Standards of Excellence for
Garden Polyanthus, Garden Auriculas,
And Juliae Hybrids

Florence Levy wrote this "Standards of Excellence" in 1946. The standards are still the same, and it is appropriate that we reprint this now as a reminder to keep them high.

Florence Levy

In considering the standards of excellence for Polyanthus and Auriculas, it must be remembered we are dealing with Garden, or Border, varieties as opposed to Florists' or Show, flowers. The two types are entirely different in form and color, and bred and grown for different purposes. In America we have only a few Show Auriculas which could meet the requirements of such a classification, and no Gold Laced, or Florists' Polyanthus, perfected to such a degree of excellence. Even in England, at the present time, Florists' Polyanthus are rare, barely beginning to rise again after a period of near extinction; while Show Auriculas, though not quite so neglected in the past few decades, are making more rapid return to popular cultivation.

Garden Polyanthus and Garden Auriculas, then, must be viewed with garden merits in mind rather than the florists' standards based on precision of form, the prime requisite of how flowers are developed solely for competition on the show table. Everyone knows the Garden Polyanthus and Garden Auricula, but perhaps not all are certain as to their good points. The scores for judging will serve to guide the grower, for the finest individual specimens naturally produce, in mass, the best effect. Since the average cultivator is not acquainted with the standards of excellence for Show Polyanthus and Show Auriculas, these rules are also given as the most effective way of outlining the difference of form and the purpose for which each type is developed.

The strict rules for Florists' Polyanthus are based upon precision of line, purity of color, and restrained refinement. The ground color must be one rich uniform shade of red, or black, which is laced or edged with yellow—preferably a clear unvarying lemon-gold—around the edge of the petal striking down through the petal's center to meet the golden eye which must be of the exact shade as the lacing. The lacing must be exquisitely smooth and of even width throughout, laid on with great precision and without blemish. The center, or eye, in addition to being the exact shade of the lacing, clear and unvarying, must be absolutely circular and as wide as possible. The mouth of the tube should be slightly raised above the level of the eye and should be filled with bold anthers up to the surface with the stigma almost sessile below. All of the flowers, or pips as they are called, should be equally and fully expanded, perfectly flat and round, and scalloped on the edge. This is only a bare outline which omits embroidered details and many of the fine points. George Glenny, a voluminous writer on the subject of Florists' flowers in England during the last century, has scored the Gold Laced, or Show Polyanthus, as follows: (a) Strong straight stem, 4 to 6 inches, ½ point. (b) Footstalks of pips just long enough to bring all together in a compact symmetrical whole, ½ point. (c) A truss of not less than five well-expanded flowers, 1 point. (d) The center pure, without stain, and uniform with that on the edges, 1½ points. (e) The lacing thinly and regularly laid on round each segment, cutting down to the center 1½ points. (f) The ground color red or black, unshaded, and dense, 1 point.

It will be noticed that no points are given for thrum-eyed blooms, the type with visible anthers. The reason is simple enough. Florists had decreed against pin-eyes, and cultivators hustled them off to the compost heap as soon as the form became apparent, even absolute perfection on all other points being unable to save them. Consequently it was understood that only thrum-eyes were acceptable.

This raises the point which today absorbs a disproportionately large amount of attention. It can readily be
seen why pin-eyed blooms were rejected in flowers bred to symmetrical precision, but at long range, in the garden, other factors are much more important. However, since thrum-eyes are prettier in close view than pin-eyes—a preference possibly carried over from the florists' dictum—they are given extra points in judging.

From the garden point of view sturdy habit; clear color; substantial texture for greater beauty and insurance against storm damage; size and form of blossom; large, full truss; a stalk strong and tall enough to carry the truss to advantage; and foliage free from disease and pests are the valued properties. On the basis of 100 points, the Society's standard of excellence for judging Garden Polyanthus gives 50 points to the flower and 50 to plant habit and foliage as follows: Flower, clear color with nouddliness 15 points; substantial texture (not thin and papery) 15; size, must be over 1 inch, 10; clear eye, 5; fully opened blossoms when mature, either ruffled, frilled or flat 2½; thrum-eyed 2½, total 50 points. Umbel, 10 points—full and with short enough footstalks to bring the individual florets into a compact, symmetrical truss. Stem, 20 points—sturdy, round and sufficiently tall to hold umbel well above foliage. Foliage, 20—free from disease and pests, well grown but not stimulated beyond proportion.

Although the Garden Polyanthus came to be admitted more and more frequently to English show tables, it was a rare Garden Auricula that ever passed the portals. Garden Auriculas were more apt to be considered something that did not measure up to Show standards rather than a type to be developed for its own particular beauty as we do here. Show Auriculas and Alpine Auriculas, though on the increase in America, have so far been shown non-competitively. Both the Show Auriculas and the Alpine Auriculas are distinct from the Garden Auricula. Briefly, Show Auriculas are of four main sub-types: Green-edged, grey-edged, white-edged, and selfs (not edged, the ground color continuing uniformly to the outer rim of the petal with no shading). Each floret appears to be four concentric circles as though drawn by a compass, made up of tube, paste (eye), ground color, and edge. Much more elaboration of detail is given the Show Auricula than the Show Polyanthus, but since space does not permit, only the standard of excellence for Show Auriculas outlined by the Royal Horticultural Society of England which is considered very simple, follows: The truss to consist of not less than five fully developed flowers, 10 points; the corolla (floret) round, smooth on the edge, perfectly flat, 2 points; the tube yellow or lemon, round, filled with anthers, 1 point; paste smooth, solid, pure white, 2 points; ground color dense, forming a perfect circle next the paste, 2 points; the edge green, grey-white, or unshaded self-color, 2 points; stem strong and sufficiently long to bear the truss above the foliage, 1 point.

The type of Auricula known technically as the Alpine differs from the Show Auricula by having a perfectly unmealed center, or eye, and the petals are richly shaded from the deepest to the lightest tints of the one color the flower has adopted. The tube of the Alpine should follow closely the color of the eye for greater uniformity and, as in all Auriculas, the mouth of the tube should rise fully to the level of the flower's face. The Alpine Auricula is divided into two sections, the one with the golden center which is considered the higher type, and the paler, almost primrose-colored center. Flowers are perfectly flat with smooth-rounded petals and excel in rich, warm shades.

The Garden Auricula, like the Garden Polyanthus, is now developed for bedding and, accordingly, the qualities which fit them for this purpose most satisfactorily are given the highest rating. The judging score of 100 points, which almost parallels the standard for Garden Polyanthus, follows: Flower, 55 points—clear color, 15; substantial texture, 15; clear paste, or eye, 10; thrum-eyed 10; fully open blossoms when mature may be flat or ruffled, 5; Umbel 10, symmetrical and compact; stem 15, sturdy enough to carry the umbel erect, may be with or without meal; foliage 20, healthy, pest free, of good substance, may be with or without meal.

Primroses do not sport as readily as Polyanthus and Auriculas, therefore no Show Acaulis have been developed. The best garden form is the one which is the most floriferous with blossoms carried well above the foliage. The standard of excellence which follows gives 50 points to the flower and 50 to habit of growth and foliage: Flower—clear color 15; good texture 15; floret well opened 10; size 5; clear eye 2½; thrum-eyed 2½, total 50 points. Form of growth, 25 points—floriferousness 15, florets in full view unhidden by foliage 10. Foliage 25 points, healthy, well grown, free from disease and pests, not over fertilized.

With Juliae hybrids, miniature plant form is the desired characteristic. Too many hybrids are first generation crosses between P. juliae or some of its hybrids and Acaulis or Polyanthus resulting in a large-leaved, medium-flowered plant which certainly should not be termed a Juliaform. There are, however, some very beautiful first and second generation crosses which amount more nearly to reduced Polyanthus with very small eyes, sometimes in complete absence except for rays, of exceedingly rich, glowing colors, and with a noticeable resistance to drought. A separate classification (Continued on Page 76)
Now is the time for all good Primula Lovers to come to the aid of the Show Committee. Show time is the high point of the season. The time when friends we haven’t seen since the last Show are seen again. The time we can see what the good growers have been doing to improve the breed and in creating new colors.

The 1959 Primrose Show should be particularly memorable because for the first time the Annual Awards Banquet and the Annual Meeting are corrected by constitutional amendment to coincide with the National Show. This enables every one who comes to the Show to come to the Banquet. No excuses will be valid.

THE FLAME RESTAURANT in Kirkland is the place and Saturday evening, April 18th, is the time. At only $2.25 a plate and because of the number expected, the wise ones will check in early with Mrs. L. C. Murdock, 3003-116th S. E., Bellevue, Washington, who is the reservations chairman. Her phone number is Gibson 4-7802.

Patronize the Show and enter all classifications you can. The novice growers get a “break” this year as, with the theme “Old Fashioned Gardens,” almost anything goes. See you at the Show.

Winning plants together with Trophies and Show Auriculas displayed in glass house at the 1957 Kirkland show. Photograph courtesy Orval Agee

Brown’s Iris Garden Display at the 1958 Kirkland show, dramatically showing how well Primroses and dwarf Iris go together. Photograph courtesy Brown’s Iris Garden
CANADIAN PRIMULA AND ALPINE SOCIETY
Vancouver, B. C., Canada
April 17-18
Friday 2-10 p.m.; Saturday 2-9 p.m.
Technocracy Building
1166 W. Georgia Street
Admission: 50¢ to include tea
Show Manager: Mr. George Boving
4573 W. 4th, Vancouver, B. C.

1959 OFFICERS
CANADIAN PRIMULA & ALPINE SOCIETY
President ................ Mr. E. F. Miller
Vice-President .......... Mrs. F. J. Macey
Secretary ............... Mrs. R. Boys
Treasurer ............... Mrs. F. S. Day

MT. ANGELO PRIMROSE SOCIETY
Mt. Angel, Oregon
St. Mary's School
April 12, 2-9 p.m.
Refreshments available
Plant Sale
General Chairman: Mrs. Katherine Williams
1959 OFFICERS
Mt. Angel Primrose Society
President ................ Mrs. Victor Hoffer
Vice-President .......... Mrs. Roy Palmer
Secy.-Treas. .............. Mrs. Alphonse Schaecher

Lewis County Primrose Society
Chehalis, Washington
Community Building
13th and Williams
April 11 and 12
Saturday: 2:30-9 p.m.
Sunday: 12 noon-9 p.m.
Theme: Primrose Panorama
Admission Free
Show Chairman
Mrs. Reuben Stohr

Parade of Gardens
Multnomah County Fair
Gresham, Oregon
Gresham Fair Grounds
April 15-19
Theme: Beauty by Night
Admission: 75¢ including parking
Restaurant available on grounds
Plant Sale
Show Chairman: Harold Fooze
Multnomah County Fairgrounds

Onandaga Primrose Society
Syracuse, New York
Primroses in the Syracuse area are
at their best in May. The "Primrose Garden Tour" inaugurated last
year was so successful the same pro-
cedure will be followed this spring.
Date for the tour is dictated by the
weather and has not been set. Gerald-
ine H. Gates 132 Brasford Street,
Syracuse, N. Y., will supply informa-
tion on request.

Primulas In Southern California
This is the first account of Primula culture in Southern California that the
Quarterly has published. Although only three types of Primulas are mentioned,
there must be many more species and varieties that would do well in that
climate.

By Philip A. Chandler

For one who has had the opportun-
ty of growing Primulas in the cool
temperate regions of the world, Eng-
land, Eastern North American, and
then the Pacific Northwest where the
culture of these plants excel, the move
to Southern California with its Medi-
terranean climate presented a chal-
lenge. But is it not always a challenge
to grow plants to perfection?

The coastal areas of Southern Cal-
ifornia are well known for the all-
year-round climate of abundant sun-
shine, with many sections almost frost
free. Many who are not familiar with
the region assume the sunshine and
warmer temperatures are advantageous
for growing plants. This is true to a
certain extent, but to the horticulturist
the cooling effects of the summer fogs
and the cool nights at all times have
an even greater influence in the
growing of many plants. This is so
with Polyanthus, also Primula mala-
coides and P. obconica, which thrive
under such cool conditions that exist
in this area for much of the fall, win-
ter, and spring months. All of these
plants are being grown here more and
more, particularly in shaded areas, to
give winter and early spring color in
the garden. Unfortunately, the writer
has had little experience with other
dspecies of Primula in this part of the
country and it is rather doubtful if the
alpine species will grow well in this
climate due to insufficient winter
chilling. Hence all the suggestions for
growing Primulas in this area will
be confined to the three types men-
tioned.

In outlining the culture of Primula it is only fitting that the writer, who
has for the past ten years been associ-
ated closely with the Department of
Plant Pathology at the University of
California at Los Angeles in the de-
velopment of the U. C. system of
growing healthy plants*, should apply
these principles to the growing of
Primulas. The system advocates three
major basic principles — the use of

*P. obconica

Photograph courtesy
Prof. Walter C. Blas-
dale.
clean disease-free planting stock or seed, the use of soil treated either by steam or chemicals for disease control, and, lastly, sanitation; or, in other words, good cultural practices to prevent occurrence of disease. Now some of the ideas may appear like radical lines of thought in the growing of Primulas, but the results obtained will fully justify all the effort.

First, let us discuss seed sowing. Here in Southern California, seed is normally sown from June until October. The earliest sowings produce larger plants which often begin to flower in December or January. Treatment of seed by chilling has been fully discussed many times in the Quarterly lines of the Society and no doubt some treatment helps germination. A greenhouse is not necessary in this area for seed sowing. The only advantage it offers is better control of shade and humidity and this can be achieved just as easily under lath shade.

Many different soil mixes have been described for sowing seeds, almost as many as writers of articles, with other mixes for growing the plants. This is not necessary and every attempt should be made to standardize practices, for there are so many other variable factors to contend with in growing. The standard U.C. mix of 50% fine sand and 50% peatmoss is ideal for Primulas. They mix together easily, and are readily available, have good aeration and drainage, yet retain adequate moisture for plant growth. Do not confuse the fine sand with the coarse types of plaster sand used in the propagating bench. Desirable types of fine sand can often be found as wind blown deposits in the rolling hill areas.

The waste deposits often called silt—a misnomer—from sand and gravel quarries are ideal, the important criteria being the uniformity of particle size and the freedom from the clay fraction. A soil mix of this type will be low in nutrients, an advantage in that known quantities of fertilizers can be added. To the 50-50 mix of fine sand and peatmoss, add the following quantities of fertilizer to a cubic yard of the mix: 2 1/2 pounds of Hoof and Horn, or Dried Blood; 1/2 pound Sulphate of Potash; 2 1/2 pounds Single Superphosphate; 7 1/2 pounds Dolomite Lime; 2 1/2 pounds Calcium Carbonate Lime.

Because of the possibilities of high soil temperatures when Primula seed is sown, it may be wise to reduce the quantity of the organic nitrogen to one pound per cubic yard. The hobbyist will often wish to make up smaller quantities of the mix, and a bushel appach box is a useful measure, with 1.7 bushels to the cubic yard. Approximately two ounces of fertilizer per bushel equals two and a half pounds per cubic yard.

Primulas, like the majority of plants, are subject to a number of "damping-off" diseases and it is therefore essential for successful results to sterilize the soil with steam or chemicals. The assistance of the local greenhouse grower may be of help to the hobbyist in getting the soil steamed. Some of the chemical fumigants are quite satisfactory for treating soil, such as Vapam and, particularly the latest, Mylon.

Seed should be sown evenly, preferably in small flats as less drying out is likely to occur. Shade must be provided at all times and the flats kept moist and cool, preferably on raised benches under a lath area. As with all other seedlings they should be transplanted as soon as large enough to handle; however, do not discard the seed flat as a number of seeds may germinate later. The same soil mix can be used for transplanting as used in sowing. At this stage the two and a half pounds of hoof and horn or dried blood per cubic yard should be used. Keep the seedlings moist and shaded at all times, paying particular attention to watering during the dry hot spells of weather in the late summer and fall months.

Supplementary feeding with a liquid nitrogen fertilizer should be started about two weeks after transplanting, using ammonium nitrate at the rate of one pound to a hundred gallons, or a level teaspoon to a gallon of water. A good rule to follow is to use the liquid fertilizer every third irrigation. After about two months a more complete feed is necessary and a change made to the following—ammonium nitrate, mono-ammonium phosphate and muriate of potash at the rate of eight ounces of each to a hundred gallons, or a level teaspoon to each two gallons of water.

When Primulas of the types under discussion are grown in containers, cans, or planters boxes, the same practices can be followed. When the young plants are to be planted in the open ground it will be an advantage if special beds of fine sand and peatmoss mix are prepared. The results obtained will be worth the effort. However, since this is not often possible, a compromise is the next best thing. In preparing the natural soil of the garden, avoid the use of leafmold and animal manures as these materials often carry soil-borne disease organisms and are high in soluble salts, thus adding to the salinity problem. The addition of other organic materials such as peatmoss, fir-bark, shavings, and sawdust are safer to use, even though extra nitrogen fertilizer will have to be added when sawdust and shavings are added. All of these ma-
terials can also be used as a mulch around the plants—a benefit in any garden practice. When the plants are to be grown in beds or borders and no other living plants are present at preparation time, the opportunity should be taken to fumigate the soil with Vapam or Mylon.

Cultural practices after planting will consist of keeping any decaying leaves picked off and dead flowers removed which will help prevent the build of Botrytis—Grey mould fungus—disease that can do much damage under moist conditions. A careful watch should be kept for insects, particularly aphids, mites, and leaf-miners. Malathion will keep the aphids under control, Kelthane for mites, and Toxaphene for the leaf-miners. In wet seasons Polyanthus are subject to a leaf spot disease, Ramularia Primulae, and, at the first signs of leaf spots, a spray program should be started using either Captan or Par zate at the rate of a level teaspoon per gallon.

With the hot dry summers that prevail in this part of the country, it is doubtful if it is worth the effort to carry plants over for another season, although with particularly fine plants any effort will be worth while.


Editor's Note:
It has always been axiomatic that Primroses and cow manure went together, so Mr. Chandler's interdiction regarding leaf-mold and animal manure needs explaining. Mr. Chandler is writing about Southern California where conditions are such that his advice is sensible. The problem is a twofold one of disease and salinity. Leaf-mold and animal manure add disease germs and soluble salts to the soil. In (Continued on Page 69)

The Glen Of Primroses

You need but read this lovely note from Scotland to understand the endearing spell of the Primrose and why we look so eagerly for the first flower of spring.

BY MARION HENDERSON

I have always loved primroses. For me they are the most endearing of all yellow spring flowers and hold a special message of spring. There comes a day in May when the postman brings me a box of them, carefully packaged, the flowers lying on a bed of damp moss to keep them fresh. After a good soak in water they are none the worse for their long journey from the Highlands, and arranging them transports me to the spot where Aunt Jessy picked them, as she has done for countless years.

I see primroses growing in a Highland glen brown with withered bracken and the matted leaves of beech. The trees crown deep ledges of rock, looking like the pillars of a cathedral, and a burn rumbles down between the rocks, crooning to itself on its way to the sea. There are primroses everywhere, acres of little, pale-yellow stars washing in waves down hill, lighting up the glen like knots of stars illuminating the skies.

Aunt Jessy and I picked basketfuls of bloom three years ago and while primroses in most places belong to April, they blossom later in the Highland glen, reaching the peak of their flowering in mid-May. Once I remember picking them as an unexpected snow shower and their petals still felt warm to the touch.

Aunt Jessy is careful to choose a sunny-day so that the primroses she sends to me may be perfectly dry. I can picture her with her brown wicker basket, walking stick, and stout shoes, setting off on her purposeful walk to the glen.

She sets down the basket on a mossy ledge of luminous green while she starts to pick from single groups and scattered files lining the narrow zigzag path that goes down by the burn. Baby buds peep out from the tangled leaf-carpet of beech and oak where they nestle cozy and warm. Adventurous primroses cling to the rocky ledges close to the burn, where the tiny cascades bubbling up between the stones wash them fresh and dewy. A spell of the Primrose and why we look so eagerly for the first flower of spring.

Yellow stars and paler-yellow stars wink among moss in the shade of the trees, and down in the hollow where a spicket fills a cattle trough with the burn water the flowers grow in the soggy soil squelched by the hooves of cattle that go there to drink.

Aunt Jessy picks dozens of bunches of primroses, tying each with a piece of thread and placing each bunch in the brown basket until it is full to the brim. Then she wanders off to revisit special places in the glen where she roamed as a child. While she has passed the allotted span, she walks in the "Never, Never Land" when the primroses bloom.

She goes to a well about a quarter of a mile from the spot where the basket of primroses is waiting. Ages before the advent of hydroelectric power Aunt Jessy used to bring her washing to the well. Now the well is hidden by a screen of whin bushes on which the clothes were spread. All around that ancient well primroses bloom. So for old time sake another posy must be picked there and kept separate from...
the other bunches of bloom in the basket.

Every year I unpack this larger bunch of primroses with a rush of feeling, for Aunt Jessy writes a few words on the white paper fixed to the flowers. "The well-water is drying up but the primroses are blooming on." Never one to wear her heart on her sleeve, I know that the simple message is still garlanded with romantic memories. And so the flowers picked beside the old well must have the prettiest posy bowl I possess.

Arranging them is a simple matter, for their innocent flower faces have nothing to do with the effective display one strives for with other flowers. As I place the posy bowl on my table, some words from H. E. Bates come to mind: "It is the common things which never fail, they perform a perennial miracle of transcendence."

Reprinted, by permission, from the Christian Science Monitor of May 12, 1958.

Primroses in Canton, Ohio

Mrs. Steinkamp shows that greenhouses or tricks of the professional grower are unnecessary to grow beautiful Primroses.

By Florence Steinkamp

My original experiences with growing Primroses was in Oswego, Oregon, and I was an avid member of the American Primrose Society. I found that my best luck was from Spring sown seed in outside beds made up of loam, peat, and sand. I have never used any other method here in Ohio as it has always been the most successful.

When the first real leaves appear, the plants are transplanted into a larger area, where they grow until late summer. Then at bulb-planting time, they are lifted with lots of soil on the roots and placed where they are to bloom in the spring.

An attempt at late summer planting proved unsuccessful as the winter winds proved just too devastating for such small plants. A great deal of snow falls, but does not stay on the ground constantly. Periods in between snow falls may be frigid, with strong winds, and this is when the plants suffer. My winter loss has not been heavy, no more than a dozen plants, I'm sure, and those were in extremely vulnerable areas.

None of my plants get more than a half day of sun and never lack for moisture. We have had a few days in summer when temperature approached 100° but the extreme humidity I think saves the plants from damage. Lowest temperature in winter occurred last year and was 11° which lasted about twenty-four hours. Usually a few days of such extreme temperature are expected in February, March, or earlier.

I am presently living in an outside unit of a four-plex and have very limited space for my beloved Primulas but make the most of what space I have. It seemed all the people in Canton came to see my plants last spring. Only the most ordinary kinds appear on the market here which explains why I have received so many requests for "starts". My fondest hope is to one day have a spacious garden in which Primroses can be made to grow and show off to the very best advantage. Until such time they must border flower beds, grace the base of shrubs, or make a frame for flowering bulbs as they did last Spring.


A Brief Review

By James Stuart McLees

Not long ago, through the kindness of our editor, there has come to my attention a book the like of which I had not seen before. It is the Sixth Edition of "Plant Buyer's Guide."

Published by the Massachusetts Horticultural Society, the volume describes itself as "the ONLY directory that tells you where you can buy the plants you want," and thus it defines the task it has set for itself.

With minor additions the book consists of two sections, the first of which, headed Sources of Stock, lists the names of nurseries, growers, and dealers in nursery stock arranged alphabetically by states and a few countries outside the United States. Each of these names is assigned an alphabetical symbol of no more than four letters, by means of which plants in the second section are keyed to the sources offering them for sale.

The second section is in two parts of which the first consists of "Special Lists" dealing with genera such as Dahlia or Iris that are the interest of specialist plant societies which publish to their members and others the sources from which their special materials may be obtained. Under each generic name are given the names and addresses of officers of the society to whom the reader is referred, together with a few sources selected from the names listed in section one. No attempt is made to list the names of the cultivars or horticultural varieties under these genera since it is recognized that to cross reference these would require a volume too cumbersome for use and too expensive to produce.

The second part is a general list of "Available Plants" with special emphasis on the rarer plants and those that are difficult to obtain. The arrangement here is alphabetical by genera, by species under the genus, and by natural and horticultural varieties under the species, and each plant is keyed to the sources or sources from which it may be bought, by means of the aforementioned alphabetical symbols. For primula lovers the list contains almost four pages each of three columns of closely printed names, and is a veritable mine of information not readily available elsewhere.

In a work of this scope, involving the collection and collation of great masses of information it is not difficult to find faults, errors both of omission and commission. The keying system which on first use seems to be so cumbersome, soon becomes acceptable because one finds the alphabetical symbols have been so chosen as to remind the reader of the names for which they stand. After much thought no better method has suggested itself.

In one respect the list of Sources of Stock could be improved. It will be noted that many of the names in this list bear symbols to indicate whether the source trades at wholesale, at retail, or at both, and in a few cases that seeds are offered. In all cases where seeds are offered, the fact should be indicated here as well as against the plant names. This is important to primula lovers, especially with respect to sources in Great Britain. The plant quarantine applied by
the United States Department of Agriculture prevents the importation of plants from the United Kingdom. England is the only source of many Primula species and only seeds may be imported, yet there is nothing in the list to show that Thompson and Morgan, Ltd., Sutton and Sons, Ltd., and Watkins and Simpson, Ltd., offer seeds for sale although the first named is the largest seed house in England and all three ship large quantities of seeds to practically every country in the world.

The list of sources of primula is sadly deficient in names. In the State of Washington only twenty-nine sources are listed and one could readily list that many from the Seattle area alone. Members will note the absence of the name of Mrs. Levy, of Barnhaven, and others. On the other hand, at least one source is recorded from Seattle the location of whose address I have been unable to find. Those of us who import primula seeds will miss the names of Jack Drake and the Edrom Nurseries, Scotsmen who supply much of the rare seed that finds its way into the Pacific Northwest. From the list it would appear that in all Scotland there are but two sources of Nursery stock. But it may be the fault of the sources themselves that their names do not appear in the Plant Buyer's Guide. Let us hope the listings will prove so valuable the missing nurserymen will take steps to ensure their inclusion in the forthcoming supplement.

Considering the magnitude of the task one should not dwell too much upon these faults. The wonder is that so much useful information has been made available. The important thing is not that some specific name has been omitted from the listing but that the searcher should be able to locate the plant of his desire.

The price of the book is fifteen dollars which includes a supplement to be issued in 1959 or 1960. It is a pity if the cost of a work like this should put it beyond the reach of many amateur but enthusiastic gardeners. I, for one, am glad that the book can be consulted through the library of the Primula Society.

Editor's Note: May we call attention of the publishers of this very excellent publication to the error of listing Vetterle & Reinelt as growers of Acaulis. Vetterle & Reinelt (see ad on page 73) grow many thousands of Polyanthus at their nursery in Capitola, California, but never an Acaulis. Primula growers are hopeful that this error and shortcomings such as noted by Mr. McLees may be corrected in forthcoming supplements of the Plant Buyer's Guide so that the Guide may be of such value to primula growers as it doubtless is to those growing better known plants.

6th Edition of THE PLANT BUYER'S GUIDE, H. Gleason Mattoon, Compiler and Editor. $15.00 including Supplement. Massachusetts Horticultural Society, 300 Massachusetts Ave., Boston 15, Massachusetts.

Excerpts from letter to the Editor of the Quarterly from the Editor of the "Plant Buyer's Guide," Mr. H. Gleason Mattoon, follows:


May I start out by saying that the Special List is the weakest part of the publication, especially weak because some of the specialized nurseries that should be listed objected to having their names included. In most cases they felt their stock was not

(Continued on Page 68)

Primulas for the Average Garden

Though many of the Primula species might be temperamental in your region, we hope these interesting accounts and culture hints will challenge you to try as many of the species as you can obtain. You will be surprised at the number that will thrive with just a little care and planning.

F. C. Puddle, V.M.H.

If I were asked the question: Which do you consider the most popular family of garden flowers? without hesitation my reply would be Primulas, for there must be very few gardens in which this genus is not represented as, provided that the cultural conditions are fairly reasonable, there are Primulas suitable for every garden. Yet there is no royal road to Primula cultivation, even our native Primrose (Primula vulgaris) will not thrive in every garden. The late Sir Arthur Hill, on seeing a colony of Primroses naturalised in the gardens at Bodnant, once remarked to me: "I wish we could grow Primroses like that at Kew." Much, of course, depends on local conditions, but whilst some Primulas will thrive in the hands of novice gardeners, others will try the skill of the most experienced cultivator.

There are many pitfalls in Primula culture, and one of the most common is the idea that moisture-loving Primulas require boggy conditions, and would-be growers attempt to provide natural conditions by constructing an artificial bog. We must always bear in mind that the water in a highland bog is constantly moving and is therefore aerated, whereas an artificial bog is invariably stagnant, and I know of no Primula which will endure such conditions for very long.

When a natural stream is running through the garden the conditions are, of course, very different, for the banks of a stream will usually provide ideal positions for growing moisture-loving Primulas, and some species, notably P. Florindae, will be quite happy with some of their roots actually in the water. I have known P. Florindae to naturalise itself under these conditions, whereas it has soon died out in a bog.

In the average garden, without natural water, Primulas are far happier growing on a moist shaded border or bed than in any artificial bog, and provided that the soil is rich in humus, in the form of peat or leaf-mold, then the whole of the Candelabra group of Primulas may be grown with every chance of success. These include: P. pulverulenta and its beautiful pink forms which are known as the Bartley strain; P. japonica and its varieties; also P. Baileya, P. aurantica and P. Coelbourniana with their charming hybrids. There are several other species of the Candelabra group which are, perhaps, not quite so well known but are worthy of more extended cultivation, amongst these being the yellow P. helodoxa and the deep purple P. anisodoras; these two species are very effective when planted in combination, and occasionally they will form a union and produce a hybrid with flowers of a crushed strawberry shade which has been exhibited under the name of P. anisodoras. P. Potssonii is one of the latest of the Candelabra section to flower, and its rich rosy purple flowers combine well with P. Florindae, which blooms at the same time. It is closely allied to P. Wilsonii but, as a garden plant, it is superior to that species, the chief difference being that the flowers of P. Wilsonii are slightly...
smaller and more or less pendant, whereas the flowers of P. Poissonii are more flat and are carried almost at right angles from the flower stems, or in other words they look at you.

Rhododendron beds often provide congenial homes for moisture-loving Primulas, as the Rhododendrons usually provide the right amount of shade, and here the dainty Primulas of the Sikkimensis section which include P. sikkimensis, P. alpicula and its varieties violacea, alba and luna, also P. secundiflora, are particularly effective, but they must not be allowed to suffer from drought during the summer months. These species are also very charming when planted in suitable positions in the rock garden.

P. Mooreana, which belongs to the Capitata group, is one of the most desirable Primulas for the average garden as it not only flowers over a long season but accommodates itself in almost any semi-shaded position provided that the soil is rich in humus. P. denticulata ranks amongst the most popular of Asiatic Primulas, and it provided a charming spring picture in many gardens.

The Farinoseae group provides us with a number of good garden Primulas. These include P. rosea, P. chrysophora, P. involucrata, P. yarngonis and P. luteola. Primula Tayloriana, a recently introduced species, with charming lilac-blue flowers, is worth noting for future planting as it promises to be a good garden plant. It was exhibited for the first time in March (1949), when it received the R. H. S. Award of Merit. All the species in this group require fairly moist conditions at all times, but a congenial home can usually be found for them in semi-shaded low-lying beds in the rock garden, especially if the beds are mainly composed of peat.

P. Sieboldii is an old inhabitant of British gardens for it was introduced, from Japan, in 1861. In recent years it appears to have been overshadowed by the flood of new species which have been introduced to our gardens. Yet it is the best and most attractive of the Cortusoides section and deserves more extended cultivation. There are a number of varieties in various shades of rose and rosy purple, and the pure white form, P. Sieboldii alba, ranks amongst the most beautiful of garden Primulas. Some writers suggest that P. Sieboldii is of doubtful hardiness, but I have known it to withstand zero frosts without protection and without injury; surely there can be no more convincing test of its hardiness. All that it asks for is a semi-shaded position and a soil rich in humus. Other desirable species in this group are P. heucherifolia, P. Veitchii, P. geranioides and P. latiscapa, and these can be accommodated in a shady nook in the rock garden.

The Nivalis section is chiefly represented in gardens by P. chionantha. This species requires good drainage in winter and moist conditions during the summer months. The Muscarioideae group includes a number of species which are good garden plants provided they are treated as biennials, and are grown on a shaded border rich in humus. Happily they usually produce seeds abundantly, so reproduction is comparatively easy. P. Vialis, formerly known as P. Littontana, is the most charming species in the group and its small Kniphofia-like flower spikes densely packed with violet flowers make it one of the most distinguished Primulas in cultivation. Other desirable species are P. cernua, P. conica and P. muscarioideae.

The most suitable Asiatic Primulas for well-drained sunny positions are contained in the Bullatae section.
finer; "Ruby" has deep ruby-red flowers and "Faldonside" is crimson. There is also a beautiful white form, P. pubescent alba, which is generally known in gardens as P. nivealis.

P. marginata is another old favorite and is one of the loveliest European species with blossoms of lavender-blue. This species crossed with P. venusta produced the deep-violet "Marven." It is also the parent of "Linda Pope," a beautiful hybrid with rich lavender-blue flowers.

Many gardeners have endeavored to grow our native P. farinosa but without success. P. frondosa, a rather similar species from Thrace, is more amenable; in appearance it is like a coarse P. farinosa and is more free-flowering, the flowers being also a little more blue. It will succeed in a semi-shaded bed where the soil is fairly moist in summer and not too wet in winter. P. longiflora, a species from the Dolomites, with pale violet flowers, belongs to the same group and succeeds under the same treatment.

Our native Primrose, which is botanically known as P. acaulis and as P. vulgaris, belongs to the Vernales group of Primulas, is a first-class species and well worthy of garden cultivation. Many gardeners may wonder how the colored varieties of Primroses are obtained as there are few signs of variation amongst the plants in our hedgerows. These colored varieties owe their origin to P. acaulis rubra, which is a form of our Primrose introduced from the Levant, and in nature it has red, lilac, purple and crimson varieties. This form is undoubtedly the parent of our colored Primroses including the blue ones.

P. juliae, although an Asiatic species, belongs to the same group as our common Primrose, and this together with its hybrid form a very charming family of garden Primulas. The typical species is an attractive plant with magenta flowers, but it is quite outclassed by its hybrid progeny. These hybrids are grouped under the name of Juliana and some of the more meritorious varieties are "Wanda," lilac; "Devon Maid," rose-pink; "E. R. Janes," orange-pink; "Jewel," crimson-purple; "Mrs. Neave," violet-purple; "Purple Splendor," whose name describes the color; "Snow White," a beautiful white variety; "Pam," a charming miniature, and "Our Pat," with quite double purple flowers. They are all charming plants for shaded pockets in the rock garden and they are also quite happy in a fairly moist flower border, if they can be afforded a little shade from the midday sun.

We are sometimes apt to chide ourselves for the loss of some of the old varieties of garden primroses, but we must bear in mind that varieties which must be vegetatively propagated have a definite life-span, and when we propagate from cuttings or by division we are not creating new individuals but merely dividing one into many parts, and the whole clone gradually becomes weaker with old age, and the variety eventually dies out.

Probably the most troublesome thing which cultivators of Primulas have to contend with is root and stem rot. The greatest losses take place during the winter and we must bear in mind that, in nature, the Asiatic species are usually covered with snow during the winter months, and the varying conditions of our British winters are very trying to them. It is wise to remove all decaying foliage so that it does not form a rotting mass over the crowns, for this may set up a rotting of the crowns themselves. Another wise precaution is to avoid late autumn planting, for Primulas should not be transplanted after the middle of September, otherwise any roots which may be injured (Continued on Page 69)

The University of California System For Producing Healthy Container-Grown Plants

Mr. Balcom here reviews a volume which, although compiled primarily for nurserymen, is a liberal education in plant pathology and, at the small cost, there is no reason why it should not be on the shelf of every grower, large or small.

BYRALPH BALCOM

The University of California College of Agriculture has recently published a manual entitled "The U.C. System for Producing Healthy Container-Grown Plants".

This is a very comprehensive publication of 332 pages in book form and is the summary of a program resulting from sixteen years research by the Department of Plant Pathology, University of California, Los Angeles. Ten authors, each a recognized authority in his own field, have contributed chapters dealing with various phases of this program. The information here assembled should be of real value to all nurserymen.

They have evolved a system for cutting the cost of growing plants in containers. This is best accomplished by employing a constant base consisting of a mixture of fine sand and peat moss (both low in fertility) and, to this base, fertilizers are added to suit the particular needs of the plants. Charts are listed which show these varied formulas. No leaf mold, animal manure, turf, or compost is used in any of these soil mixes.

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This manual is not something that can be read like a story book but requires a considerable amount of study. Its principal use will be as a book of reference and it has been arranged accordingly, with an index, cross references, tabulated data, and a summary. It also contains charts, drawings, and photographs.

I might criticize mildly the fact that in places it is somewhat repetitious — also that the authors tend to get involved in lengthy technical details that, to the average layman, is a bit tedious. There is assembled here, however, an immense amount of useful up-to-date information which should be of value to Primula growers who raise plants in pots or containers, particularly to those who grow them in quantity. It represents a tremendous amount of research and effort, and in my opinion, is a work well done.

To obtain the Manual No. 23, send $1.00 to Agricultural Publications, 22 Gianini Hall, University of California, Berkeley 4, California. Please make checks or money orders to The Regents of the Univ. of California.
American Primrose Society

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Knippenberg, Mrs. J. F.    736 Pines Lake Dr. W., Wayne, N. J.  
Koeder, Mrs. Louis    800 South Raymond St., Bay City, Mich.  
Kolowrake, Mrs. Eric M. L.    2611 South West Ravensworth Dr., Portland 1, Ore.  
Kramer, Mrs. Clarence    P.O. Box 3, Elbe, Wash.  
Kristof, V.    Chrudim 305/2, Czechoslovakia  
Labby, Dr. Daniel    5931 South West Hamilton St., Portland 1, Ore.  
Lamb, Mrs. J. C.    814 Montclair Dr., Lexington, Ky.  
Landweer, Mrs. Harry    P.O. Box 76, Mt. Vernon, Wash.  
Lancaster, Mrs. B.    1845 North Burlington, Wash.  
Langdon, Mrs. Howard G.    77 Beverly Rd., Wethersfield, Conn.  
Langfelder, Richard    170 Bedford Rd., Chappaqua, N. Y.  
Larkin, Howard    628 North Prospect, Tacoma 6, Wash.  
LaSociete des Amateurs de Jardins Alpins    6/10 Viciomeuse de Toulouse, 14 Bd Edme Augier, Paris 16, France  
Laughlin, Mrs. H. C.    3867 Sulphur Springs, Toledo 6, Ohio  
Lawfield, W. Norman    345 South New Malden, Surrey, England  
Leacock, Mrs. W. H.    Highburgh Slipper Lane, Mirfield, Yorkshire, England  
Leach, Mary Ellen    1832 Greenwood, Reedsport, Ore.  
Leaver, Mrs. S.    16603 Hjorth Rd., Rt. 3, North Surrey, B. C., Canada  
Lee, George S.    17 Chichester Rd., New Canaan, Conn.  
Lee, Mrs. John M.    317 Englewood Ave., Syracuse 7, N. Y.  
Lee, Mrs. Frederic P.    7401 Glenbrook Rd., Bethesda 14, Md.  
Lehman, Bertram    416 E. Chicago St., Elgin, Ill.  
Leighty, Mrs. J. M.    11 High St., Winthrop, Main.  
Less, Mrs. William I., II    2026 E. 80th, Seattle 15, Wash.  
**Levy, Mrs. Florence    Barnhaven, Gresham, Ore.  
Levy, Mrs. Lew    Rt. 1, Box 380, Rockaway, Ore.  
Levis, Mrs. Henry M.    P.O. Box 1, Jericho, Montana.  
Linthicum, Miss Louise    2605 South West Buena Vista Pl., Portland 1, Ore.  
Livingston, Miss Alida    Bensmen's Lane, Ocean Bay, Long Island, N. Y.  
Lord, Mrs. William A.    3136 Pine Street, East Elmhurst, Queens, N. Y.  
Loud, Miss Edith M.    Eastland Hotel, Portland, Maine  
Lucas, Mrs. Henry    Star Rt. 2, Chelalis, Wash.  
Lusforden, Francis    Box 251, Box 661, Everett, Wash.  
Luncher, Mrs. C. J.    Box 251, Butte, Mont.  
Lusforden, J. D.    Box 1, Box 661, Everett, Wash.  
Luther, Mr. & Mrs. Arthur    2206 E. 80th, Seattle 15, Wash.  
Lyons, Mrs. Wm. H.    RR 5, Dummbulure, Ontario, Canada  
Macken, Mrs. H. S.    Box 222, Rt. 1, Silverdale, Wash.  
MacPherson, Mrs. M. J.    3049 East 90th St., Seattle 15, Wash.  
Madison, Ber    2556-30th Street, Moline, Ill.  
Madison, Mrs. Marshall    19th Floor, 225 Bush St., San Francisco 4, Calif.  
Magnus, Mrs. Isida H.    9707 Meridian Ave., Seattle 3, Wash.  
Manter, Mrs. A. H.    Mansfield Lawrenceville, N. J.  
Manton, Mrs. Robert C.    Durham, N. H.  
Maris, Mrs. Robert C.    4172 South East 55th, Portland 15, Ore.  
Martin, Mrs. Daniel D.    530 North East 87th Ave., Portland 20, Ore.  
Martin, Mrs. Louis G.    1326 North 13th, Ohio  
Maskey, Mrs. Carl    2125 Fifth St., Milwaukee 22, Ore.  
Masley, A. L.    3626 Springs Trail, Madison 5, Wis.  
Massino, Mr. Robert    14815 Watertown Plant Rd., Elm Grove, Wis.  
Matsumura, Mr. Yoshikura    Shomu Jr. College, Nakayama & Chome  
Maxwell, Mrs. K. M.    425 East Lancaster Ave., Downingtown, Penn.  
McCleary, Dora M.    Rt. 1, Box 395G, Edgewater, Md.  
McCord, Robert D.    Star Route, Kingston, Wash.  
McCurray, Floyd D.    P.O. Box 141, Bay City, Ore.  
McElwee, Mrs. M.    150 Collinsworth Dr., Rochester 10, N. Y.  
Mckay, Mrs. Edna H.    1634 North East 74th, Portland 13, Ore.  
Mckay, Mrs. Frank H.    Rt. 3, Box 301-A, Port Orchard, Wash.  
McKean, Miss Margaret    1705 Beaver Rd., Coralsia, Pinn.  
McLauchlan, Mrs. L. S.    R.F.D. No. 1, Norridgewock, Maine  
McLeod, Mr. James Stuart    6921-58th Avenue N. E., Seattle 13, Wash.  
McMurry, Mrs. Theresa    2311 Vallicia St., Bellingham, Wash.  
**
McRae, Mr. Hugh ........................................ 415 Lineme Ave, N.W., Washington, D.C.
Mecze, Edward E ...................................... 24416-16th Avenue S., Kent, Wash.
Michaud, Mr. Frank ................................... 13528 Trans-Canada Highway, New Westminster, B.C., Canada
Michaud, Mrs. L.J. .................................... Rt. 1, Box 3306, Issaquah, Wash.
Miller, Elva Maudie ................................. 21 Raymond Heights, Petaluma, Calif.
Mitsch, Mr. Grant E ................................... Canby, Ore.
Moare, Rita .............................................. 113 Alberni, B.C., Canada
Moffett, Mrs. James B ................................ 510 West 29th Ave., Vancouver 9, B.C., Canada
Montich, Mrs. Mahlon ................................. 31210 Beverly Rd., Alderwood Manor, Wash.
Montich, Mrs. Virginia .............................. 31210 Beverly Rd., Alderwood Manor, Wash.
Moon, Mrs. Charles ................................... 4107 West Woodbine St., Chevy Chase 15, Md.
Marcehau, Mrs. Russell .............................. 7605-7th Place N.E., Chevy Chase, Md.
Morin, George A ........................................ 44 School St., Boston 8, Mass.
Mott, Mrs. Wilfrieda ................................. 102 Oswego St., Baldwinsville, N.Y.
Mayer, Miss Robert O. ............................... Rt. 1, Welser, Idaho
Muller, Miss Robert W .................................. P.O. Box 384, Davenport, Iowa
Mullhollan, Ethel ....................................... 194第五大道, Eugene, Ore.
Murdock, Mrs. L.C. ................................... 3003-118th South East, Bellevue, Wash.
Murray, Mrs. Edward D ................................ Westbury, Long Island, N.Y.
Myers, Mrs. Boyd ....................................... Rt. 3, Box 269, Sherwood, Ore.
Newkirk, Mrs. M.W. ................................... Box 35, Belfair, Wash.
Nies, Miss Anna ................................------- 1124 Maple Ave., Lancaster, Penn.
Nogrady, John W ....................................... 317 Sixth St., Rockelle Park, N.J.
Noguchi, Kikusaburo ................................ No. 1022 Shimrosue, Kamaki City, Aichi Prefecture, Japan
Norberg, Mrs. Earl ................................... 5740 Wissachicken Ave., Philadelphia 44, Penn.
Norris, Mrs. Tom ....................................... Box 124, Maple Valley, Wash.
Noyes, Miss Lyman A .................................. FERNBRIER GARDENS, Rt. 1, Box 1321, Issaquah, Wash.
Offerman, Mr. Jack ................................. OFFERMAN DELPHINIUM GARDENS, 5019-47th Ave. S.W., Seattle 16, Wash.
Olson, Mrs. O. A. ...................................... 222-78th Avenue S.E., Mercer Island, Wash.
Ord, Mrs. George ...................................... Rt. 5, Box 955, Bremerton, Wash.
Osman, Albert ......................................... 201 Gilman St., Bridgeport 5, Conn.
Otteston, Mrs. A. ..................................... 6036 North East Sixth Ave., Portland 11, Ore.
Page, H.J. ................................................ 110 Walling St. E., Markle Pl., Tucowser, Northants, England
Palmer, Dr. Edward ................................. 6639 Stanley Ave., Berwyn, Ill.
Park, Mrs. Julia ........................................ 816 12th St., Bellingham, Wash.
Parsons, Mrs. Hubert F. ......................... 3024 North East 23rd, Portland 12, Ore.
Pearce, Percy L. ...................................... 11 East 52nd Ave., Vancouver, B.C., Canada
Pearson, Mrs. Blanche L ...................... R.F.D. 1, Middleport, N.Y.
Pearson, Mrs. E. P ...................................... Rt. 1, Box 355, West Linn, Ore.
Parkins, Mrs. John D .................................. MERRIN NURSERY, P.O. Box 283, Fort Bragg, Calif.
Peters, Mrs. H.A. .................................... Apt. 2-E, 20 Brookside Dr., Greenwich, Conn.
Petersen, Elsie ........................................... Rt. 2, Box 429, Portland 10, Ore.
Petersen, Alvin E ................................... 3345 Tennyson St. N.W., Washington 15, D.C.
Petersen, Raymond W. ............................... 943-47th Street, Hammond, Ind.
Phaff, Mr. Albert D .................................... 829 Morse St., Saginaw, Mich.
Phillips, Mrs. Melva A .............................. 316 Riceardon Rd., Christ Church, N.W. 3, New Zealand.
Pinney, Mrs. Alexander ............................ Tullahoods Rd., Whippoorwill, Armonk, N.Y.
Plews, Mrs. Burns .................................... 40 Taylor Dr., Toronto 6, Canada
Portland Garden Club ................................ 2312 South West BIdg., Portland 15, Ore.
Powell, Miss Gladys .................................. Clinton, N.Y.
Priley, Joseph C ...................................... 203-8th Avenue E., Duluth 5, Minn.
Primrose Glasgow .................................... RR2, Box 335, Berrien Springs, Mich.
Putnam, Robert C ...................................... 11811 North East 73rd, Kirkland, Wash.
Puts, Alfred ............................................ 812 Princeton Ave., Haddemond, N.J.
Pyle, Mrs. Harold, Sr. ............................... Sinking Spring, Rt. 1, Berks County, Penn.
Rameley, Mrs. Ralph ............................... Rt. 1, Monroe, Wash.
Raymond, Mrs. Florence......................... Rt. 1, Box 164-A, Alderwood Manor, Wash.
Rea, Mrs. N. F. GEITZUM PRODUCTS .......... 1310 Zehnder St., Sunnyside, Wash.
Reed, D. L. .......................................... 1423 East 2nd St., Fort Angeles, Wash.
Reid, Mrs. Alex Dodge ............................ 260 Boulevard, Mountain Lakes, N.J.
Renefelt, Frank ...................................... Capitola, Calif.
Rice, Mrs. George T. .................................. 67 Thatcher St., Westfield, Mass.
Rice, Mrs. L.S. ........................................... Rt. 2, Box 2006, Loomis, Calif.
Rief, Mrs. Charles D ................................ 1751-3rd St. F., Brock, Calif.
Richmond, Mrs. A .................................. 1065 East Main St., Shelby, Ohio
Hiddle, Dr. Matthew C. ......................... 2557 South West Vista Ave., Portland 1, Ore.
Ries, Mr. Victor ...................................... 1241 Lincoln Rd., Columbus 12, Ohio
Rigby, Mr. Leonard R .............................. Box 130, Lakeview, Wash.
Ringspach, Mrs. L.N. ............................... 19723-88th Avenue N.E., Bothell 4, Wash.
Ringspach, Mr. L.N. ................................ 19723-88th Avenue N.E., Bothell 4, Wash.
Roch, Mrs. Helen ..................................... 306 Boynton St., Mt. Vernon, Ohio
Robbins, Mrs. Willard ............................. Rt. 2, Nauvoo Rd., Fort Byron, N.Y.
Roberts, Miss Helen H .............................. 222 Everit St., New Haven, Conn.
Roberts, Mrs. W.C. .................................. P.N.E. Fair Park, Sutton, Shropshire, England
Rodebaugh, Mrs. Everett G ....................... 20, Box 356, Pottstown, Penn.
Roney, Mrs. A.V. ..................................... 8300 Beverly Blvd., Los Angeles, Calif.
Root, Mrs. E.W. ...................................... 13110 Martin Ave., Los Angeles, Calif.
Rosenfeld, Mrs. James W. .......................... 6427 South West Hamilton St., Portland 1, Ore.
Roush, Mrs. L.T. ..................................... Box 35, Belfair, Wash.
Rumple, Mrs. J.F. ................................... R.R. 2, Ladysmith, B.C., Canada
Ryba, Mrs. Adolph ................................. 405 Prairie Ave., Elmhurst, Ill.
Salzman, Mrs. A.G. .................................. 20035 South West Johnson, Aloha, Ore.
Sanborn, Mrs. A.H. ................................. 205 South West-11th Ave., Chico, Calif.
Sanderson, Miss Clarence ......................... Rt. 3, Box 332, Sedro Wooley, Wash.
Sandsy-Wunsch, Mrs. T.V. ..................... "Dowoods", Duncan, B.C., Canada
Sandum, Mrs. Van ................................. 254 West Humphrey Way, Eugene, Ore.
Savage, John Y ....................................... Warren, Cornwall Bridge P.O., Conn.
Saxe, Mrs. Robert E .................................. 166-11th Avenue, San Francisco 18, Calif.
Sayers, Mrs. A. ....................................... Box 74, Haney, B.C., Canada
Schmidt, Mrs. Rosella B ............................ Rt. 1, Mount Lebanon Rd., Abbotsford, B.C., Canada
Schmidt, Mrs. Norman ................................ 1546 South East 57th Ave., Portland 4, Ore.
Schuierer, Lorenz .................................... 415 South East Shoreland Dr., Bellevue, Wash.
Schulties, Mrs. H.C. ................................ 4900-12th Avenue, Sacramento 20, Calif.
Scott, Mrs. Allen B. ................................ 940 Buchanan, Corvallis, Ore.
Schwender, Mrs. Wm. L .................................. 12001 Des Moines Way, Seattle 88, Wash.
Selling, Mrs. Laurence ............................. 6005 South West Hamilton, Portland 1, Ore.
Shackelford, Mrs. G.G. ............................ Star Rt. 1, Box 355, Belfair, Wash.
Shanes, Mrs. Helen V .............................. P.O. Box 152, Summer, Wash.
Sharoni, Mr. Riad ................................... 653 Avenue Horria, Gianaclis, Ramleh, Egypt
Shea, Charles R ....................................... 67 Dedham St., Newton Highlands 61, Mass.
Shepherd, Mrs. Dave .................................. Box 272, Mt. Angel, Ore.
Sherman, Mrs. E.J. .................................. Rt. 2, Box 88, Molalla, Ore.
Sherwin, Mrs. Carl P ................................ Duane Stage Rt., Malone, N.Y.
Short, Mrs. Howard ................................. 3232 Conkling Pl., Seattle 99, Wash.
Shoaf, Mrs. John ...................................... 3232 Conkling Pl., Seattle 99, Wash.
Shuman, Mrs. John ................................ 5957 - 37th South West, Seattle 6, Wash.
Shuman, Mrs. John ................................ 5957 - 37th South West, Seattle 6, Wash.
Sibbett, Mrs. Ira N. .................................. 2817 N. Warner, Tacoma, Wash.
Siebert, Mrs. Charles ................................ 3272 Arcadia Pl. N.W., Washington 13, D.C.
Siepert, Mrs. John ................................... 3616 North East Bellevue-Redmond Rd., Kirkland, Wash.
NOTES ON SEE D EXCHANGE

BY ELMER C. BALDWIN

A rising vote of thanks to the members for their interest as evidenced by their contributions to the Exchange. Another standing vote for their interest as shown by the requests made. It was inevitable that some items should run short and, with this in mind, we endeavored to divide the seeds of the scarcer varieties into packets of a sufficient quantity to insure at least a small group of plants. Of those in better supply, a larger portion was possible.

It was unnecessary to remind the member that in handling and planting the extremely fine seed of some of the items—as, for example, certain of the primulas, saxifraga, ramonda, chimaphila, pyrola, and others—"care" was the watchword.

The Committee will continue its efforts to include even more primula species another year and again to limit the polyanthus varieties to known quality strains and sources but, in addition, to have a section for hand-pollinated seed as produced in members’ or club gardens if sufficient interest in this is indicated by member participation.

Thought will be given to a standard envelope for contributors to send in, if they care to use it.

THE ALPINE GARDEN SOCIETY

Has Over 160 Members In The United States Of America

Its Quarterly Bulletin of nearly 100 pages, is generally recognized as one of the best specialist horticultural publications in the World.

Its Seed Distribution Scheme offers a choice of well over 2,000 kinds from which Overseas Members can annually select 15 packets (donors, 20 packets) of seed which in many cases is not otherwise procurable. There is always a good choice of primulas.

The Annual Subscription, dating from the 1st of January, is £1, payable to the Secretary, C. B. Saunders, Husseys, Green Street Green, Farnborough, Kent, England, but American members may find it more convenient to send $2.80 to Dr. C. R. Worth, Groton, New York, the Society’s Hon. Assistant Secretary in the U. S. A., who is empowered to receive subscriptions and to issue receipts on behalf of the Society.

AMERICAN PRIMROSE SOCIETY

APPLICATION FOR MEMBERSHIP OR RENEWAL

The official organ of the American Primrose Society

Mrs. Orel I. Agee, A.P.S., Treasurer

11103 S.W. Wood Avenue,

Milwaukie 22, Oregon.

I desire to be admitted to or to renew my membership in the AMERICAN PRIMROSE SOCIETY, Herewith I enclose dues, as checked below, which will include a year’s subscription to the Quarterly.

( ) First member of the household $ 3.50

( ) Three years if paid in advance 10.00

( ) Second member (no subscription) 1.00

( ) Sustaining Membership 5.00

( ) Life Membership 100.00

( ) Commercial Listings in Capitals in Register 1.00

( ) Overseas Membership 2.50

Kindly make checks payable to the American Primrose Society

American Primrose Society

Polyanthus

Auricula

Primula

Delphinium

Pristipila

P. kisumii
(Continued from Page 48)
adequate to supply the large number of orders they anticipated if their name appeared. Your comment about noting behind the name of the nursery that seeds are offered is appreciated. We have done this in some cases, but we have not in all. We also tried to note behind the key when seeds are available.

It might interest you to know that we wrote to every individual and company that had a nursery permit in each state in the Union, explaining what the Plant Buyers' Guide was, and that we were anxious to include all of those who had plant material to offer. We asked in each case that either a plant list or a catalog be sent us, because it was from those that the plant names were taken. The ones in the Plant Buyers' Guide were those who replied.

There are errors in the make-up, many of them, and those we have discovered to date will be noted and corrected in the supplement which should appear this summer, and which will be sent free of charge to all those who have purchased the Guide.

Thank you for calling our attention to the error which lists "acaulis" as grown by Vetterle & Reinelt.

You may be interested to know that the letter key set-up was recommended to me by the Director of the Agricultural Section of the Library of Congress as being much simpler to use once it is understood. We have had very few criticisms about it.

Beginners are often surprised to learn that prickling off seedlings as soon after germination as they can be handled is much less of a shock than if left in the seed flat and transplanted later. Watering with tepid water for the first few weeks is another trick of the successful professional grower.

There are errors in the make-up, many of them, and those we have discovered to date will be noted and corrected in the supplement which should appear this summer, and which will be sent free of charge to all those who have purchased the Guide.

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

Liquid WHALE by MAIL ORDER
If you cannot buy the more economical larger sizes of BLUE and Liquid WHALE from your Nurseryman, send $1.00 for post-paid, duty-free, 12 fluid ounce can of Liquid WHALE, and/or $3.25 for a bantam bag (approx. 10 lbs.) of BLUE WHALE to Acme Peat Products, Ltd., 789 W. Pender Street, Dept. 16, Vancouver, B. C. (See back cover)

PRIMULAS FOR THE AVERAGE GARDEN
(Continued from Page 52)
during the operation will have little chance to heal before winter sets in and rotting of the roots may result.

Primula aphids sometimes a troublesome pest, especially when plants are grown in pots. Although methylated spirit is usually recommended for its destruction it is not very effective when used alone, but when a little nicotine is added it is much more potent. Place a teaspoonful of nicotine in a regulation medicine bottle and fill with methylated spirit—the medicine bottle forms a most convenient receptacle as the mixture can be corked for further use. The insecticide should be applied with a small brush.

During dry weather Primulas are sometimes attacked by red spider. This is a difficult pest to eradicate as the insects lurk on the underside of the leaves and they are difficult to reach with a sprayer. If only a few plants are affected it is advisable to sponge the foliage with a suitable insecticide. If obtainable, a soapless insecticide should be used, for soap often proves injurious to hairy-leaved plants.

To preserve a collection of Primulas it is very necessary constantly to renew the stock by means of seeds. Fortunately this presents little difficulty as most of the species and hybrids seed freely. When the plants are in flower it is a good plan to go carefully through them and to mark the best forms by tying a piece of raffia round the flower-stems and save seeds only from these marked plants. In this way we may enjoy all the pleasures of selective breeding and gradually improve the quality of our plants.

When the seed capsules show signs of ripening they should be examined daily and collected when they show signs of splitting, otherwise the seeds may be lost. The seeds should be sown as early as possible after they are gathered, but do not be discouraged if the autumn germination is not up to expectation, as Primula seeds do not, as a rule, germinate collectively and there is usually a second germination in the spring.

Reprinted from "My Garden" September 1949.

Primulas In Southern California
(Continued from Page 44)
places there is plenty of natural rainfall the salts are diluted naturally and the soil kept in balance. This leaves the problem of disease which is reduced greatly in regions of adequate rainfall by being merely washed away. Of course many thousands remain, which is reason enough to take Mr. Chandler's advice to heart. In sections of inadequate rainfall it would be smart to test for salinity before using leafmold or animal manure.

Erratum
Attention is called to the fact that the price quoted on page 20 of the Winter 1959 Quarterly for Doretta Klaber's new book has been corrected to $3.95. This book by our regional editor from Pennsylvania, entitled "Rock Garden Plants—new ways to use them around your home," had not yet been received by J. K. Gill Company in time for inclusion in their ad on page 78 of this issue. However, the editor has been assured that the J. K. Gill Company will stock this book and that orders will be honored as soon as the book has been received from the publisher.
Constitution Of The American Primrose, Primula and Auricula Society
(As revised through November 1958)

We, the PRIMROSE LOVERS OF AMERICA, for the purposes hereinafter set forth, organize ourselves in an Association under the following Constitution:

ARTICLE I
The name of this organization shall be the AMERICAN PRIMROSE, PRIMULA AND AURICULA SOCIETY, INCORPORATED.

ARTICLE II
Section I—To increase the general interest and to cooperate with all interested organizations and growers in the cultivation of the primula in all its forms, hybrids, and species, and to improve it in standard of excellence and to study the best methods of its culture.

Section II—To encourage the use of, and to cooperate with other organizations in seeking to establish standardized nomenclature of existing species, hybrids, and varieties.

Section III—To set up, as the parent organization, a standard of rules and regulations for the judging of the genus.

ARTICLE III
Section I—All persons interested in the objects of this Society shall be eligible to membership.

Section II—Every member upon payment of dues set forth in the By-Laws shall be entitled to vote at all regular and special meetings of the Society and one duly elected representative from each affiliated organization shall, when registered with the Secretary of the National Society, be entitled to one vote for the Society plus one vote for each ten members or fraction thereof whose affiliate dues have been paid.

Section III—All members shall be eligible to the office of President, Vice-President, Recording Secretary, Corresponding Secretary, Treasurer, and Director, except that professionals shall be in a minority on the Board.

Section IV—Active, sustaining, life, and affiliated organization memberships shall be held as provided in the By-Laws.

ARTICLE IV
Section I—The officers shall be President, Vice President, Treasurer, Recording Secretary, Corresponding Secretary, and six Directors.

Section II—Terms of all officers, except directors, shall be for one year beginning at the close of one annual meeting and ending at the close of the next annual meeting. Terms for Directors shall be for three years. Two directors will retire and two new ones be elected at each annual meeting.

Section III—Officers shall be elected by ballot at the annual meeting.

Section IV—Offices shall be filled by the Board of Directors for the unexpired term of office in which the vacancy occurs.

Section V—The President shall appoint a nominating committee not later than two months after the annual meeting. The nominating committee shall submit their nominations to the President within four months after the annual meeting. Nominations will also be accepted from the floor at the Annual Meeting, with the consent of the nominee.

Section VI—The fiscal year shall start January 1st and end December 31st.

ARTICLE V
The Annual Meeting of the Society shall be held during and in the same vicinity as the National Primrose Show each year. The local affiliated society sponsoring the show shall be host to the National Society for the annual meeting. The Board of Directors shall conduct the business of the Society between annual meetings with full power to act under the provisions of this Constitution and By-Laws to carry out the policies and projects of the Society that have been agreed upon by the members at the annual meetings or special meeting.

ARTICLE VI
The Constitution may be amended at any annual meeting by a two-thirds majority vote of the members present providing amendments have been approved first by the Board, and notice of such amendment has been published in the Quarterly, or otherwise given to all members at least twenty days preceding such meeting; or, by a two-thirds majority of Direction by mail providing that within three months from date of notice of proposed amendments with instructions for voting, ballots from fifty percent or more of the entire membership have been received by the Secretary.

ARTICLE VII
The Board of Directors may each year, upon application, designate one of the general primrose shows staged by an affiliated society as the National Primrose Show. Every effort will be made to secure a truly national representation at the national show. Without the Board's discretion, a special type primrose show, when staged by an affiliated society, may be designated as the National Show for that type of primrose. Never more than one show for a particular type of primrose shall be designated at the national show for that type of primrose in any one year.

ARTICLE VIII
Section I—The Society shall maintain and issue regularly each year three quarterly magazines and a year book, which shall be delivered free to the members and shall be sold to non-members under such terms as the Board of Directors from time to time may deem advisable to fix.

Section II—The President and Board of Directors shall designate each year, at the first Board meeting after the annual meeting, an editor and an editorial board to have charge of, and responsibility for the preparation and publication of the magazine, publication of advertising for same, and such other functions as naturally develop upon that position.

Section III—The editor shall be responsible for handling of editorial material received, for its editing and arrangement in the Quarterly and the Year Book.

Section IV—The Year Book shall be issued thrice a year and in April it shall be deemed to be absorbed into the Year Book which shall be issued at that time.

BY-LAWS
ARTICLE I
Section I—The officers shall be elected by ballot at the annual meeting of the Society and shall be by members and duly elected representatives of affiliated societies present at the meeting. Absence ballots received by the Secretary prior to voting time at the annual meeting will be counted the same as if the member were present.

Section II—The President shall preside at all meetings of the Society and of the Board of Directors and perform the general duties of President. He shall, with the approval of the President, appoint such committees or commit-teec chairmen as are needed to successfully carry on the work of the Society.

Section III—The Vice-President shall assist the President in every way possible and assume the office of Acting President in case of absence or incapacity of the President.

Section IV—The Treasurer shall post a bond during his incumbency, the cost of which shall be defrayed by the Society. He shall receive and account for all moneys of the Society and disburse the Society's funds on approval of the Board of Directors. The Treasurer shall be prepared to render an audit of the Society at its annual and other meetings. The annual report made by the Treasurer shall be accompanied by a report of audits made by an Audit Committee of two members appointed by the President.

Section V—The Corresponding Secretary shall conduct all official correspondence.

Section VI—The Recording Secretary shall record the minutes and maintain files and records of all publications, business bulletins, and business transactions of the Society.

Section VII—The Directors shall serve with the other officers as a Board of Directors to carry on the necessary business of the Society under the provisions of the Constitution and By-Laws and such additional ruling as may be made by the Society at its annual and other meetings.

ARTICLE II
Special meetings shall be subject to call of the President or Vice-President, or may be summoned by the Board of Directors, or invoked by notification through the President by a petition signed by fifty members. Twenty days' notice shall be given to all members of the United States of any special meeting and the object of the meeting shall be stated in the notice. No business shall be transacted at a special meeting except as stated in notice thereof.

ARTICLE III
Section I—Memberships shall be active (individual and household), sustaining, life, and affiliated organization memberships.
Section II — Active membership dues shall be $3.50 per year, and shall be due November 15th for the following year and considered delinquent as of January 1st. A family membership, with one copy of the Quarterly but with full rights for each member, will be offered as follows: $3.50 for the first member and $1.00 for each additional member. Active membership dues may be had for three years by payment of $10.00 in advance. Full membership, including subscription for the Quarterly, for overseas membership may be had for $2.50 per year.

Section III—Active membership shall entitle the holder to receive all publications issued by the Society during the year and to vote in the business meetings of the Society.

Section IV—Sustaining membership may be taken by persons interested in and desirous of furthering the objectives of the Society, and fees for such membership shall be $5.00 per annum, payable November 15th for the following year and considered delinquent January 1st.

Section V—Life memberships may be awarded to persons who have performed outstanding service in the interests of the Society, or may be secured by persons interested in furthering the work of the Society, for a fee of $100.00. Life memberships shall carry all privileges designated for individual memberships.

Section VI—An affiliated organization membership may be taken out by local, state, or national garden clubs, or similar organizations that have special and pre-eminent interest in Primulas, affiliating themselves with the National organization; and such membership shall be based upon payment of 25c for each member who belongs to the affiliated society as of the end of such society’s fiscal year. Minimum payment for affiliation $2.50.

Section VII—An affiliated organization membership shall entitle the organization to receive one copy of all bulletins, reports, and publications issued by the American Primrose Society; representation by duly elected delegate at all meetings of the Society; free rental of slides or any other program air maintained by the American Primrose Society.

ARTICLE IV

Section I—The Board of Directors shall consist of the President, Vice-President, Treasurer, Recording Secretary, Corresponding Secretary, the retiring President for one year, the Editor of the Quarterly, and six elected Directors.

Section II—The Board of Directors shall direct the business of the Society within the limits of the provisions of this Constitution and By-Laws and according the general policy laid down by the members at the annual or special meetings.

Section III and IV—deleted.

Section V—Directors shall be elected to serve three year terms. Two directors shall be elected at each annual meeting for terms of three years to replace the two whose terms are expiring and secure the rotation of membership on the Board. Absence of a director for three consecutive Board meetings or any four Board meetings during the year, without just cause, shall constitute a resignation.

Section VI—The Board of Directors may designate and constitute certain geographical areas as official regions of the Society and appoint a Regional Vice-President to represent the Society locally for each region. The Board of Directors may vacate, rescind, or change the designations of official regions whereupon the appointment of such Regional Vice-Presidents shall be vacated. Regional Vice-Presidents shall be appointed annually by the Board of Directors for one-year terms starting and ending with the terms of elected officers.

ARTICLE V

The members present, including five members from the Board, shall constitute a quorum for the transaction of any business at any regular or special meetings of the Society.

ARTICLE VI—deleted

ARTICLE VII

These By-Laws may be amended in exactly the same manner as the Constitution.

ARTICLE VIII

Roberts Rules of Order, Revised, shall govern this Society in all parliamentary matters to which they are applicable and in which they do not conflict with the Constitution and By-Laws.

Adopted at the APS National Meeting, Olympia, Washington, November 8, 1958

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1959 SPRING QUARTERLY

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(Continued from page 37)
should be made for this group. But for true Juliae hybrids, the more nearly the plant retains the miniature foliage and creeping habit of P. Juliae, the better the form. More often than not, foliage which is small at blooming time becomes gross before summer is over. Because of the dominant color of P. Juliae, one shade which is not easily bred out, purple shades are in the majority, with red, rose, and lavender shades second, and blue, yellow and white, third. Although no extra points have yet been allotted the color breaks, those colors most difficult to achieve, this is taken into consideration now that such forms are beginning to put in an appearance. The score for Juliae hybrids, or Juliana forms, has been kept simple until such time as competition among cultivators demands a more elaborate one. On the basis of 100 points, 30 are given for floriferousness; 25 for miniature foliage as nearly the type of P. Juliae as possible; 25 for clearness of color and eye; and 20 for cultural excellence. The standard for the species, P. Juliae, is based entirely upon cultural excellence and floriferousness.


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