X  
 263 Lavandula officinalis "hidcote blue" J, O  
 264 Leontopodium alpinum KK  
 265 Leontopodium sibiricum X  
 266 Leucogenes grandiceps X  
 267 Lewisia redivia K, HH\*  
 268 Liatris callilepis W  
 269 Liatris scariosa alba BB  
 270 Lilium backhousei NN  
 271 Lilium centifolium NN  
 272 Lilium henryi EE  
 273 Lilium regale O, NN  
 274 Lilium x aurelianense EE  
 275 Linaria alpina T  
 276 Linaria purpurea EE  
 277 Linaria species O  
 278 Linum perenne album I  
 279 Lobelia cardinalis M, O, AA, NN  
 280 Lobelia siphilitica DD  
 281 Lopezia coronata NN  
 282 Lunaria annua J  
 283 Lupinus polyphyllus NN  
 284 Lychnis alpina W  
 285 Lychnis chalcedonica alba W, NN  
 286 Lychnis coronaria NN  
 287 Lychnis coronaria alba W  
 288 Lychnis dioica AA  
 289 Lychnis viscaria K  
 290 Lychnis x haageana EE  
 291 Mahonia aquifolium NN  
 292 Malva moschata K  
 293 Malva moschata alba NN  
 294 Malva moschata rosea NN  
 295 Marrubium vulgare NN  
 296 Meconopsis betonicifolia X  
 297 Meconopsis cambrica FF  
 298 Meconopsis grandis X  
 299 Meconopsis SS&W 4680 red Q  
 300 Meconopsis SS&W 1943 pink  
 301 Meconopsis villosa X, Y  
 302 Medeola virginiana W  
 303 Melandrum rubra O  
 304 Mimulus cardinalis HH  
 305 Mirabilis jalapa NN  
 306 Mitchellia repens NN  
 307 Muscari comosum NN  
 308 Myrica pensylvanicum NN  
 309 Oenothera mexicana T  
 310 Oenothera triloba BB  
 311 Onosma stellulatum O  
 312 Orchis maculata X  
 313 Osmunda regalis O  
 314 Paeonia garden, named NN  
 315 Paeonia species NN  
 316 Papaver alpinum FF, CC, NN  
 317 Papaver somniferum dbl pink NN  
 318 Papaver "white fringe" CC  
 319 Papaver yellow CC  
 320 Parnassia early species FF\*  
 321 Paronychia virginica Y  
 322 Pelargonium zonale NN  
 323 Penstemon albertinus CC  
 324 Penstemon albinus CC  
 325 Penstemon diffusus NN  
 326 Penstemon digitalis W  
 327 Penstemon ovatus CC  
 328 Penstemon procerus L  
 329 Phlox paniculata NN  
 330 Phyteuma orbiculare EE\*  
 331 Phytolacca americana NN  
 332 Pinus mugo NN  
 333 Platycodon grandiflorum O, W, NN  
 334 Podophyllum peltatum NN  
 335 Polemonium haydenii FF  
 336 Polygonatum commutatum NN  
 337 Potentilla argrophylla insignis M  
 338 Potentilla nepalensis Willmottiae T, W  
 339 Potentilla rupestris K  
 340 Potentilla SS&W 7768 EE\*

341 Potentilla warrensis I, K, O  
 342 Primula acaulis NN  
 343 Primula acaulis "american beauty" MM  
 344 Primula acaulis pastel MM  
 345 Primula acaulis yellow MM  
 346 Primula acaulis "gold" MM  
 347 Primula acaulis yellow semi-double MM  
 348 Primula alpicola B  
 349 Primula auricula FF, MM  
 350 Primula auricula bauhini EE\*  
 351 Primula auricula "black prince" MM  
 352 Primula auricula blue MM  
 353 Primula auricula delft blue MM  
 354 Primula auricula lavender MM  
 355 Primula auricula pink MM  
 356 Primula auricula rose M  
 357 Primula auricula violet, white eye MM  
 358 Primula auricula yellow MM  
 359 Primula bulleyana FF  
 360 Primula calderiana NN  
 361 Primula calycina NN  
 362 Primula candelabra NN  
 363 Primula candelabra deep red J  
 364 Primula capitata NN  
 365 Primula chionantha EE  
 366 Primula clusiana EE  
 367 Primula concholoba NN  
 368 Primula cottia EE  
 369 Primula denticulata deep blue MM  
 370 Primula denticulata purple O  
 371 Primula denticulata white O  
 372 Primula edgeworthii X  
 373 Primula elatior X  
 374 Primula farinosa EE\*, KK  
 375 Primula forrestii Q  
 376 Primula frondosa FF, GG, LL  
 377 Primula gemmifera zambalensis EE  
 378 Primula geraniifolia FF  
 379 Primula Grandis EE  
 380 Primula Halleri FF  
 831 Primula hyacinthina NN  
 382 Primula Inshriach N  
 383 Primula involucrata NN  
 384 Primula japonica M, Z, HH  
 385 Primula japonica "glowing embers" W  
 386 Primula japonica pink O, MM  
 387 Primula japonica red E, S  
 388 Primula juliae x wanda MM  
 389 Primula kewensis NN  
 390 Primula kingii NN  
 391 Primula laurentiana FF  
 392 Primula luteola EE  
 393 Primula macrophylla NN  
 394 Primula marginata T, EE\*, LL  
 395 Primula muscarioides NN  
 396 Primula obliqua NN  
 397 Primula pedemontana EE\*  
 398 Primula polyanthus FF, MM  
 399 Primula polyanthus "gold laced" NN  
 400 Primula polyanthus H.P. H  
 401 Primula polyanthus Tecumseh NN  
 402 Primula polyanthus white NN  
 403 Primula polyneura FF  
 404 Primula prolifera A  
 405 Primula pulverulenta N, FF  
 406 Primula pulverulenta "Bartley" Q, X  
 407 Primula pulverulenta pink X  
 408 Primula rosea grandiflora B  
 409 Primula rosea grandiflora "Visser de Geer" KK  
 410 Primula rotundifolia NN  
 411 Primula rubra EE  
 412 Primula saxatilis FF, MM  
 413 Primula secundiflora B  
 414 Primula sibirica FF  
 415 Primula sieboldii D, FF, NN  
 416 Primula sieboldii select FF  
 417 Primula sikkimensis Zimm #1383 EE\*  
 418 Primula sikkimensis Zimm #1523 EE\*  
 419 Primula vantana X  
 420 Primula veris hybrids K, M, W  
 421 Primula vialis K  
 422 Primula viscosa NN  
 423 Primula wilsonii NN  
 424 Primula x arendsii multiflora KK  
 425 Primula x asthore NN  
 426 Ptelea trifoliata NN  
 427 Pulsatilla camla O  
 428 Pulsatilla "Drake's variety" P  
 429 Pulsatilla "Mrs. Vanderelst" X  
 430 Pulsatilla rubra EE\*, CC, JJ  
 431 Pulsatilla vernalis P  
 432 Pulsatilla vulgaris CC, X, EE\*  
 433 Pulsatilla vulgaris pink X  
 434 Pulsatilla "white swan" P  
 435 Puschkinia BB  
 436 Ranunculus gouani X  
 437 Ranunculus gramineus X

- 438 Ranunculus species M
- 439 Ranunculus spicata X
- 440 Rhododendron arborescens FF
- 441 Rhododendron calendulaceum FF
- 442 Rhododendron x atlanticum FF
- 443 Rhododendron roseum FF
- 444 Rhododendron canadense FF
- 445 Rhododendron carolinianum FF
- 446 Rhododendron catawbiense FF
- 447 Rhododendron x fortunei FF
- 448 Rhododendron glass x fortunei FF
- 449 Rhododendron dauricum FF
- 450 Rhododendron "dexter hybrids"  
cold selected FF
- 451 Rhododendron fargesii FF
- 452 Rhododendron gandavense FF
- 453 Rhododendron japonicum FF
- 454 Rhododendron keiskei FF
- 455 Rhododendron maximum FF
- 456 Rhododendron x fortunei FF
- 457 Rhododendron mucronulatum FF
- 458 Rhododendron obtusum kaempferi  
FF
- 459 Rhododendron obtusum arnoldianum  
FF
- 460 Rhododendron reticulatum FF
- 461 Rhododendron roseum FF
- 462 Rhododendron schlippenbachii FF
- 463 Rhododendron vaseyi FF
- 464 Rhododendron yedoense poukhanense  
FF
- 465 Rhodotypos Tetrapetala NN
- 466 Rudbeckia tetra gloriosa Z, NN
- 467 Salvia argentea JJ
- 468 Salvia pratensis blue NN
- 469 Salvia pratensis pink NN, BB
- 470 Sanguinaria canadensis BB
- 471 Saponaria alpina JJ
- 472 Saponaria ocyroides FF
- 473 Saxifraga decipiens purpurmantel K
- 474 Saxifraga encrusted mixed T
- 475 Saxifraga species M
- 476 Scabiosa alpina JJ
- 477 Scabiosa dwarf form I
- 478 Scabiosa lucida JJ
- 479 Scabiosa scabra O
- 480 Scabiosa species M
- 481 Schisandra chinensis NN
- 482 Schivereckia podolica T
- 483 Scilla hispanica NN
- 484 Scilla sibirica NN
- 485 Sedum species M
- 486 Sempervivum species M
- 487 Senecio adonidifolius EE\*
- 488 Sidalcea malvaeflora BB
- 489 Silene alpestris T
- 490 Silene compacta NN
- 491 Silene pendula bonnetii O
- 492 Silene saxifraga X
- 493 Silene schafta X
- 494 Sisyrinchium littorale B\*
- 495 Smilacina amplexicaulis U
- 496 Smilacina racemosa NN
- 497 Solidaster luteus K
- 498 Sophora viciifolia EE
- 499 Spartium junceum EE\*
- 500 Specularia speculum-veneris M
- 501 Stylophorum diphyllum BB
- 502 Synthyris reniformis HH
- 503 Taxus canadensis NN
- 504 Taxus capitata NN
- 505 Taxus cuspidata NN
- 506 Thalictrum H
- 507 Thalictrum aquilegifolium EE
- 508 Thalictrum glaucum BB
- 509 Thalictrum kiusianum X
- 510 Thermopsis W
- 511 Thermopsis montana M
- 512 Thymophylla tenuiloba O
- 513 Tiarella trifoliata B\*
- 514 Townsendia exscapa W
- 515 Tricyrtis stolonifera O
- 516 Trientalis boreale NN
- 517 Trillium erectum NN
- 518 Trillium undulatum NN
- 519 Trollius dschungaricus EE
- 520 Trollius europaeus NN
- 521 Trollius pumilus T
- 522 Tulipa dasystemon Y
- 523 Tulipa sprengeri X
- 554 Tulipa sylvestris Y
- 525 Tulipa tarda O
- 526 Uvularia perfoliata BB
- 527 Verbascum blattaria alba NN
- 528 Verbascum blattaria yellow NN
- 529 Vernonia noveboracensis NN
- 530 Veronica holyphylla BB
- 531 Veronica incana W
- 532 Vesicaria reticulata X
- 533 Viburnum fragrans rosea NN
- 534 Viburnum lentago NN
- 535 Viola calcarata FF
- 536 Viola cuculata "freckles" N
- 537 Viola cuculata rubra NN
- 538 viola curtisii alba X
- 539 Viola glabella B\*
- 540 Viola priceana NN

- 541 Primula polyanthus REGAL SUPREME H.P. pink OO
- 542 Primula polyanthus H.P. red OO
- 543 Primula polyanthus H.P. Tango OO
- 544 Primula polyanthus H.P. white OO

# ORDER BLANK

20 packets \$1.00

Please remit in stamps, currency, check or postal order payable to  
Elmer C. Baldwin, 400 Tecumseh Road, Syracuse 10, N.Y.

FIRST CHOICE

SECOND CHOICE


NAME .....

AMT. ENCLD. \$.....

ADDRESS .....

REMARKS .....

A.P.S. Seed Exchange 1961

USE ORDER BLANK  
ON REVERSE SIDE  
FOR YOUR SEED ORDERS

## My Garden

*The unreasonable is feasible, but the impossible takes time.*

Laura Jezik, Seattle, Washington

Mine is an alpine garden built at a great expense of effort in a situation another gardener might believe impossible. The developer of this neighborhood, thinking only of the view, I suppose, bulldozed and regraded the land, giving one lot all of the trees and shrubs of the area, another all of the deep humusy clay topsoil, and us as much of the yellow clay subsoil as he could pile onto our pocket of deep muck. This clay topdressing varies in depth from three feet in the north garden to as much as nine feet in the south.

Although this is not the infinitely impossible blue clay which it could be, still it is impossible enough that neither grass nor trees, flowers nor shrubs can be grown on it.

Its only endemics were quack grass and several similarly rhizoma-

tous pseudo-quack grasses, plantains, docks, some tough clovers and a few similar weeds.

What I wanted was a rock garden, a woodland, what I call a species garden: a garden of those plants which have the quality of "alpinity." Alpines are jaunty, they are perky, independent, cooperative and intractable by turns. Their philosophy is "Life is a joke, so let's be merry." The umbels of the *Androsace* tribe are gaiety, the blossoms of *Gentianae* are optimistic to the point of boastfulness. *Schizocodons* and *Shortias* have a bashful but confident beauty, *Menziesia* are Japanese aristocrats. *Dianthus* are willing mats until the spirit moves them to move on. *Kabschias* are unintrusive brightness.

*Cheilanthes Gracillema*, the Lace Fern, grows in the full hot sun of the

*Plants in bog: P. frondosa (top left above large rock), Kalmia polifolia microphylla (lower left with label), Kalmia polifolia (center), Ledum Groenlandicum (upper rt. corner). Living sphagnum all over with Dodecatheon Jeffreyi near Ledum.*



arid zones with its roots in the small crevices of rocks which give no indication of a moisture supply behind them. Everyone knows, and certainly the Lace Fern must, that ferns don't grow in places like this, so it makes the most of it by fattening its tiny pinnae to the point of succulence, covering their undersides with rusty tomentum, and making the rock beautiful.

*Lewisi*s, in particular *rediviva* and *brachycalyx* are improbable. How could those flowers be a part of a plant like that and grow in so hot and dry a place?

The species tulips, those graceful rhizomatous (or is it underground stoloniferous?) things, invariably know better than I where they would be most beautiful, because they send out their bulblets in strange directions and seldom bloom where I planted them. My favorite, *Sylvestris*, made itself a home deep in the matty roots of an *Erica*, *Gilearis* Dawn where it seeds and increases, but would smother if it was reasonable.

The alpine plant delights us today and is gone tomorrow or here for keeps, and who is to say which or why or how. When the mood is upon them to die, they die. Seldom do they linger and let us try to fuss them back to health. Dignity and gaiety are theirs; patience and humility and eventually a similar dignity must be ours.

I think the primary requirement of any and all of these plants, (aside from the platitudinous sharp drainage) is that their roots be given a soil which is deep and of a texture they like. Lime or no lime is much talked about, but I think it is only of importance in gardens whose native soil is calcareous. For the rest of us, it is proper soil texture we must provide.

Some alpine like a gritty humusy compost, some a needly sandy one. Some like a springy, retentive peat, others want soils varying from gravelly scree to an almost clay. My clay would never do.

The first move I made in starting to build my garden was a mistake, and still is here to remind me of my ignorance. I tried to improve the native clay. First I mixed it with equal parts of sand and peat. No results. It was still clay. I tried rotted sawdust. Still clay. I tried a great number of humus materials. Still clay. I have come to believe that in any mixture of soil in which there is as much as five per-cent clay, the clay will dominate the cross: witness a pile of pure sand which became encrusted and solidified in part by deposits of wind blown road dust before and during our neighborhood paving job.

Seeing that this way lay madness, I hit upon what I think is the only way of dealing with clay. I dug it out, by cubic yards and truckloads, and had it hauled away. In most places my excavations were three feet deep, in others, two. After an existing drain tile system was adjusted so that it would carry away surplus water from the garden, I filled all excavations with specific soil mixes. (Without this drainage system my excavating would have produced a sort of clay lined bathtub filled with stagnant water charged soils and fatal to just about every plant.)

Later on, in my woods, where the general good quality of the existing soil permitted it, I eliminated the exhaustive digging and removing and instead piled my woodland soil mixes in hills and valleys above the original grade.

By this process I have provided myself with a limestone scree, a

rather damp and rich one for *Androraces*, *Dianthus*, *Saxafrages*, *Gentiana Acaulis* which blooms for me here, (I throw that in for what it is worth) and many other limey scree folk. I have also a neutral scree, a sphagnum bog, in which, incidently, bog primula looked distinctly out of place and were removed to my wet woodland area. There is also a dry woodland soil bed, a peat bed for heathers, and what might be termed arid to desert scree for the prairie flowers. If I had kept my clay and continued to work with it, I think I would never have gotten it to the state where it could provide such a divers collection of planting areas.

An unexpected result of all my changes is that the weeds of our neighborhood do not like any of my foreign soils. Some of the invasive grasses encroach a bit around the

edges at times, but nearly all other weeding I do is the removal of the seedlings of my alpine. Seeds of the plantains, docks, clovers, vetches, etc., do not germinate in scree, peat, leaf-mold, or sphagnum bog.

My ideal would be to finish this story with an account of the saxatile primula I grow in my cooler screes and crevices. Would that this tale could cover, aside from *P. Marginata* and some *Auricula* species, such things as *Minima*, *Tyrolensis*, *spectabilis*, etc. ad infinity, but the sad tale is these plants are not readily available to us. They can be had from seed by those gardeners with fewer pre-school children and greener thumbs than I have, but to get nice sized plants I must either order them from out of the country or depend on exchanges with friends.

Plants from left to right are *Raoulia Australis*, *Crocus zonatus*, *Veronica saturoioides* (at top on rock.)



## Twixt Anther and Pistil

*Patience in hybridizing brings the author a long sought pink hose-in-hose.*

WESLEY BOTTOMS, Tacoma, Washington

I doubt that there is anything more exciting than the world of the hybridist, which lies "twixt anther and pistil" of the parent flowers he has chosen in the hope of realizing his dream of a new form, a better fragrance, or a clearer color. This field is so unlimited for joyous activity that future generations of hybridizers will never run out of dreams that need work to accomplish. If it's thrills you are looking for, and you like flowers, try your hand at making some of your own!

If this article wanders a bit, please forgive me. I am no writer, but I love my garden, and perhaps am unseemly proud of my results, and haven't sense enough to hide it from those who think I should be more modest. I'll

have to admit that I feel a bigger man when I hold a beautiful sturdy plant in my hand — the like of which has never before seen the light of day. I know that a new hybrid is a result of a kind of working prayer. There is no place in the world like a garden, especially in the early morning, to make a man want to pray and tell of his gratitude.

These last years I have given a great deal of time and thought to the development of primroses. I owe a great deal to the hybridizers who have gone before me, especially for their work in achieving a clear pink in polyanthus. However, I have never found any seeds which give a high percentage of clear "baby ribbon pink"

*Wesley Bottoms has won many awards for his beautifully grown primroses. A pink hose-in-hose polyanthus, a result of hybridizing by the author, is shown below.*

*Photographed by Cyrus Happy*



polyanthus or acaulis. Last year I got a good percentage of clear pink hose-in-hose, many of which are more like a "cup and saucer" in that the second corolla is a little larger than the first. You can imagine how delighted I was, a few years ago, when my cups and saucers first appeared.

I have been taught that "the Earth is the Lord's" and my experience has been richer because of the feeling that I am only the *custodian* of my plot of ground, and that I want to leave that ground in as fine a condition as I can. This is my simple duty, as I see it.

Because of my prime interest in seeds, I am not interested in quick flashy growth, but in native hardiness of the strain. Thus I "feed" my plants, not just "stimulate" them. I have found a soil builder and conditioner which provides whole bone (which has been rendered available by steaming and emulsifying), and which provides the needed humus and other food elements as well — and is even less expensive, in that it is concentrated and saves so much time. Once applied, it lasts for the season and conditions the ground for years. Since I must give away so much soil every year, with the plants I sell and give to the plant sales, I have to build up a fresh supply for each new crop.

Before I plant out my seedlings I mix the top 4" of soil with whale-impregnated peat moss, with enough drainage material such as 1/4" crushed rock, to give the "crumb structure" I want. Vilate, my wife and partner, says that this prepared soil is "just like pie crust before water is added, only a rich dark brown color." It should be sticky enough to hold together in the hand but should crumble when dropped. No clods can form in ground prepared like this and yet air can get to the roots.

I water my primroses carefully in

the summer because hardiness depends on keeping the plants moist enough, especially during August and September, so that their cells do not shrink away from the center of the carrot, as in a woody turnip. If that happens, the winter rains collect in the cavity, and when that water freezes, the root is blasted by the expansion. This accounts for much of what is called "crown rot" in the spring. I read about this in the *Quarterly* and have since proven it for myself.

I think that Vilate and I are interested in every plant that grows, and every individual who grows them. We do not believe all we read in the advertisements, but try to "think for ourselves" about each claim made. "Am I being sold only because they need a customer, or because the product will really help build the health, stamina and beauty of my plants? For instance, we have found that rhododendrons and other "acid loving" plants have longer blooming periods and heavier textured petals when they can get a gentle type of calcium such as the calcium carbonate in marine marl — if that calcium is mixed with very acid materials such as animal proteins and acid sphagnum peat. Plants need their proteins too, just like human beings. Deficiencies do not always show up in one generation, but the plant breeder knows that you can breed hardiness in a weaker strain, just by providing animal and vegetable matter to the soil in the proper balance, always remembering to provide *enough drainage*.

I do hope that some of you will come to visit us here in Tacoma to compare notes. The best times are in the spring and summer. I'd like to see your primroses and show you mine. One perfect corolla can stir Vilate and me to a great deal of bragging on Mother Nature — whether its on your plant or mine.



## Life Membership Presented To Roland E. Cooper, F.R.S.G.S., F.R.S.E.

*For outstanding contributions as a plant hunter and writer Mr. Cooper has been given a Life Membership in the American Primrose Society.*

ANNE SIEPMAN, *President A.P.S.*

On June the 16th in the year 1890 there was born to Harry Conrad Cooper, auctioneer of Kingston-on-Thames, Surrey, England, and his wife Jessie, a son christened Roland Edgar. Before his fourth birthday this boy had lost both parents. Guardians saw that he was fed and educated until he was sixteen when through a change of guardian he was taken to India where he lived in the Botanic Garden Calcutta.

Here he first became acquainted with plants and their ways but these were tropical. In 1910 he was brought home and took the Course of Instruction at the Edinburgh Botanic Garden with a view to becoming a fruit farmer in British Columbia. Before the course finished the Keeper of the Garden, Isaac Bayley Balfour, approached him with the prospect of exploring for plants for a Cheshire cotton broker A. K. Bulley, who had already launched George Forrest and Kingdon Ward as plant collectors.

Professor Balfour was a real inspiration to his young men, encouraging them to seek and make new observations in their plants. In propagation for instance to experiment and interpret the earliest phenomena in plant growth. His assistant in this propagation was a former 'young man' named L. B. Stewart who had control of all the glass houses. He too in his way (with a caustic and rough tongue) was equally inspiring. He possessed the greenest of thumbs and the keenest of insight where plants were con-

cerned. He introduced one of his young men to a conservatory of plants by suggesting that he went round his conservatory every morning saying Good Morning to every plant; for as he said, "when you meet someone and say Good Morning to them you look at them and can tell at once how they feel." Another point—since plants grow roots first, anything vital that goes wrong with them must be through the roots. "Don't fold your hands and watch them die, dig them up carefully, wash the roots clear of soil, prune off any rotten bits and dust them thoroughly with sand. Then replant and usually all will be well."

So, R.E.C. as he had been known (with names like his what else could one do?) went plant hunting in the Himalayas with results that you know.

His finest discovery was the sole Asiatic and European representative of the giant *Lobelias* of the Mountains of the Moon on the Equator in Africa. *Lobelia nubigena*.

He served in the war with the Gurkhas and R.A.F. After the war Kew got him appointed as Superintendent of the Botanic Garden in Maymyo, Shan Hills Burma. The Rangoon Development Trust secured his services to move a garden of about twelve acres occupied by the Agri-Horticultural Society of Burma, whose revenue was derived from its activities, from one site to another a few miles away, maintain the average revenue all the time and leaving them in a position to



*Roland Cooper at the actual summit of the Bara Larcha Pass crossing the Himalayas from the little hill state of Lahaul into Ladakh. The pass has an elevation of 16,600 feet and is swept by the bitterest winds from the open steppes of Tibet. A small stone shelter there provides some protection from the bitter weather.*

maintain it for the following two years. A fascinating job to make a garden with its views based on the gleaming golden spires of the Shwe Dagon Pagoda. The major part of the job was done in two rainy seasons and then R.E.C. became its Superintendent for five years. Busy years and happy years for the Burmese love flowers even more than we do. When he left to take his son aged four out of the heat to an English climate for an English education every one of his hundred odd garden staff came to give the final salaam, a lot of them touched his feet in gratitude, culminating in the presentation of a silver rose bowl embossed with typical scenes of Burmese village life.

Back to Britain where after a spell of hunting for work (tropical experience is of little use to any English horticultural establishment) he was recruited to the staff of the Royal Botanic Garden Edinburgh as assistant to the Curator. After four years

through gaps made by death and retirement he became Curator from 1934 to 1950. In this came the second world war in which his son was killed whilst serving in the R.A.F. before he was twenty years of age.

During his service at the Edinburgh 'Botanics' that institute had to handle the prodigious amount of material collected by George Forrest on the last expedition before he died in the field. Forrest had a keen interest in Primulas and practically every known Chinese species had been collected. This laid the foundation of seed studies from which the then Professor tended to stay aloof.

In 1950 Roland Cooper retired at the age of sixty to a town in the south of England. During his spell in Edinburgh the Royal Scottish Geographical Society elected him a 'diploma'd Fellow' for his out of the way exploring. Later he was elected to the honor of a Vice President.

He was a founder member of the

Scottish Rock Garden Club and of this was later elected an Honorary Vice-president. He was also in at the beginning of the Scottish Folk-lore Society now, alas, defunct.

But the highlight of his work in Scotland was to discover before any of the Garden Staff, including his undiscerning Professor who had been looking at *Primula Parryi* in flower for many years before he arrived, that it was unique in that its leaves folded inwards and so took it out of the Nivales in which it was included and into the Involutae and the Auriculas. It is doubtful if that Professor ever forgave him for it.

In retirement, far away from Edinburgh and its primulas, life had to find a fresh incentive. Back to an old love of trees (instilled by Balfour) and the sycamore tree, *Acer Pseudoplatanus*, which is a foreign tree to Britain but of which there were specimens standing by ancient monuments which were once tenanted castles and manor houses. The hunt here was to try and find out WHY the tree had been brought into Britain for so general a use in every county, WHO brought it from its home in Central Europe so many hundreds of years before, HOW it was brought by land and sea in those benighted times and yet lived and thrived, and WHEN. Only after ten years has a clue been found. When quite a lad, a phrase of Rudyard Kipling had stuck in his memory. It runs thus:

I keep six honest, serving men.

They taught me all I know.  
Their names are WHAT and WHY  
and WHEN and HOW and  
WHERE and WHO.

There is no doubt that those serving men served him well for while in Edinburgh he was elected a Fellow of the Royal Society of Edinburgh and that is compliment enough.

## Seed Exchange Notes

As the seeds are mailed out this season one packet of seed of each order will be packaged in our "Home Made" envelopes which require no paste or glue, cannot leak at the corners, and are quite simple to make. If interested use the packet as a pattern. The packet used will be one fourth of a business size letter sheet. A full sheet may be used in the same manner for a larger envelope.

Among the primula companions are many wildings, as beautiful to behold as they are impossible (for many of us) to grow. Those who are fortunate enough to have them growing in their original habitat have little to be concerned over. To grow them from seed is quite another thing. Our experience may surely not reflect that of the average, yet we have had such a phenomenal lack of success that we offer this year in place of seed, for those who have not read it; for those interested in the family, and more particularly, the genus *Cypripedium*, the title of a little book, useful in a cultural sense and written in a strangely appealing style: *ORCHIDS FOR EVERYBODY*: Wickham; McBride Co. Inc.

Elmer C. Baldwin,  
Seed Exchange Chm.

### IN MEMORIAM

Sadly we announce the death of Herbert F. Clarke of Clackamas, Oregon and extend our sympathy to his wife Marguerite. He gave much time to hybridizing primulas and the results of his work will go on in our gardens and memories.

Because we have been guilty of unsound gardening practice in growing the same crop on the same piece of land unremittingly for many years, we have tried to replace that which is taken each year from the soil. Heretofore we have used what was considered a good organic fertilizer, the base being the usual sheep guano which left little, if anything, but a heritage of weeds.

Last year, for the first time, we used Miller's Organic upon the recommendation of our garden supply house. The difference in the health and vigor of the plants spoke well for the building of the soil. Before using this product, the analysis was carefully considered and it seemed cost had not been allowed to stand in the way of making a superior product that could still compete favorably with products formulated less to the soil's needs.

The analysis is a basic 5-3-2 (Nitrogen 5, Phosphorous 3, Potash 2), but it is the additives and the base which make the organic vegetable growers especially happy. Instead of sheep guano, the base is olive pulp, or olive pomace (the residue processed on the spot), which is rich in iron and weed-free. Added to this is bonemeal, tankage, potash, dolomite, calcium, magnesium, iron, ammonium sulphate, rock phosphates and—trace minerals. It is a balanced diet for any man's soil, plants and table whether the object is food or flowers.

Florence Bellis  
Barnhaven  
Gresham, Oregon

## PAMPER YOUR PRIMROSES



GROW THEM in soil protected from insects and disease with  
*Miller's* SOILDUSTO

FEED THEM all necessary food including Iron Chelates with  
*Miller's* BOOSTER POWDER

PROTECT THEM from slugs with  
*Miller's* SLUGDUSTO

At Your Dealer's

MILLER PRODUCTS COMPANY  
7737 N.E. Killingsworth  
Portland 18, Oregon



## Rotted Alder For Starting Primula Seeds

If anyone else has tried this or uses it this winter please write the editor regarding your success. The writer agreed to write up in detail just exactly what steps to follow.

J. E. MASON, Seattle, Washington

Several years ago I cut down a good many alder trees on some property that I own in the country, intending to haul the wood into town to be burned in the fireplace. The wood, however, was never hauled to town and just stayed where it was piled and rotted.

In the spring of this year 1960 I brought some of the rotten alder to town and it was not used until September. On the 12th of September I sifted some of the rotted alder through a fly screen and using the brick method of germinating seed, I placed the screened alder one half inch deep on a brick and placed the brick in water so that the water was one half inch deep with the brick in it.

I left the brick in the water several days in order to see how damp the rotted alder would get. As it appeared to maintain the proper amount of moisture I then scattered polyanthus prim-

rose seed, which I had gathered in the garden in July, on the alder seed base.

I then placed a little of the screened alder in a pepper shaker (the holes are too big in a salt shaker) and barely covered the seed with the alder mix. I placed a sheet of glass an inch above the seed and placed a paper on the glass. The brick was then placed in a temperature of 60 degrees.

Three days after planting the seeds began to show white spots and six days from the planting date I had the best seed germination I have ever had.

On the 24th of October the seedlings are ready to be transplanted. They are wonderfully healthy and I am stuck with what to do with them during the coming winter months.

### Another Successful Seeding Method

*This writer gets 100% germination without sterilizing her seed mix.*

BETH TAIT, Bothell, Washington

I am fortunate in having large quantities of leafmold in my woods and have found that it makes an excellent base for the following seeding medium:

- 3 gallons leafmold
- 1 4" pot sand
- 1 gallon loam
- 1 small handful chunk charcoal
- 1 Tablespoon aldrin

The aldrin was added to the mix after a sad experience of small black worms in the leafmold eating some of my most valuable seedlings. By digging down three feet I can get leafmold that

does not need sifting. My loam is of such texture that it is not necessary to sift it either.

I do not sterilize this mix. I prefer planting in a flat rather than on bricks so that I can leave the seedlings undisturbed until they have four or five leaves.

My seeds are frozen for one week and taken out to thaw for eight hours. For the next three days I alternate freezing at night and thawing during the day. The seeds are planted on top of the seeding mix and covered first with a wet paper towel and over that a pane of glass. When the seedlings begin to appear the paper and glass are removed and coarse rabbit wire placed over the flat to prevent damage from birds, etc.

I raise all my seedlings in a cold greenhouse. The only heat provided, and it is sufficient to keep them from freezing, is a 250 watt G. E. reflector infrared heat bulb (such as used to keep baby calves and lambs warm). This is kept on night and day three to four feet above the seedlings. It is never turned off because doing so in very cold weather may break the bulb. I have used the same bulb for three years without replacement. I have never had trouble with either damp-off or mold.

*Editor's note: It is the general practice to sterilize soil before planting primula seed. The above articles are published because both writers report 100% germination, no dampoff or mold. Some valuable elements necessary to the control of disease may be lost by sterilization.*

Articles from all readers will be appreciated by the editor.

JUST OUT!

## "Meet The Natives"

by M. Walter Pesman

Over 800 species of Rocky Mountain Plants classified by color, elevation, flowering time. 220 pages and many line drawings. Paper bound \$3.00. "Wir-O-Bind" \$3.60 Postpaid.

### New & Out of Print Botanical & Garden Books

Books in stock by Anderson, Ashberry, Bowles, Chapple, Clay, Correvon, Crook, Farrer, Flemwell, Genders, Hills, Hoffman, House, Hulme, Jekyll, Kingdon-Ward, Klaber, Lawrence, Loudon, Lounsbury, Mansfield, Markham, Meredith, Sanders, Schroter, Sedgwick, Stephens, Stern, Thomas, Thompson, Vareschi, Wilder, etc. etc. WRITE FOR PRICE LIST. No charge for advertising for out of print books in the specialized trade media of the U.S. and Great Britain.

## LYNN M. RANGER

41 Lynn Shore Drive

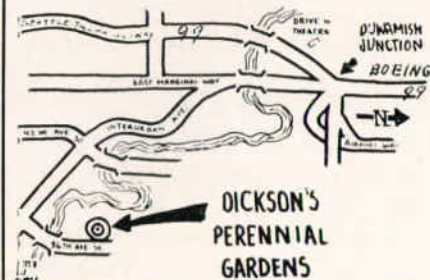
Lynn, Mass.

## Plants For Sale

At Garden Only

Primula Species, Polyanthus

Seedling transplants—Old plant divisions. Seeds for mail order—\$1.00 per pkt.: Goldlace Polyanthus, Selected Garden Auricula, Alpine Auricula, Polyanthus, bright red and orange shades mix.



13347 - 56th Ave. So.

Seattle 88, Washington



Seed pod of *P. florindae*



Seed pod of *P. prolifera*

A study of the various shapes of seed pods could be as interesting a study as that of seeds themselves (and valuable if seed pods get separated from their labels).

## The Question Box

Please send questions to the editor, Mrs. Robt. M. Ford, 2406 Boyer, Seattle, Wn.

Question: What is salt hay? I read that it is good for mulching but find no explanation.

Mrs. Delta Sanford,  
Independence, Mo.

Answer: Regarding your inquiry about salt hay one book describes it as follows: "Hay cut on salt marshes is exceedingly valuable for mulching, first because it is inclined to be firm and stiff and not so likely to mat down and freeze solid; second because it is free from seed, both of its own kind and of weeds; and third, because, where obtainable, it is usually cheap and abundant. Large quantities are used on commercial bulb farms, the hay being carefully raked from off the rows in spring, stacked, and used year after year. It is equally useful for mulching perennial borders, strawberry beds, etc., in the home garden, but is not so suitable for use as a cover crop or source of humus to be plowed under or added to the compost heap."

Probably the reason they don't recommend it as a source of humus is that salt—1 part in 1000 parts of soil—is harmful in a dry or light soil, while a wet soil will probably tolerate or endure 2 parts salt in 1000 parts of soil. There are exceptions like seakale and asparagus which seem to benefit from a top dressing of salt in spring.

Mann Leiser, Bellingham, Wn.

Question: What is the difference between regular candelabra primroses and Pagodas?

Julia Dean,  
Redmond, Wash.

Answer: The Pagodas are a special strain developed by Mrs. John P. Han-

non of Portland, Oregon. When Mrs. Hannon started to hybridize the Oriental wildings of the Candelabra Section she was fascinated by the new colors which came through such parents as burmanica, chungensis, pulverulenta, aurantiaca, Beesiana, and cockburniana. Her work with the most outstanding plants resulted in isolating separate colors, and each year the plants became more rugged, the flowers larger with more distinct eyes, and the colors more opalescent. She was awarded the Hybridizing Award for her Fujiyama, a large lemon-eyed white japonica with unique foliage. Oriental Apricot, one of the loveliest and most luminescent of the Pagoda shades; Imperial red, a true Chinese red; and Mandarin Orange, nearly burnt orange, are some of the colors available. One of her crosses between P. helodoxa and P. anisodora gives a large percentage of salmon pink. Candelabras are exceptionally hardy and do not require a bog situation in the Northwest.

The editor (who grows many of them)

Dear Editor:

In answer to Dora E. Waterson, Anderson, Indiana, Fall 1960, regarding the creosote soaked cloth to keep aphids away: An easy way to discourage aphids is to make a solution of Diamond L Dog Repellent mixed according to directions and dip swatches or small pieces of sponge in it. If these are hung in rose bushes or other plants attractive to aphids it will repel these pests. A sponge on a garden stake dipped in this solution and placed wherever dogs, cats, rabbits, or deer are a problem works well, too. People with greenhouses might try it around auriculas that cannot be sprayed because of the farina.

Mrs. C. D. Thompson  
Rt. 1, Carnation, Wash.

## MARKET SQUARE

### AURICULAS named varieties of Show and Alpine



We now have a good stock of all the best known varieties only. A few novelties are in limited quantity.

Our catalogue of Primulas, rare Alpines, Heathers, and dwarf Evergreens will interest you. It is free.

Catalogue free

### ALPENGLOW GARDENS

MICHAUD & COMPANY  
13328 Trans-Canada Highway  
New Westminster, B.C., Canada

## SPENCER POTTERY

TROPHIES FOR PRIMROSE SHOWS

lanterns

patio bells

flower containers

Visit Our Studio

Tuesday through Saturday 10-6

4861 So. 144th St. CH 2-4440

Seattle, Washington

## Silver Dollar Polyanthus

raised from our easily germinated

## Hand Pollinated Seed

All Shades and Colors  
Still \$1 Pkt.

## Order Now

from our uniquely illustrated listings

Barnhaven Gresham, Ore.

Why don't some of the interested members take out Life Memberships? It would give a big lift to the Society and—remember—it is tax deductible!

## V MIX C

### CAMPUS NURSERY

A Complete Garden Store

Landscaping  
Roses

Choice Specie Primula

Fertosan Compost Accelerator

Come In and See Our BONZAI Collection

5000-25th Ave. N.E., Seattle 5, Wn.

LA 3-5588

## Named English Show & Alpine Auriculas

American Grown Varieties

JOHN SHUMAN

5957 37th S. W.

Seattle 6, Washington

Phone MOhawk 5-2993

## THE LATH HOUSE

Primroses, Delphiniums, Fuchsia  
Chrysanthemums, Dwarfed Sweet  
Williams

Albert "Bob" Funkner

RT. 2 BOX 238

BORING, OREGON

POLYANTHUS CANDELABRA

AURICULAS DENTICULATAS

PLANTS

SEEDS

List on request  
Will ship to all States

SKY HOOK FARM  
JOHNSON, VERMONT



# MARKET SQUARE

Where There Is  
CUPROLIGNUM  
There is no rot



for Flats—Benches  
Fence Posts

At Lumber Yards — Hardware Stores  
Everywhere

**RUDD & CUMMINGS**

1608 - 15th Ave. W., Seattle 99, Wash.



**PRIMROSES  
AZALEAS**

Glenn Dales  
Gables  
Dutch Hybrids  
Exbury

Choice Ornamentals and  
Rockery Plants

**JONES NURSERY**

(Formerly Bartoo's Gardens)

6210 S. 286th—Kent, Wash.  
2½ miles south Kent, West Valley Highway

Streptocarpus Seed  
"Cape Primrose"

Beautiful Colors  
Shipped in mixture only

Packet \$4.00  
½ Packet \$2.00

**ANTONELLI BROTHERS**

2545 Capitola Road  
Santa Cruz, California

Write for 1961 Catalog

**Special to A.P.S. Members**  
Members of the American Primrose Society are given a special advantage in the purchase of Ferostan. Packets of the size necessary to reduce one ton of waste material to compost in the six-week period,

**VETTERLE & REINELT**  
CAPITOLA, CALIFORNIA



Pacific strain of  
*Polyanthus Primroses.*  
Fresh seed available now.

When buying anything advertised in these pages, please say you saw the ad in the Primrose Quarterly.

**Says "NO!" to dogs**

**DIAMOND L BRAND**  
**Guards Lawns and**  
**Shrubs**

Positively effective dog and cat repellent. At garden stores, or write direct. Dealer inquiries invited.

Information on request

**Harry N. Leckenby Co.**

DUVALL, WASHINGTON, U.S.A.

sold in the State of Washington at \$1 a packet, may be obtained for 60c, post prepaid, from the office of the A. P. S. Quarterly, at 2406 Boyer Ave., Seattle 2, Washington. Washington State purchasers should include sales tax.



# LIQUINOX

THE ALL-PURPOSE BLUE RIBBON FERTILIZER

Contains Yucca Extract

10-10-5

0-10-10

Pint  
.85

Quart  
\$1.50

Gallon  
\$3.95

**KEIFFER'S NURSERY**

Kirkland, Washington

VA. 2-5326

**PRIMROSES**

Transplants for Spring—

Field Plants—Seeds

*Polyanthus-Acaulis-Doubles-*  
*Species-Auriculas*

**SPECIAL: Kingii Seed From**  
**India—\$1.00 pkt.**

If you are not on our mailing list write for catalog. We ship plants anywhere in U.S. and Canada.

**We Use and Sell Blue Whale—**  
**We Recommend It**

**Spring Hill Farm**

P.O. Box 42 (On the new highway)  
Gig Harbor, Wn.

When buying anything advertised in these pages, please say you saw the ad in the Primrose Quarterly.

Giving plants to new members of local Primrose Clubs is not just a way of getting new members. It lets the new member have a start of full grown, blooming plants that are usually not available from garden stores. If they receive primula species they are encouraged to study up on the culture of those plants. They will most likely raise others like it from seed, but that takes time. Plants to fill this need are donated by other members who have an abundance.

*It's New*

**LECKENBY'S**

**CRESCENT**  
**WEEDER**



Keen-edged, simple to use, long handle, double edged cutter. Leaves dust mulch favorable for plant growth bacteria.

**Price—\$2.95**

at Garden Stores

or direct by mail from  
**Harry N. Leckenby Co.**  
Duvall, Wash.

THE CANADIAN PRIMULA  
AND ALPINE SOCIETY

Dues, including educational monthly Bulletin \$2.00

Treasurer: Rev. H. Stewart Forbes  
2054 Quilchena Cres.,  
Vancouver 13, B. C.

PS  
AT  
GR  
OA  
DI  
AN



**HANNON ACRES**  
17300 S.E. Oatfield Road  
Portland 22, Oregon  
**CANDELABRA AND OTHER  
PRIMROSE SEEDS**

CANDELABRAS: Bartley Strain pulverulenta, anisadora, Bulleyana, burmanica, heledoxa, Japonica and pulverulenta.

PAGODA HYBRIDS: Fujiyama (white), Celestial Rose, Cloissoni Pink, Manchu Yellow, Imperial Red, Mandarin Orange, Oriental Apricot, pastel and lavender shades.

FLORIDAE HYBRIDS PR. POISONI  
PR. ROSEA "Delight" PR. SIEBOLDI (mixed)  
Separate colors, or mixtures of above \$1.00 pkt.

**NATIONAL AURICULA AND PRIMULA SOCIETY, Northern Section**

Invites all Auricula and Primula lovers to join this Old Society  
Membership of \$1.50 per year includes Year Book  
Hon. Sec., R. H. Briggs  
Springfield, Haslingden, Rossendale, Lancs., England



**PRIMROSES AND SLUG-FEST  
GO TOGETHER**



- The New Liquid Control Developed by Regional Chemical
- Safe for Pets, Children, Plants and Lawns
- Leaves no residue; no unsightly piles
- Kills on contact
- Applied with sprinkling can or hose applicator
- Liquid formula allows treatment of large areas

In Western Canada, buy as  
"Later's Slugfest"

**MAIL ORDER PRICES**

4 oz. ....	\$ .97	16 oz. ....	2.95
8 oz. ....	1.69	32 oz. ....	4.95
plus shipping costs			

At all better  
garden supply houses

A product of  
Regional Chemicals

14756 - 27th Avenue N.E.  
Seattle 55, Wash.



Introducing

**Alice Hills Baylor,  
Sky Hook Farm**

Mrs. Baylor has grown primroses in Iowa, Illinois, Massachusetts and for the last ten years in Vermont.

Prior to moving to Vermont she was engaged in private practice of Landscape architecture in the Midwest as well as having had many interesting assignments in reforestation and conservation.

She was Landscape designer for the Rock Island Arsenal, Illinois, an Army Reservation of one thousand acres. She also designed the esplanade areas of the roller dams on the Mississippi river from Winona, Wisconsin to Keokuk, Iowa. She was Landscape Designer for the Chicago Park District for four years and Naturalist for four years. It was during the period she was at the State Park that she collected native flora and ferns for Dr. George D. Fuller of the University of Chicago and for Dr. George Neville Jones of the University of Illinois. Dr. Jones published both works, "An Enumeration of Illinois Pteridophyta" and "The Flora of Illinois."

Conservation of native flora, reforestation and garden design had been until the last ten years the prime interest of Mrs. Baylor. The growing of primroses is now the main horticultural endeavor as they are the natural garden subject for naturalistic and woodland gardens.

In the terraced garden near her 188 year old house are *P. auricula* massed in separated colors with low Campanulas in the low rock retaining walls, Polyanthus and Acaulis edge the paths



Alice Hills Baylor

and are used against evergreen background.

In the woodland garden where three pools are connected by a small brook the cadelabra primroses in all colors grow by the thousand with wild flowers and ferns as their companions.

Some of the unusual plants offered in the SKY HOOK plant and seed list are *P. Sibthorpii* from Greece and Turkey, a *P. X-Garryarde* Guinevere hybrid with blue flowers, interesting Julianas, and the loveliest of *P. Sieboldii* var. *Southern Cross*. Seeds are just 50c a packet. If you do not have her new list it is worth while to send for it. Gift boxes of primula are a special feature.

Behold! in my garden together  
Vigorous grown and fair—  
The seedlings of foreign trees and  
plants,

Reared and nursed with care.

Emperor Meiji (1852-1912)

# THEY TELL US - OVER AND OVER NATRIPHENE STOPS DAMP-OFF QUICK

Tablets for Trial Orders



Powdered Natriphene  
For Commercial Growers



In Greenhouse Cleanup it removes all scum, algae, moss, etc., and makes flats last for years.

We have found it to be a specific for Anthracnose on Philodendrons.

## Wonderful for Pre-emergence Damp-off

"I use Natriphene on all seed I plant and water seed pans. My rooting medium is treated after each batch. I have used this same rooting medium now over 2 years. Natriphene kills fungus and stimulates plant growth."

*Peter Klein*

"Natriphene gives us security in all fungus and rot problems. We hope it is always available. We could not successfully operate without it."

*Barubaev*

Natriphene is in use from the Royal Botanical Gardens in Ceylon to the bulb fields of Holland. It is the only material fully effective against both fungus and bacterial diseases of plants.

Was used successfully to control bacterial disease of Orchids.

*Ohio Rose Nursery:* Have been getting good results keeping "Die-Back" in check on our rose plants during storage from fall to spring.

Natriphene Company—425-O Book Bldg., Detroit 26, Mich.  
Ship Natriphene Fungicide checked below:

Trial box makes 16 gals. fungicide for.....	\$1.00 .....
100 tablet box makes 200 gals. at 2½c.....	5.00 .....
2½ lb. can powder for 500 gals. at 1½c.....	7.50 .....

Invoice same

or  check enclosed

Signed ..... Title .....