Quarterly of the American Primrose Society

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Every gardener, be he amateur or professional, has his own method for growing primulas from seed. If his procedure is easy for him and the results are good, he should not change. After twenty years of trial and error, the following directions for planting represent for us the easiest and the most successful way. Our general practice is the same, whether we plant a few choice seeds in a pot or several ounces in open cold frames, although the soil mixture may vary a little,—more sand for Alpines, more peat moss for acid loving bogs.

For us, late winter or early spring planting is by far easier and gives us our best germination. We aim to sow early enough so that the flats and cold frames can be exposed to several nights of frost. In our locality, sometime between February 1st and March 1st is preferable. In more northerly and easterly sections, the time could be later. If we have been delayed, we freeze the seed before planting. Drop enough water into the packet so that each seed is moistened; place in the freezing compartment of the refrigerator or deep freeze; leave one week; thaw 24 hours; freeze again 24 hours; thaw, drain on a blotter or paper till dry enough to handle; sow immediately. In warm localities, this artificial winter is a "must." Another reason for early sowing of primula seed is that the seedlings develop into sturdy plants with less care during the gradual rise in temperature through April, May and June, than during the extremes of July and August.

Why not plant in July and August when seeds are freshest? Primulas are cool weather plants and many seeds will not germinate during the heat of Summer. The blue and the pink shades in both Polyanthus and Acaulis can lie in the ground without germinating until Fall or the following Spring. The same is true of many Asiatics, Seiboldi, Candelabras, etc., for in nature, many primulas in high elevations drop their seeds in late Summer. Before they can germinate they are covered by ice and snow and lie dormant until the warm sun awakes them. Another objection to summer planting is that where Winters are severe, seedlings from Summer sowing must have special care to survive, whereas those from a Spring sowing are, by Fall, well established, and ready to bloom the following Spring. In southern localities, however, where growing continues practically all Winter, primula seeds, especially Polyanthus, are generally sowed in the Summer, the plants blooming the following Spring.

Properly prepared beds, cold frames, flats or seedling pans, must all have enough openings for ample drainage. Rock chips or gravel in the bottom are helpful. It is advisable to spray the boxes with a fungicide. Pots can be scrubbed. Any precautions against molds and fungi are well worth the trouble. Soil can be baked, steamed in a vegetable cooker, or boiling water can be poured over it.

**QUARTERLY**

**PLANT PRIMULA SEEDS NOW!**

*The Clarkes*, Clackamas, Oregon

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Select weed-free soil that has been frequently turned and exposed to light and sun. Sow through a one-half inch screen and mix with an equal amount of sieved leaf mold or peat moss. If soil is heavy, substitute fine sand for a portion of it — enough to make the mixture "clumpy." For Alpines use equal parts of sand, soil, and leaf mold. For the lime-lovers such as Auriculas, a dusting of oyster shell meal or horticultural lime is desirable. To kill weevils, curwings, sowbugs, and their ilk, mix one teaspoon of some soil dust to each flat of the soil mixture. These soil dusts are put up under various trade names. Most of them contain Lindane, some Chlordane, as well as various combinations. You will be amazed at the collection of pests that come to the surface after the mixture has stood overnight.

We fill the flats or pans about one third full of sieved, well rotted cow manure, or, lacking this, a rich compost. Tamp and then fill the flats to within one inch of the top with the prepared seeding mixture. Over this we sieve through a one fourth inch mesh, a topping one half inch deep, composed of leaf mold or river or creek silt. Many successful growers use rotted alder sawdust, sphagnum moss, or vermiculite for this final layer. Add a more or less sterile medium which will retain moisture and yet avoid sogginess. The light texture of these materials enables the tiny roots to take hold quickly and, since this top layer is very thin, they soon get to a richer layer of soil finally to the rotted manure. Here the roots continue to feed and develop till the seedling is large enough to be moved easily. If the seeds are sow strangely enough it is possible to leave the plants in the original seed bed until they are ready to set out in their permanent location. This bypasses that hazardous, heart-breaking first transplanting of tiny seedlings, where so many beginners take their heaviest losses.

Some gardeners object to treating the seeds with chemicals. We have consistently over the years, used red copper oxide on every seed planted and have never observed any ill effects. We feel that it discourages "damping off," and we have found that it is easier to achieve even distribution of the red coated seed. Since more primula seeds are very fine, we do not cover them with soil but press them in and lay over them a square of very thin burlap. This helps retain the moisture and also provides shade. Water seed bed through the burlap, the first time with hot water — 100° is not too hot, but later, if more moisture is necessary, use warm water. If seeds have been frozen previously, cover the flat or frame with glass or sash to retain warmth from hot water. We keep a cover on the frame for warmth, retention of moisture and protection from heavy rains, birds and animals. Baiting for slugs, snails, and mice around the frames is very important, especially in early Spring.

Germination, depending on weather, locality and the variety of seed, can occur in from one week to a month. During the germinating period the frame should be inspected daily. The seed-bed must at all times be moist but not soggy. As soon as the white checks show on the reddish seed lying under the burlap, we remove this covering and sift over the seeds one fourth inch of peat-moss or leaf-mold. This is most important. To remove the covering at this crucial stage and not replace it with a substitute, would be fatal. If the weather is abnormally warm and dry, we place the burlap back over the bed until the little red seed capsules glow above the new covering. The burlap is then removed permanently and the seed bed is now given 50% shade with slats, a lath frame, or coarse sacking tacked on a frame. Or the seed flats can be plunged in the shade of a shrub or tree.

Seedlings must have plenty of air and must never be overcrowded. We believe that many failures are due to underwatering the seedbed during the germinating period and over-watering after the seedlings are up. We aim to check our seedbeds about 10:00 A.M. and about 2:00 P.M. during the critical days when the seeds are sprouting and later when the rooting are forming. To avoid "damping off" — a term used to designate the rotting of the stem of the seedling at the surface of the ground — we rarely water the seedbeds after 3:00 P.M., aiming to carry them "on the dry side" over night. Should "damping off" occur, spray with yellow宠 coil or Serenade. As soon as the first leaves are formed pull any grasses or other weeds. Many times grasses can be pulled before the primulas are up. Always settle soil which has been disturbed. If seed has been sown too thick the plants will need thinning.

During the late Summer months, spray or dust plants for aphids and red spider. We dust for aphids with Nicotine Sulphate and for red spider we use Aramite. Various other good dusts and sprays are available. We transplant seedlings into deeply dug soil, conditioned with compost, leaf mold, peat moss or sand, depending on the particular requirements of the land to be used. Sand, rock chips and well rotted manure to which have been added some oyster shell meal and some super-phosphate, are desirable for the Alpines. The bog types are intolerant of lime and require more water. If the primula roots are heavy and fleshy, you can probably be reasonably sure that the type will thrive in a somewhat heavy soil. If the plants have fine, hairy roots, set them in light woodland soil or any well drained soil with plenty of humus. The following seem to us to be the common pitfalls.

1. Your grower has so cured and stored his primula seed, as to obtain and preserve a high degree of viability. Until you plant the seed, keep it in a sealed jar and store it in a cool place.
2. Much of the seed planted in a coarse, carelessly prepared seedbed may get buried and never germinate.
3. Do not permit seed to dry out during germination, but do not dry young seedlings.
4. If grown indoors or in a greenhouse, keep temperature cool — around 60°.
5. Bait around flats for slugs, snails and mice. Protect from birds. (Mice and birds love to feast on the seed capsules which the seedlings must have for their survival.) Good luck and good gardening!

The **Auricula** Month by Month

C. G. HAY SOM

January: During this month the Auricula will be preparing for active work for the three following months, and will require little attention beyond seeing that the soil never gets too dry. In open weather abundance of air must be admitted and the plants kept clean by the removal of all decayed leaves.

February: This is an active month. If the weather remains open the plants may be given more water than they should have received since October. All shoots large enough for removal should be taken off whether they have rooted or not. Those without roots will soon become rooted if placed around the sides of pots, and those with roots attached must be planted into 2-inch pots, and for these a little extra leaf mould or Sorboth is a useful addition to the compost. The surface of the soil around the old plants will need to be stirred, and a little fresh soil added where necessary. The old-fashioned way of removing about 1 inch or so of soil, and adding a very rich compost, is a complete waste of time.

March: During this month more water may be given, care being taken that the soil does not become sodden. On some varieties the bloom will begin to show and watch should be kept for green-fly, and as at all times when this pest appears, fumigation should be given at once. Always maintain a free circulation of air, only closing the house or frame in the event of frost which may damage the earliest blooms. Covering with paper at night will do much to protect them from frost.

(to be continued)

**AS TO PRIMROSES, IT IS ONE WORD**

Primrose lovers in other parts of the world are often interested in joining our Society, but are prohibited membership on account of fiscal regulations. Some members here have found an exchange membership profitable, whereby they are responsible for the dues of someone in England or Australia, in exchange for seeds, publications, or foreign society memberships. In some instances this has led also to a very enjoyable correspondence. If you would be interested in paying for a P.S. dues for someone outside of this country or Canada, write the Secretary, Mrs. Earl A. Marshall, at 1172 S. E. 55th Ave., Portland 15, Oregon.
Mrs. John L. Karnopp
CARROLL HIGGINS*

Growing up loving wild flowers and plants in Wisconsin, and later coming to Oregon to widen her knowledge and acquaintance with them is the experience of Mrs. Karnopp. Her home site on a hillside in Portland was not entirely cleared of the natural growth, but her garden was made more beautiful by choosing those plants that liked the Douglas fir, dogwood, maples and ferns which were there when she came. Other native plants were brought, but now along with them beside winding stone steps, the beautifully planted rocks which cover the hillside, the green lawn, and trickling water, are those native to other lands—Asia, Europe and the high mountains of America. Her skill in gardening has made them at home here.

She is a charter member of the American Primrose Society and her value to the Society cannot be estimated in mere words. She is always equal to every emergency in solving organization problems; her constructive suggestions given on so many occasions, have helped the Society to broaden its membership.

Her first special interest in Primulas was with Asiatics. She has become an authority on these plants and has some lovely examples of her own hybridizing in her garden. More recently she has led the way in pot culture of Auriculas and is the recipient of many first class trophies. She has served in many capacities on the Board, as Chairman of the Educational Committee, to name two, and this year she has charge of the arrangements for a novel Auricula Show.

Should you be a novice in primrose growing, or one whose acquaintance with these plants is of long standing, a visit with Mrs. Karnopp in her garden will be a gratifying experience. There you can look out into space to the grandeur of Mt. Hood and down at your feet to the simplicity of a small Primula species. When you leave it will be with her blessing and with some of the Primulas she has been raising so that she can give them to her friends.

* Mrs. Higgins is a former president of the A.P.S.

If you have information or pictures of Primula species grown on this continent, Mrs. J. L. Karnopp, 2738 S. W. Rutland Terrace, Portland 1, Oregon, will welcome your correspondence. She will use the material sent in for future articles or for footnotes to accompany her serialized article. The Spring may inspire members to go species hunting and the relating of those experiences should make interesting reading. This subject should make an excellent "Membership Project."

Mrs. Higgin's is a former president of the A.P.S.

Notes on Native American Primulas

MRS. JOHN KARNOFF, Portland, Oregon

The difficulty of establishing our wild species in the gardens comes undoubtedly from the fact that we cannot possibly provide the growing conditions for them that nature does. Some require their winter rest under snow, others must be almost dry the year around, while some like their toes in icy water and their heads in rarefied sunshine. There are those that must have meadow sod to grow in, and others that like mountain scree, or even the extreme of arctic tundra. As yet, we know little about the effect of altitude on these rare things. We must first realize that they have growing habits of very, very long standing and that these are not easily overcome. Acclimatization has been accomplished with many Primula species, in fact some of these have become the parents of lovely hybrids. Perhaps we may succeed with the American Primula through science or even through seed or the selection of plants, but progress can only be made through effort.

Roughly speaking the American primulas are now grouped into two general sections, Farinosae and Parryi, with two other sections, Cuneifolia and Nivalis barely represented on the very Western edge of our continent.

The FARINOSAE SECTION is both the largest and the most widely distributed section of the genus Primula. The American Farinosae are classified under the Subsection Eu-Farinosae. These are usually small meadow plants with lanceolate leaves covered with a white or yellow powder above or below. This farinosae quality has given the species its name. The pedicel is short and the truss carries several small blooms of white, lavender, lilac, or even deep purple, which are marked by the white or yellow eye commonly called "Bird's eye."

P. borealis Duby is distributed on this continent from the Mackenzie district in Canada to North and West Alaska and was probably first found by Langsdorff, a naturalist in the party of Admiral Krusenstern, in 1805. Langsdorff collected on both sides of the Bering Straits. This plant has small short rhyzomes; the leaves generally about a half inch long, are irregularly dentate and sparingly farinose. The flower stem is three-quarters of an inch to two inches tall, bearing an umbel of three to five blossoms, three-eighths to half an inch across, on slender stalks, a quarter to five-eighths of an inch long. The color of the flower is white, lavender, lilac, or even deep purple, with broadly heart-shaped, deeply notched lobes.

P. Hunnewelii Fernald is known only from a collection made by F. W. Hunnewell in 1928. This species, closely allied to P. speculicola, is very rare and was found on the limestone cliffs of the north rim of the Grand Canyon, Cocomino County, Colorado. The leaves are broad, spatulate, and farinose below. The flower scape is smooth and shiny, is relatively tall, and carries an umbel of three to ten flowers. The floral structure is not yet fully known and must wait further material.

P. incana Jones is distributed from the Mackenzie bay district in Canada, south through Saskatchewan, Alberta, Montana, Wyoming, Utah, Nevada, and Colorado. This dwarf, deciduous perennial has a short rootstock with leathery, fibrous roots, and a rosette of small short spatulate leaves, slightly toothed above the middle, at times slightly mealy, underside coated with a white or very pale yellow meal. The flower stem is rather stout, four to eight inches tall, coated with white meal and bearing a dense umbel of from two to fourteen lilac or purple yellow-throated blossoms, sessile, or on stalks up to half an inch long. The corolla is flat or slightly concave, about three-eighths of an inch across, with broadly heart-shaped notched lobes. Plants were collected by Dr. Richard Bond* in Nevada in 1950 and they bloomed in my garden but failed to endure the rather severe winter of 1950-1951. The Doctor generously shared his collection of Cusickiana, Broadheadae and incana with his many primrose friends.

P. intercedens Fernald has been found in Ontario, Michigan, Minnesota, Wisconsin, near Lake Superior, Lake Michigan and Lake Huron. It was introduced into cultivation a hundred years ago and is not too difficult to grow in the garden. It is a slender farinose
plant with a short root-stock. The leaves are broad to spathulate, flecked with farina, and may also be yellow farinose underneath. The scape is slender with an umbel carrying one to ten lilac flowers with yellow eyes.

**P. laurentiana** Fernald is found on calcareous cliffs and ledges of Labrador, Newfoundland, Quebec, Nova Scotia and Maine. It is a small farinose plant with a short root-stock, and the leaves are spathulate or ovate, varying at the tips, and white underneath. The flowers are pink to lilac, one to seventeen on an umbel, with orange eyes and yellow tubes. I have had good success with **P. laurentiana** in leaf mold with gravelly well-drained soil and a bit of bone meal or egg shell for lime. It seems to need rest, and to be rather dry after blooming and appreciates being under cover during the winter because, I suppose, it is accustomed to being under snow in its natural habitat. My plants are thrifty and make seed and are divided after blooming. I note that all the plants of the Farinosae Section I have seen make little white crown buds during the winter. These little buds get greener and greener as they prepare to spring into action on the first warm days.

**P. mistassinica** Michaux. This species was collected by Michaux in 1792 near Lake Mistassinica in the province of Quebec. It is widely distributed from Labrador and Newfoundland through the Canadian provinces to the Selkirks in British Columbia. It is also found from Maine and Vermont to Michigan and Minnesota in the United States. It grows in wet peaty soil or on sandy gravelly shores and may also be found on calcareous formations. It is said to be easy to grow and those who are most successful with it plant seed often and treat it either as an annual or a biennial. The plant has a short root-stock and sometimes develops a leafy stolon. The leaves are broad, sharp toothed, and are almost without farina. Flower stems are from one to six inches tall, and bear a loose umbel of pale pink, lilac, bluish-purple or white flowers, according to location or soil. It has the typical orange eye with yellow tube.

**P. mistassinica var. novoboracensis** Fernald differs from the typical plant in ovobate to broadly lanceolate leaves, in the smaller corolla-limb, and in the lack of a well-marked eye. It is reported to have been found in New York State.

**P. specuicola** Rydberg was collected by Rydberg in 1911 in southeastern Utah near Bluff City, growing in loose soil, under overhanging cliffs in the alcove-like heads of the canyons, characteristic of the lime bluffs of San Juan River. The plant was found in 1895 in the same locality — by Miss Eastwood — but relegated by her to **P. farinosa**. Commander Worth rediscovered this species in 1941 and to quote him, "it looks like a gigantic P. frondosa, larger in leaf and length of stem, covered with white farina." Mrs. A.C.U. Berry, of Portland, Oregon, secured from Utah some small plants which were described as growing on "a hot cliff overlaid with a few inches of soil." Of these one survived, flowered and seeded. A photograph of this plant in colour was sent to Sir William Wright Smith and Dr. H.R. Fletcher, and they were able to get a fine botanical description from it and also from the plants which grew from seeds produced by the plant pictured. The short rootstock of **P. specuicola** produces a tuft of leaves markedly farinose above and below which are broad and spathulate. The umbel carries from two to ten flowers with corollas of violet with a yellowish eye.

(To be continued in April)

**Dr. Bond was formerly of Portland, Oregon, and is now residing at Christiansted, St. Croix, U. S. Virgin Islands.**

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**Concerning An Amateur’s Debt to the Plant Hunter**

**CICELY CREWDSON,** Helme Lodge, Kendall, Westmoreland, England

We amateur gardeners do indeed owe a debt of the greatest magnitude to those collectors who have gone out to find and to send home plants or seeds which in time may give the "stay-at-homes" the joy of seeing some special rarity or beauty from China, Nepal, Bhutan, or Tibet, actually in flower in our own gardens.

Sometimes, when I look back on the many disappointments and the difficulties, and the many valuable plants which I have had and lost, I wonder why I did not give up the unequal struggle. "Hope springs eternal" with each new chance, and eventually each spring brings a partial fulfilment. I have been fortunate enough to receive seeds from many of the expeditions and also some of the plants which were flown home by air in 1949 from Bhutan, by Ludlow and Sherriff.

People often ask me what to do try and make these high alpine Primulas grow well, and while I cannot speak positively for other gardeners, I try to give these plants plenty of moisture during the growing season, good drainage, and as dry a time as possible during the resting period. This is not so easy to achieve if you happen to live, as I do, in a spot where the annual rainfall is approximately fifty inches yearly.

Most of the well-known Farinosae can be grown fairly easily. The compost which I find the most successful for pot culture is two parts each of fibrous loam and well rotted leaf mould, and one part sharp sand with the addition perhaps of a little peat.

A comparatively newcomer to the Farinosae section is **Primula Tayloriana**, so named after Dr. George Taylor, who was one of the members of the expedition to Tibet with Ludlow and Sherriff in 1938. Live plants of **P. Tayloriana** were sent to Edinburgh in 1947 and they first flowered in 1948. This Primula has not, I believe, proved quite as hardy as it was thought at first it would be. With me the seeds germinated very freely, and for the first year or two I had plenty of plants which survived the winter outside, but last year my largest plants went down completely. Suddenly in the autumn some unknown pest devoured all their roots. My one remedy for this is to wash out all the soil from the "stump" with a solution of potassium permanganate and water and then repot in completely new soil, and hope that fresh roots may form from San.

**Primula Jaffreyana**, also of the Farinosae section, has been known for sometime, and after seeds were sent home in 1938 and 1939, it appeared in a good many gardens, but I have never found it easy to grow. In trying to cultivate this species one ought to bear in mind that it grows in very dry situations. I believe among Rhododendron scrub, so a little additional sand and a very good drainage seem indicated. Dr. Taylor in his notes on the Air-Mail Primulas describes *how the dormant buds of P. Jaffreyana survived a couple of months in transit and pro-

**Mrs. Crewdson is the trusted recipient of "Air-Mail" plants from all over the world. Our Mrs. A.C.U. Berry has sent her collections of P. Cassickiana and other plants by Air Mail and reports that Mrs. Crewdson’s garden is delightful. Mrs. Crewdson writes, “I have made a few corrections to the ‘proof’ you sent me and I must ask you to make it quite clear that the quotations inserted in my article were put in by the Editor.**

duced magnificent flowering plants in the following year. The resting buds of these species have an extremely low water content and show no external trace of life.

**P. tenella** belongs to the Minutissima section and was first found in 1876. It is a tiny, silvery tufted plant, apparently found in crevices and fissures of the rocks. The leaves are covered with white mealy and my plants vary in colour from pale mauve to deep violet. This is a merry bright little plant and although I have not collected any good seed, I have been able to increase it by division, and it seems quite amenable in fairly rich gritty soil.

Primula xanthopa, of the Souliei section, was discovered in 1915, but I do not think it was in cultivation until it was sent by Ludlow and Sherriff in their last expedition. It has now flowered in many gardens and promises to become a favourite according to reports of all who saw it at the R.H.S. Show on July 11, 1950, seemed to think it most attractive. P. xanthopa seems to like moist positions. The best plant I have is outside, underneath the pear wall facing due north, where it has flowered well, and I had ONE seed, from one of my plants, which germinated. The plants I had in pots flowered well, but seemed susceptible to some disease like rust, as they are apt to turn a rusty brown and yellow. The healthy plants are most attractive in the foliage which has finely cut leaves which are covered with golden farina; the flowers themselves are small, the corolla is purplish-pink (almost magenta) and has a yellow eye.

P. Dickieana, of the Amethystina section, has been introduced several times but the Ludlow and Sherriff plants are the first which have flowered in England. I was fortunate enough to receive one of the collected plants of P. Dickieana sent by air. I put it in my pear wall facing west where it has flowered. My particular plant has white flowers with a yellow eye. I understand that in the alpine meadows in Bhutan, it grows in vari-colored masses of yellow, mauve, violet, purple or white flowers. It has shiny, glossy leaves which are as pleasing to the eye as a well polished shoe. Dr. Fletcher makes the suggestion that this Primula and P. Kingii be treated as bog plants, grown by the water side, and this suggestion I shall try to follow in the spring.

"Possibly this 1949 effort by Ludlow and Sherriff was the greatest single attempt yet made to introduce new living plants into cultivation in this country, and it was certainly a worthy climax to their years of fruitful collecting. They have been rewarded in good measure for all their labour, trouble and expense, by the successful establishment of a number of plants which would otherwise have remained unknown to gardens. "Also, the Ludlow and Sherriff expeditions have come to an end and their generous gifts of seeds and plants will be much missed in many gardens. Their contribution to horticulture has been most impressive and will become more apparent in the years ahead as trees and shrubs, particularly Rhododendrons, reach maturity."
Charles Crawford

By WILBUR L. GRAVES, Roy, Washington

Presenting: Mr. Charles Goodrich Crawford, Chief Tester of the Primrose Division of the Men's Garden Clubs of America Plant Testing Program.

One of the busiest members of the American Primrose Society, Mr. Charles Crawford works from his home in Toledo, Ohio; he guides the activities of 100 men, whose job it is to grow and study the horticultural problems of growing Primulas in their particular area. He solicits seeds from growers all over the world and sends a part of what is given him to his carefully selected helpers. Because of his efforts Primroses are being grown in areas where they have failed. We, of the American Primrose Society, feel that we must give Mr. Crawford our complete cooperation.

These testers representing 26 states, make an annual report to Mr. Crawford, who compiles this information, and then sends the report to the office of the Chief Horticulturist of the Men's Garden Clubs of America, Jesse L. Strauss, for further study and dissemination. In a recent letter to the Quarterly Mr. Strauss writes: "We consider Charles Crawford one of the outstanding chief testers whose opinion is respected by all of us in this office." Mr. Crawford keeps in touch as well, with the Educational Directors of the American Primrose Society. The task facing Mr. Crawford is not an easy one; his correspondence alone takes a great deal of time as well as the working out of the distribution account of the findings of the testers. Almost every letter presents a new problem or a request for advice, and a variety of this correspondence is of further spur to Mr. Crawford's efforts. Every section of the country needs a separate horticultural practice and it is wonderful to think that all these men are perfecting methods of culture which will succeed in spite of inhospitable soil and weather.

The youthful energy of the man belies his age. Several decades have passed since young Charles Crawford first carried tiny seedlings from the woods to plant in the yard of his Pennsylvania home. His Scotch Irish parents pointed with pride to Charlie's Sweetbriar and Sassafras. His high school botany not only revealed some of the mysteries of life to Charles, but inspired him to go further in college in the more general study of horticulture.

Upon completing his schooling, much valuable experience was gained in European and American nurseries. Later, his work as an orchard hand was interrupted to serve as a camouflage expert to the Army in World War I. After the war, Mr. Crawford married Winifred Pope, who was to become an outstanding horticulturist in her own right.

Mr. Crawford has also worked as a landscape contractor to a real estate company, as a superintendent to a private estate, and as a landscape contractor under his own name. After World War II was over he started a nursery of his own. Mr. Crawford specializes in growing plants of select strain and in rarities which tempt every gardener. His first interest is in primroses; collectors send him plants and seeds of the native species, and dealers are anxious that he test their best strain. He also grows gingers, meconopsis, and other genera. He has developed a new hybrid of Lobelia cardinalis which is bringing something like fame to the Crawford home. In addition to all this Mr. Crawford has also been an editor of the Men's Garden Club Bulletin in his locality, and is in much demand as a speaker on horticultural subjects. He is often asked to contribute articles to leading magazines and newspapers.

* Mr. Charles G. Crawford, 4225 Indian Rd, Toledo 6, Ohio.

Charles Crawford

School Flower Society and Flower Shows

By DEAN COLLINS, Retired Editor of the Garden Section of the Oregon Journal

Flower shows and garden clubs among the students of the high schools of Portland, Oregon, have been developed in the past years into a project of nationwide note and are providing a promising field for developing recruits for the various flower societies as well as for the manpower and womanpower that will be needed to handle the expanding horticultural developments in the Pacific Northwest. This over-all project has been especially sponsored by the Garden Section of the Oregon Journal who lends a helping hand in the organization of the Primrose Show. It has been a perennial pleasure to help with the publicity, advice, prizes and other aspects of the shows.

The American Primrose Society has been active in this work from the beginning, serving as "godfather" and advisor to the Katawia Club of Jefferson High School, which sponsors the Spring Primrose Show in that school.

A member of the American Primrose Society is named as a coordinator with the school organization. Students are encouraged to attend meetings of the Society and to participate in the Society's own Primrose Show, which ordinarly comes in advance of the Jefferson Show. Through the practical work in staging the show, the student committee gets a grip on the essentials of staging a flower show and are able to apply what they have learned, effectively in staging their own exhibit. The 1952 Jefferson Primrose Show was an outstanding success partly because of the highly developed sense of cooperation held by the students, and because they were good gardeners and artistic in staging their plants and arrangements. As Mrs. E. J. France, the A.P.S. advising member writes, "Jefferson is doing a fine piece of work with its shows, combining the increasing interest of the students, work of the faculty, and cooperation of A.P.S. members."

Steps are under way now to expand the number of shows to include other preparatory schools in and about Portland. This enthusiasm is felt across the country and was evidenced last spring by a transcontinental telephone hook-up to the Men's Garden Clubs of Oregon and New York. The Garden Editor of the Journal explained the organization and development of his School Shows project. This was done so that these men could hear first hand the method of undertaking a like project in their own community.

Announcement Of Auricula Show, April 25th

LOUISE GEE

A Primrose weekend will be enjoyed this Spring by Portland and her garden visitors. The outstanding feature of which will be a bosh showing of some of the rarer species of Primulas which ordinarily come into bloom too late for the other shows. Among these will be some of the finest Auriculas in the country, rare Asiatic species, rare Europeans, the little known natives of our own continent, and the now rare old types of Gold Lace and Silver Lace Polyanthus.

The tall Asiatics will be displayed as cut flowers in clear glass containers, which will show them off to the best advantage. In order to make the show educational as well as beautiful, each section will be labeled according to its botanical classification and each variety will be carefully named.

The Show will be held Saturday, April 25th, at the Women's Club Building, and the next day, Sunday, April 26th, the gardens of the Society's members, both amateur and commercial, will be open to the public. We especially welcome both as exhibitors and garden guests all "out-of-towners" whether members or not. Don't forget the date as this promises to be an outstanding event in the history of the American Primrose Society. We promise you that you will see on display the jewels of the primula kingdom—the results of your patient effort in growing and hybridizing.
**CYCLAMEN PERSICUM**, Its Natural and Cultivated Forms, by Walter C. Blasdale

*a Short Review by ALIDA LIVINGSTON*

This is a remarkable book, four chapters in forty-nine pages, seven line drawings and plates about Cyclamen persicium, its natural and cultivated forms, for the price of an average restaurant lunch.

This triumph of economy results from Dr. Blasdale's complete knowledge of a fascinating and rarely trodden by-path in the science of botany. The genus Cyclamen belongs in the family Primulaceae, actually the florists' cyclamen derives from one of seventeen species and subspecies whose recorded history goes back to the beginning of the XVII century; it is not the result of hybridization but developed from mutations after centuries of cultivation, a curious story enlightening to geneticists and highly suggestive to all plant breeders.

Chapter I shows the wide distribution of the species and outlines its history.

Chapter II describes the botanical characteristics, especially those of the root system, foliage, form and structure of the flowers and the seed capsules, which distinguish this species from the other Primulaceous genera.

Chapter III relates the life story of these cyclamen plants, including the amazing transformations of the florists varieties.

Chapter IV deals with cultivation, outlining the steps by which the natural species was improved as to vigor and size of foliage and flowers through cultivation and selection, by mutations rather than by crossing; the development of double-flowered forms, of those with fluted, fringed, or crested petals, and of the remarkable Papilio Strain. The cultural directions are so detailed and sensible that they take the fear out of growing these lovely plants.

The last page is a complete and unique bibliography.

When the book is read one turns back again to certain fascinating items: Dr. Blasdale mentions fragrant Persian Cyclamen. Certain individuals in one of the other species, C. europaeum possess a strong and delicious scent like violets at their best. All species seem to have the possibility of long life; some are very hardy to cold if planted in the right conditions, even the present day florists' plants are probably less tender than their reputation. The plant breeders might think about giving us a large flowered, fragrant, reasonably hardy strain with a life-span paralleling that of human beings.

**NATIONAL AURICULA AND PRIMULA SOCIETY (Of England) ANNOUNCES:**

The publication of the Society's 1953 YEAR BOOK which contains many items of interest to lovers of Primulas, Auriculas and Polyanthus, including:

The history and development of the Polyanthus with an account of recent trials

The modern Polyanthus in U.S.A. and New Zealand

The Gold-laced Polyanthus — by Dan Bamford

Hardy Primulas — by Jack Drake

Plant Breeding, Part II — by Dr. R. Newton

Primulas at Harrogate — by Mr. L. Bishop

Double Primroses, their cultivation and list of varieties — by Captain C. Hawkes

Auricula Topics.

Price 5/- postage paid U.S.A. and Canada $1.00.


**The Vagaries of Altitude**

**CHESTER K. STRONG**

Ten thousand feet above sea level is 10,000 feet, regardless of where the measurement is made, but there is a vast variation in what is found at that elevation on the surface of the earth. In the Alps of southern Europe perpetual snow and ice would be found and certainly very few members of the interesting flora would be discovered. At this altitude in the central Rocky Mountains this mark would be in the zone of densest coniferous tree growth, and 1000 or 1500 feet below the last outpost of timber.

In the mountains of western China, the habitat of so many of the Asiatic primulas which, in later years, have been brought to gardens, the 10,000 foot level generally lies in the midst of upper-lying cultivated fields. E. H. (Chinese) Wilson, an indefatigable hunter of plants in the highlands of China, until his death in that land of mystery, left behind a profile of the uplifts near the city of Ichang. On his projection the limit of maize cultivation is not reached until near 10,000 feet, and wheat and barley are cultivated in the sub-alpine zone, the upper limit of which is placed at 15,000 feet. It is above the upper limit of the alpine zone, near 12,000 feet that the amazing profusion of native herbs is met, and here he indicates is a land dominated by Primulas, Gentians, Meconopsis, terrestrial orchids and uncounted acres of Rhododendrons of numerous species, the most of the herbs and shrubs climbing to 15,000 feet where the last outpost of woody vegetation is found. Much higher amid glaciers on exposed moraines the alpine cushion plants persist to an extreme of 16,500 feet.

Climatic conditions control the vagaries of high altitudes and a Primula growing at 12,000 feet in the mountains of China might meet even less austere conditions than another plant of the genus, but of distant relationship, growing at comparatively low altitude in the European Alps.

* Chester K. Strong of Loveland, Colorado, is one of our new Vice Presidents. He has been, and still is, a most cooperative and helpful Regional Editor.

**ALPINE GARDEN SOCIETY**

The Alpine Garden Society was formed in 1930 by a small but ardent band of enthusiasts under the leadership of the late Sir William Lawrence. The efforts, capacity and high conception of that early group of pioneers laid secure foundations for what is now recognized as one of the leading specialist Societies of the world.

The purpose of the Society is to encourage the introduction of an interest in plants suitable for cultivation in rock and alpine gardens, alpine houses and frames. Primulas have been featured to quite an extent by the Society, in articles, in illustrations, and in the extensive seed exchange list.

Amongst the members are those who garden by the acre and those who keep their treasures in a window-box. If you are interested in alpine plants, join the Society and increase your pleasure by getting in touch with others who share your interests.

The annual subscription is $3.00 payable to the Secretary, G. B. Saunders, Husseys, Green Street Green, Farnborough, Kent, England.
Outline of the Sections of the Genus Primula

SECTION AMETHYSTINA
amethystina Franchet
subsp. argutidens (Franchet) W. W. Smith & Fletcher
subsp. brevifolia (Forrest) W. W. Smith & Fletcher
Dickieana Watt
var. chlorochara W. W. Smith and Forrest
var. aureostellata (Balfour & Cooper) Fletcher
var. Gouldii Fletcher
Faberi Oliver
Kingii Watt
odontica W. W. Smith
silenea Petitmengin
Valentiniana Handel-Mazzetti
Virginis Veitch

SECTION AURICULA
Subsection Arctithica
Clusiana Tausch
var. crenigeraca Beck
glaucus Moretti
subsp. calycina (Duby) Pax
subsp. longoboarda (Porta) Widmer
tpectabilis Trattinick
Wullenfiana Schott

Subsection Breviclavata
carniolica Jacquin
marginita Curtis
viscosa Allioni

Subsection Machaeliis
carmina Timotcheva

Subsection Cyanopsis
doorum Velenovsky
guinotiana Wullenf

Subsection Erythrodorum
apennina Widmer
daoennis Leybold
dedemontana Thomas
rubra Glinel
villosa Jaeg.
subsp. commutata (Schott) Widmer f. cotta (Widmer) Lud

Subsection Eu-Auricula
auricula Linnaeus
subsp. Balbiani (Lehm) Widmer
var. Obristii (Stein) Beck
var. monacensis Widmer
rubra Glinel
villosa Jaeg.
subsp. commutata (Schott) Widmer f. cotta (Widmer) Lud

Subsection Euphylloides
Allioni Leiseleur
integripetala Linn.
Kitaibeliana Scott

Subsection Rhopsidium
Allioni Leiseleur
integripetala Linn.
Kitaibeliana Scott

Due to pressures of business Mr. Lynn has turned this work over to the Editor. It must be emphasized that this is only a compilation and that all credit for the source material printed under “Sections of the Genus Primula” is due to Sir William Wright Smith and Dr. H. R. Fletcher.

SECTION BULLATAE
bracteata Franchet
bullata Franchet
var. rufa (Balf. f.) W. W. Smith and Fl.
Duberianaria Forrest
Forresti Balfour F.
Hennici Brevard & Franchet
redolens Balfour f. & Ward
Eckicii W. W. Smith

SECTION CANDENLABRA
anisadora Balfour & Forrest
aurantica W. W. Smith & Forrest
Eesiania Forrest
var. leucantha (Balf. f. and Forrest)
Fletcher
brachystema W. W. Smith
Helleyena Forrest
burmanica Balfour f. & Ward
coryschochera Balfour f. & Ward
cuengensis Balfour f. & Ward
Cockburniana Hemsley
Cooperi Balfour f.
heodoxa Balfour f.
itthina Balfour f. & Cave
imperialis Junghuhn
var. gracili Pax
japonica A. Gray
kiasiana Balfour f. & W. W. Smith
ralliphylla Balfour f.
renchondonta W. W. Smith
microcena Handel-Mazzetti
Miyabeana Iti & Kawakami
Morsheadiana Ward
Paxsoni Franchet
polonensis Ward
preantha Balfour f. & W. W. Smith
pollera Wallich
pulverulenta Dubhe
serratifolia Franchet
var. roseo-tincta Forrest
var. unicolor Forrest
Smithiana alpina
stemonata Balfour f
sumatrania Merrill
Wilsoni Dunn

SECTION CAPITATAE
capetita Hooker
subsp. Crabei (Balf. f. & W. W. Sm.)
W. W. Smith and Forrest
subsp. cirroma (Balf. f. & W. W. Sm.)
W. W. Smith and Forrest
subsp. lacteocapitata (Balf. f. & W. W. Smith)
subsp. Mooreana (Balf. f. & W. W. Sm.)
W. W. Smith and Forrest
subsp. sphaerocephala (Balf. f. & For.)
W. W. Smith and Forrest
glomerata Pax

SECTION CAROLINELLA
atria W. W. Smith & Fletcher
chapsaensis Gagnepain
Henry (Hemsl.) Pax
Huana W. W. Smith
obovata (Hemsl.) Pax
Partschiana (Hemsl.) Pax

SECTION CORTISCOIDES
Subsection Eu-Cortisoides
cinerascens Franch.
subsp. anomalias (Balf. f. & Forrest)
W. W. Smith & Forrest
cortisoides Linnaeus
var. tomentella Regel

Eugeniaceae Fedorov.
Kauflmanniana Regel
lactiflora S. Turkevitz
var. lactea Schepitszyn
lactea cortisoides Schepitszyn
molls Nuttall ex Hook.
polyneura Franch.
sixalis Komarov
Sieboldii E. Moore
violari W. W. Smith & Fletcher

Subsection Geranioides
calyx Balf. f. & Forrest
decidi.stripa Balfour
heucherifolia Franch.
jesoana Miquel
kisoana Miquel
laetus W. W. Smith
Loeseri Kitagawa
Minkwitziae W. W. Smith
Normaniana Ward
palmata Handel-Mazzetti
Pauliana W. W. Smith & Forrest
septecloba Franch.
var. minor Ward
vagninaa W. W. Smith & Forrest

SECTION CUNEIFOLIA
cuneololia Ledebour
subsp. hakusanensis (Franch.)
W. W. Smith & Forrest
subsp. heterodonta (Franch.)
W. W. Smith & Forrest
subsp. saxifragifolia (Lehm.)
W. W. Smith & Forrest

nipponica Yatabe
suffrutescens A. Gray

SECTION DENTICULATA
strotonotdoa W. W. Smith
denticulata Smith
subsp. alta (Balf. f. & Forrest)
W. W. Smith & Fletcher
erosa Walllich
erthrocampa Craib
lacum W. W. Smith
pseudodonticiata Pax
subsp. monticola Handel-Mazzetti

SECTION DRYADIFOLIA
chlorodryas W. W. Smith
dryadifolia Franch.
Decandrei W. W. Smith
mystrophylla Balf. f. & Forrest
triloba Balf. f. & Forrest
Tsengpeni Fletcher

SECTION FARNOSA
Subsection Eu-Farnosae
algida Adam
assamica Fletcher
baldschuanica B. Fedtschenko
blandula W. W. Smith
borealis Duly
budaria W. W. Smith & Forrest
var. nana W. W. Smith & Forrest
captyella Boissier
Clutterbuckii Ward
Comberi W. W. Smith
concina Watt
saryalies Ruprecht
subsp. farinifolia (Ruprecht) Kun.
decipiens Duly
erratica W. W. Smith
exigua Velenovsky
farinosa Linnaeus
var. albiflora Pax
var. chrysophylla Trautv. & Mey
var. denudata Koch
var. flexicululis (Beauverd) Hegi
var. litoralis Heslop-Harrison
var. pygmea Gaudin
var. xanthophylla Trautv. & Mey
var. Fauriae Franch.
Fernaldiana W. W. Smith
fistulosa Turkevitz
flava Maxim.
frondosa Janka
Balleri J. F. Gmel.
heraca Duthie
Runnewellii Fernald
incana Jones
intercedens Fernald
intermedia Sima
Jaffreyana King
Knuthiana Pax
laurentiana Fernald
magellanica Leumann
Matsumurae Petitmengin
mollismania Michaux
var. nowerenensis Fernald
modesta Bisset & Moore
ossetica Kusnetzow
scandinavica Bruun
Smithania Handel-Mazzetti
potential Hooker
Sharmas Fletcher
sorachinsa Miyabe & Tatewaki
specicola Ryberg
stenocephaloxy Maxim.
stricta Hornem.
Tayloriana Fletcher
yuparensis Takeda

Subsection Gemmifera
campasma Balf. f. & Purdom
gembemifera Batalin
var. amoena Chev.
var. Lichteni W. W. Smith & Fletcher
var. monantha W. W. Smith & Fletcher
var. ruprestri W. W. Smith & Fletcher
var. zambalensis W. W. Smith & Fletcher

Subsection Pulchella
Prtatti Hemsley
pulchella Franchet
pulchelloides Ward
The species will appear in the index of Volume 10, the April issue of our quarterly, in alphabetical order. If there are any corrections brought to our notice, we will publish them in our next issue.
**American Primrose Society Spring Show, April 9-12**

There is to be a Spring Garden Show at the Multnomah county fairgrounds at Gresham, Oregon, April 9-12. More than 60,000 square feet of space in fair buildings and lawns will be transformed into the most extensive plantings and patio displays ever planned in this region. The theme of the show will be "Outdoor Living." The county commissioners said they were inaugurating the event to help develop the county's nursery industry and to display flowers, shrubs and complete gardens "that the average homeowner can afford to buy and plant or build in his own yard." Both professional and amateur groups are invited to participate, including wholesale and retail florists and nurserymen.

The American Primrose Society has decided to join in this community enterprise and hold its regular Spring Show at this time and place. It should be well worth the while of members to fly across the whole country to see such a display. Everyone is welcome to exhibit their Primroses and to attend. (See notice of The Auricula Show on Page 11.)

**The Show Committee**

**MRS. M. A. LAWRENCE,* Ocean Lake, Oregon**

The Show Chairman is the manager of the show. She must have nerves of steel, a sense of humor, soft shoulders to cry on, be steady in times of stress, quick in decisions, and ready to take over any chairman's incompletely done task. Her decisions must be final for the success of the whole show is her responsibility. Her first duty is to select her committee chairman.

The principal committees and their delegated duties and authorities are:

- **The COMMITTEE on SCHEDULES and RULES** is the most important. Its duty is to compile a program of all the horticultural and decorative classes to be exhibited. This Committee should be familiar with all phases of the particular horticulture of the subjects to be shown. It should anticipate the maximum range of material to be exhibited. It will determine the rules governing the show, i.e., entries, exhibitor control, etc. The published program will carry these rules, as well as the notice of the divisions, the classes, the address of the show place, and the opening and closing hours.

- **The STAGING CHAIRMAN** is appointed at the earliest possible moment and serves from the inception of the show until it opens its doors to the public. She must be available constantly prior to the show and particularly during its set-up. No other chairman may make plans for disposition of space without her sanction. She assumes all responsibility in connection with the preparation and actual building of the show. She selects the show site if not already chosen and works with the owner or management of the building as to fire hazards, protection of the property, and access. A diagram of the floor plan is usually made up and given to key personnel in other committees.

- **The PROPERTY CHAIRMAN** provides all material and equipment needed for the show, i.e., cards to water-proof floor covering, and takes care of the salvaged material after the show is past.

- **The ENTRIES CHAIRMAN** will make life easier for everyone by schooling her crew of co-workers long in advance of the time when the competitors start bringing in their plants and arrangements. Plenty of well trained clerks, and plenty of equipment, combined with good nature smooth out and speed up this job.

- **The CLASSIFICATION CHAIRMAN** and her committee work with the Entries Committee. They must be competent consultants and should always be on hand to classify anything not understood by a clerk, to correct exhibitors' errors, and to identify unknown material.

- **The PLACING CHAIRMAN** should organize and train enough helpers so that entries will be placed as rapidly as they are released by the Entry Clerks. Relays of workers help, as do standbys to move and relocate overcrowded classes. Identifying cards (divisions, classes, etc.), conforming to the show schedule, should be placed on the benches before exhibits come in, preferably in the same order as they appear in the show schedule. Placers should be informed of such changes as have to be made.

The **CHAIRMAN of JUDGES** should consider these qualifications when choosing judges: First, unquestionable impartiality; second, familiarity with the types of horticultural or decorative material to be judged, and third, ability to instruct the judging staff as to scoring and point schedules. Junior judges should serve as third on teams, or as observers. Scoring or point schedules and prepared recording sheets for each of the various divisions, classes, etc., should be provided the judges by the Property Committee.

A group of clerks are needed to attend the judges while they are at work. They should have careful instruction beforehand on their duties, and have at hand necessary equipment such as ribbons and stickers, etc. One or two clerks accompany each judge. They should never volunteer information and must be silent except when answering questions or when securing essential information. They must keep their distance so that the judges may talk freely.

The **HOSPITALITY CHAIRMAN** should choose a committee of members who can be relied upon to be charming and diplomatic. It will be their duty to serve as a police force to protect the exhibits. A gracious hospitality committee can do much to further a garden club's influence in the community.

The **PUBLICITY CHAIRMAN** must be carefully chosen. A show cannot succeed without the public. Some really good shows have gone virtually unvisited because public interest was not properly aroused. Posters, radio, displays, news stories, every means of telling the public about the show should be used. When the show is open, rush a description of the show with names of the winners to the daily press. Invite their reporters and photographers to visit the show ahead of the actual opening. Never stop advertising until the show is a thing of the past.

The **GARDEN CLUBS CHAIRMAN** must use every means at her disposal to interest other garden groups in the show.

The **TROPHIES AND AWARDS CHAIRMAN** should contact previous donors and invite others to offer awards. She should arrange for displays of trophies, etc.

The **EDUCATIONAL CHAIRMAN** is especially important if it is the aim of the Society to educate the public as to the virtues of the plant material in the show. The American Primrose Society always provides a special table for exhibits and drawings. The Educational Committee has been called "the Society in action." Its scope and activities are limited only by the intelligence, imagination and enthusiasm of its members.

The **MEMBERSHIP CHAIRMAN** may be given a table and chair near the entrance.

The department of FINANCES and RIBBONS is handled by the Show Chairman and Board of Directors. All bills should be approved for payment by the Show Chairman. The expense of staging a show depends upon choice of show size, ribbons, awards, tables, classification, entry sheets and entry cards, and many incidentals too numerous to mention. The average American Primrose Society show costs from three to seven hundred dollars.

Additional chairman are optional. When the show is on a smaller scale there may be only a few chairmen. The duties are the same in any case. Last, but not least, is the **CLEANUP COMMITTEE**. Its duty is to leave the premises in such condition as will warrant a return welcome for a future show, and to salvage material which can be used to advantage again. A good ending to a show leaves a good impression.

*Mrs. M. A. Lawrence is a successful Show Chairman and has a perfect right to be a feminist in the use of her pronouns. Her ability can match that of any "chairman."

It is regretted that we had to condense her fine article.*

**OFFICERS FOR THE ONONDAGA PRIMROSE SOCIETY FOR 1953**

President — Dr. Fred A. Jordan _5 River Street, Cortland, N. Y._

Vice-President — Mr. Benjamin L. Houghton _161 Cedric Ave., Nedrow, N. Y._

Secretary — Mrs. George O. Ritzie _1640 Valley Drive, Syracuse 7, N. Y._

Treasurer — Mr. A. H. Modine _209 Meadow Road, Syracuse 8, N. Y._

*Mrs. M. A. Lawrence is a successful Show Chairman and has a perfect right to be a feminist in the use of her pronouns. Her ability can match that of any "chairman."

It is regretted that we had to condense her fine article.*
The Picture on the Cover

The superb Polyanthus on the cover is the named variety, Cowichan, bloomed by Dr. Walter C. Blasdale in his home garden in Berkeley, California. This named variety originated near Cowichan Bay in British Columbia and is a natural garden hybrid between a Polyanthus and a Juliana. The deep, sparkling wine color is overlaid by a most beautiful velvety sheen and the eye, being but a golden ring around the throat, and therefore inconspicuous, makes the floret appear even more luminous.

Th new Cowichan crosses resulting from planned hybridization exhibit this same smoldering quality, the same overlay, the absence or near absence of eye, the small, neatly bunched foliage, and beautiful form of stalk and umbel. The colors in the hybrids range chromatically in tonal quality from deep ruby and oxblood into amethystine shades. Often the foliage has a red or bronze coloring. Miss Alida Livingston remarked during her visit to Oregon last July, that the red bronze green of the foliage, and the glorious colors of the flowers, reminded her "of stained glass windows in a cathedral."

OF INTEREST TO MEMBERS:

We have a deep feeling of sympathy for our President, Mrs. Otto Zack, whose husband passed away in December. We shall always remember him working among his Primroses as he was in the picture published in the October, 1949, issue of the Quarterly. The plate has been lost or we would have printed it again.

We quote from a letter to Louise Gee, our Educational Director, from Kenneth Charles Corsar. "It is most gratifying to know that my book on Primulas has been useful to growers in the United States. I greatly appreciate your comments. If all goes well, the revised edition of PRIMULAS IN THE GARDEN will be published before the end of this year (1952). The new edition contains an additional chapter covering some of the Primula species introduced to cultivation through L. S. distributions as well as the American species P. Cucichiana and the variety P. Brodebeadeae which was sent to me by Mrs. A. C. U. Berry. The remaining chapters are much the same as in the first edition except for corrections arising from the research of Wright-Smith and Fletcher. The species formerly known as P. hirsuta now appears under the revised name of P. rubra. P. Hopeana has lost its specific rank and becomes a variety of P. kikkimensis, etc.

"I recently received a presentation copy of the Quarterly Bulletin of your Society which I found most interesting.... I have it in mind to contribute an article at some future date if you would care to have it. What about notes on Parry Primulas in my Garden?"

We have the promise of one of these fabulous seed catalogs from "Florai’re" the Garden of H. Correvon & Fils, Chene-Bourg, Geneve, Switzerland.

Talking of catalogs, I have on my desk a copy of "Sauer’s Magazine." A manual of rare flowers, their selection and culture. It is put out by the Pioneer Seed Company — Dimondale, Michigan. Their seed list is both long and interesting.

Mr. Dan Bamford comments on our October issue:

"The article by Mrs. Ben Torpen tracing the growth cycle, from seed sowing to the flowering plant proves that the writer has mastered the Auricula. It will be a great help to all in America who contemplate taking up the cultivation of this plant. A fine achievement is shown by the beautiful coloured cover illustration of a Grey Edged Seedling raised by Mrs. Torpen. This, we are told, is fifteen months old from the seed sowing stage, and from the appearance of the plant and roots; this is quite an achievement. The pips would have been in finer form if the enthusiasm — and I must add — very able lady grower had reduced the number to five. This is the first visible evidence I have seen of such hybridizing efforts in America. You have only had the Auricula a few years and yet in this short time we see an Auricula of this quality. Many times Mrs. Torpen has declared that you would strive to maintain the old traditions surrounding this flower and now we see that it was no vain boast. At last you are on the march and you will improve, in the years ahead Mrs. Torpen can indeed look back with pride to the cover of the Auricula Handbook for 1952, and the Society too can share that pride with her.

"The line drawings, by Mrs. Agee, showing the perfect Auricula are excellent — and could not be improved."

This, and more praise and comment, were the contents of a delightful letter from the "Dean of English Judges." We only wish that we could publish these letters in full, and as that is impossible, we pass them from hand to hand. In the next issue Mr. Bamford will review the Qualities and Points of Show Auriculas and Gold Lace Polyanthus in an explicit and practical manner.

This is the month when most of us will be planting our seeds and the Quartely Staff recommends that you send for a trial order of NATRIPHEN E and use it as a fungicide to soak the soil in your seed flats. If old flats or pots are used it is a good practice to soak them as well.

We have been waiting for an advertisement from our good friend Henri Schilpzand, botanist, of Den Hoorn-Texel, 1, Holland. We sent for his exciting catalog and ordered several packets of seed. The Polyanthus and vulgaris (acaulis) have intriguing names and, if the flowers are as beautiful as the seeds are viable, we will have something to write about in the Spring.

Our new Vice President in Maine, Mrs. Harry Hayward, writes to our new Regional Editor in New York, "I have divided and divided my Garden Auriculas and massed them with others of their own color. It is wonderful indeed that such a fine effect can be gained in this simple way."

The post has just brought a delightful letter from the American Primrose Society’s good friend, Mr. Norman Lawfield, 345 South Lane, New Maiden, Surrey, England. He has accepted our request that he be the A.P.S. Quarterly’s representative in England. He is an Assistant Editor of Gardening Illustrated and has done some fine writing about Primulas this year. Mr. Lawfield will have charge of our English funds and Advertising receipts. Membership or subscription dues may be paid to him in English currency.

We made a mistake on page 5 of the October Quarterly when we mentioned ‘the splendid Herbarium collection of the R.H.S. There are three great Herbaria in Britain: At the British Museum, at the Royal Botanic Gardens at Kew, and at the Royal Botanic Garden at Edinburgh. Our good friend, Dr. Harold Fletcher was associated with the Herbarium in Edinburgh at the Royal Botanic Garden. He is now the Director of the Wisley gardens.

IT IS OF THE GREATEST IMPORTANCE THAT OUR READERS LET US KNOW OF THEIR INTERESTS. Our policy for Volume 11 will be formed to a great extent by the wishes expressed by our correspondents. What would YOU like to read about in YOUR Quarterly?

S. W.

Annual Dues

ANNUAL DUES are now payable. It is appreciated when remittance is mailed at once to save the office staff the time and expense of sending out statements. Checks and Money Orders should be made out to the American Primrose Society, and mailed to the Treasurer, Mr. C. Y. Griffin, 2946 N. E. 58th Ave., Portland 13, Oregon. Active memberships are $2.50, sustaining memberships $5.00 per year.
Lovely Ferns Which Defy Description
CARL STARKER GARDENS, JENNINGS LODGE, OREGON
In that shady spot plants HARDY FERNS as companions to your Prim- 
roses. All summer interest is provided in their cool, refreshing beauty. Grace, 
elegance, and variety, in form and texture, are offered by these easily grown 
plants. We have fers in stock measuring from three inches to four feet.
Our collection of British (imported) and American ferns is not equaled 
by any other commercial grower in this country. Write for catalogue of 
ferns, choice rock plants, dwarf shrubs, iris, and Primula (Garden Auriculas, 
Sieboldii, Juliae, etc.) We are proud of the way we pack our plants for 
shipment.

Sincerely,
Carl Starker

The How and Why of BETTER GARDENING
By LAURENCE MANNING
This book will show you how to grow better flowers, fruit, shrubs, 
trees and vegetables, because it contains the basic principles of plant 
science, described in an easy-to-read way every gardener can understand 
and use. . . . $3.00.

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The J. K. GILL CO.
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Ready Built—Knock Down—Never Rotts, 
Rusts or Needs Paint. F.H.A. terms.

Aluminum
Greenhouses & Alpine Houses
Utility—Standard—DeLuxe and Custom
○ PRECISION BUILT ○ MORE LIGHT
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"Assembled with a Screwdriver"

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5012 N.E. 42nd Ave., Dept. P., Portland
6x9, 8x10½, 9x12 and larger sizes.

Broaden Your Knowledge of Plants 
Through Membership in
THE AMERICAN ROCK GARDEN SOCIETY
19A PITTFORD WAY - SUMMIT, N. J.

SUGGESTED CONSTITUTIONAL CHANGE
It is suggested that we repeal amendment article IV and that the combined offices of 
corresponding Secretary and Treasurer be separated as in the beginning.
PROPOSED AMENDMENT TO THE CONSTITUTION
The board proposed an amendment to Article IV Section 7 of the Constitution that 
the Editor of the official magazine be a member of the board and empowered to have a 
vote.

Readers ATTENTION!
We need specialized copy for the following ad for the April issue. The editorial staff has not had the experience of growing Primula under glass inside the house. Many indoor gardeners have used the Terrace Greenhouse successfully 
to grow exotic Orchids, Anemones, Gloxinias, African Violets, Lily of the 
Valley, Tuberous Begonias, Pansies, Miniature Roses, Ferns, and Swamp Flowers, 
with colorful results for their winter's pleasure.

If we can learn to use the Terrace Greenhouse for the growing of Primulas, 
we will start a project of supplying as many as we can afford to veteran's hos-
pitals and to members who are no longer able to get out into their gardens.

Please send for the literature offered by Mr. Otis. He has assured us that he 
will cooperate in every way he can as he is interested in this project humanly 
as well as commercially.

The Terrace Greenhouse
NOW! Grow your favorite plants 
and flowers in the TERRACE GREENHOUSE all the year round. 
Use it indoors or outdoors ... in any weather. Automatic controls plus scientific construction insure the 
finest and best results at all times.
Put it in your window! Place it 
on your porch or terrace! The perfect 
addition to any home! Lovely 
for schoolrooms, for reception rooms 
and offices, too!

The Orchidarium
The Orchidarium is the first scientifi-
cally designed orchid case with 
completely automatic features: Au-
tomatic top ventilation, thermostat-
cally controlled heat, inside and 
outside temperature and humidity 
gauges, overhead illumination, fog 
spray atomizer, bottom ventilation, 
built-in tray and table. It is con-
structed of beautiful California Red-
wood and sturdy aluminum with all 
framed glass doors and roof. The 
Orchidarium will grow tall Cym-
bidiums as well as other tall plants 
such as greenhouse Carnations, and 
Camellias.

36" long, 24" wide, 42" growing height. 
Its overall height from the floor is 6. 
Shipping weight 150 pounds. Price $175.
There are tables to match the Terrace Greenhouse. Standard 16" Model...$.1495
DeLuxe 18" Model ...16.95

There is a sturdy, good looking aluminum tray to fit the Standard Model...$9.95
DeLuxe Model 6.95

All Shipping Charges on Trays and Tables Are Prepaid!

Ask for literature on these and other gardening aids such as the WEATHER-
KING Hot Bed and Cold Frame which is completely non-corrosive and rot 
proof because of its all-aluminum and brass construction.

KENTUCKY GARDENS
Box 1325 916 2nd National Bank Building 
Ashland, Kentucky
Quality PANSY and PRIMROSE Seed

Cowichan Hybrids are luminescent in color (lightest clear red to deepest blue red) and are unusually vigorous. 100 seeds...$1.00

FOR A.P.S. MEMBERS
Special packets of Polyanthus Seeds gathered from our most outstanding plants, all colors and the widest possible variety of shades. Quantities limited.

1952 crop: packet 100 seeds, $1.00

Complete colored catalog of our regular Pansies and Primroses (free)

The CLARKEs
Box 440 Q
Clackamas, Oregon

BOTANICAL SOCIETY of EDINBURGH

Papers on the sections of the genus Primula, by Sir William Wright Smith and Dr. Harold R. Fletcher, are available in the following "Transactions":

XXXIII pt. 2 (1941) Candelabra
XXXIII pt. 3 (1942)...
Amethystina, Minatissima, Bella, Muscariaoides
XXXIII pt. 4 (1943) sikkimensis, Souliet, Rotundifolia
XXXIV pt. 1 (1944) Cortusoides, Malvaceae, Pycnoloba, Dryediafollia, Captivae
XXXIV pt. 4 (1948) Vernales

Members wishing to purchase copies are asked to apply to Miss D. E. Purves, Assistant Secretary, Botanical Society of Edinburgh, Royal Botanic Garden, Edinburgh, 4, Scotland.

THE AURICULA
by Sir Rowland Biffen

"This book will be an important one to all who love and grow auriculas..."—The Garden Journal of the New York Botanical Garden

$3.75 at All Bookstores

CAMBRIDGE UNIVERSITY PRESS
32 East 57th Street - New York 22

EDROM NURSERIES
Coldingham, Berwickshire, (South Scotland) (Dept. A)

A well-established firm, producing a very wide variety of Primulas, including several species from the Ludlow and Sherriff Expedition, 1949.

These Nurseries are known in all parts of Britain and they hold a long record of honours gained at the largest Horticultural and Agricultural Shows in the Kingdom, including the Prince of Wales' Gold Medal for the best Rock Garden in the open, the Royal Highland Society's Silver Medal, Scottish Rock Garden Club's Gold Medals, etc., etc.

Hardy Primulas:
- alpicola var. luna
- alpicola var. violacea
- apocila
- aurantiaca
- Auricula mixed
- Auricula McWatt's Blues, 35c
- bellidifolia
- capitata, true species (L&S) 35c
- capitata subsp. Mooreana
- chionantha
- chungensis
- cockburniana
- denticulata
- farinosa
- floriniae
- floriniae hybrids
- frondosa
- gemmifera var. zamballensis, 35c
- gernafolia
- helodoxa
- leskea
- involucrata

Candelabra hybrids, EDROM STRAIN, mixed

Polyanthus Crimson King
Polyanthus Gold Lace
Polyanthus Yellow

Polyanthus Fancy Shades
Polyanthus Superb
Polyanthus mixed

Meconopsis:
- Baileyi (betonicifolia)
- simplicifolia
- neapelensis
- paniculata
- omphlagramma vinciflorum — 70c

All seeds 1/, or 14 cents per packet, except where otherwise priced. Add 21 cents for air mail postage.
STOP DAMP-OFF QUICK!
Learn How for a Dollar…

1224 Growers Stop Damp-Off, Mildew, Stem Rot & Blue Mold. Get High Seed Germination & Full Stands With Natriphene

IOWA: “Natriphene is working wonderfully in our greenhouse. We found nothing to do away with damping off of plants until we started using Natriphene. Results have been overwhelming.”

So we let them write our advertising—

Oregon: The premier grower of primroses throughout the U.S.A. used your product and was successful in mailing out over 120,000 seedlings this year.

Calif.: A friend gave me a Natriphene sample for control of fungus on my begonias. I have sprayed twice at one week intervals and cleaned up sordid conditions. The Horticultural inspector was here today and marveled at results having seen the plants before.

Wonderful for Pre-emergence Damp-Off

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

Fungus moves fast. Have a can of Natriphene on hand when fungus starts so you can stop it quick.

Tablets for Trial Orders

Powdered Natriphene For Commercial Growers

Ship Natriphene Fungicide checked below:

<table>
<thead>
<tr>
<th>Quantity</th>
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<tbody>
<tr>
<td>2-8 table boxes makes 20 gals. fungicide for $1.00</td>
</tr>
<tr>
<td>100 tablet box makes 200 gals. at 21/2c. 5.00</td>
</tr>
<tr>
<td>21/2 lb. can powder for 500 gals. at 11/4c. 6.25</td>
</tr>
</tbody>
</table>

Ship Natriphene Fungicide checked below: Quantity

| 2-8 table boxes makes 20 gals. fungicide for $1.00 |
| 100 tablet box makes 200 gals. at 21/2c. 5.00 |
| 21/2 lb. can powder for 500 gals. at 11/4c. 6.25 |

Why Not Have the Best?

Our Mr. Bacher, of the Swiss Floral Company, 1920 N.E. 7th Avenue, Portland 12, Oregon, will promptly send a pair of his superior Trimming Shears, which he has imported from Switzerland, postpaid, for $5.25. “They will serve with precision for a lifetime!”

OREGON’S PRIDE PRIMROSES


“MAGNIFICENT”—Our supreme achievement: Those blooms for the first time last spring and were acclaimed sensational for color, texture and size of flote... $2.50 per pkt.

R. P. McHenry, 2835 N.W. Raleigh Street, Portland 10, Oregon.

FOUNDER ON REQUEST

ALPENGLOW GARDENS - MICHAUD & COMPANY

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R.R. 10, Dept. AP, New Westminster, B.C., Canada

In the species of the Section Auricula we have:

P. auricula subsp. Balbisii
P. x pubescens Hene
P. glaucescens
P. rubra (hirsuta)

Some of the quantities of seed in the following list of Primulas are small, the prices are listed per packet.

Auricula Border de Luxe $1.00
P. auricula subsp. Mooreana .25
P. x pubescens Hene .50
P. auricula subsp. Balbisii .30
P. x pubescens Mooreana .25

P. rosea grandiflora .30
P. x pubescens Hene .30
P. auricula subsp. Mooreana .30

P. auricula subsp. Mooreana .50
P. auricula subsp. Balbisii .50
P. auricula subsp. Mooreana .50

A plant list, which may be had for the asking, from the Alpenglow Gardens include such treasures as the double violet “Arthur Domboulis,” Crimson Cowichan hybrids, lovely named Julia hybrids, P. albicans, long called microdendron “Moonlight”—a truly lovely plant and amenable to gardens. Rosa Grandiflora, the lovely garden form of P. rosea, and the striking “Midas de Geer,” the named variety of P. rosea which is a dark glowing pink. Mr. Michaud has an enviable but limited collection of named hybrids of Auriculas which have never before been on the market. Collectors are encouraged to send their list of plants they have been unable to procure elsewhere. Plant orders for export to the U. S. are accepted for $5.00 and over only, because of the extra work with exporting papers. Base prices are for $1.00 and over are sent postpaid without permit. Remittance can be made by Cashier’s or personal checks. See our October ad for instructions for the importing of PLANTS.

Headquarters for Hobby Gardeners

Try Companion Plantings of species TULIPS & CROCUS, DWARF NARCISSEUS, SNOWDROPS, SCILLA, BULBOUS IRIS, ETC., with your PRIMROSES. Send for Complete Bulb List.

PORTLAND SEED & PET STORE

204 S.W. Yamhill Street

Portland 4, Oregon

THE SCOTTISH ROCK GARDEN CLUB

Annual subscription $1.50, personal check or bank draft. Two journals a year. Frequent articles on Primulas. Liberal seed exchange. Seeds of 72 varieties of Primula distributed last year. Write for membership forms and for information to—Major-General D. M. Murray-Lyon, Honorable Publicity Manager, 28a Inverleith Place, Edinburgh, 4, Scotland.
Majestic Primroses

Dear Friends: I hope that the New Year brings us the realization of our hopes and anticipations and that each of us may go out in the garden and find that “best ever” primrose we have been dreaming about! This happened to me the year I found my first “CROWN PINK” Polyanthus! This has been a good season so far: No freeze! No disease! I'd be happy to have you try my good hand-pollinated Polyanthus seed in standard colors at $1 a packet, and of “WARM LAUGHTER” at $2.50 and $5. The “CROWN PINK” is sold out until 3953. My plants are fine and sturdy and full of promise, and I will have a few to sell this spring.

Sincerely,
Linda A. Eickman, 211 E. Sheridan Street, Newberg, Oregon.
ORTHO-GRO Liquid Plant Food, the new organic fish fertilizer, does produce rapid and outstanding all around growth of stems, roots, foliage and more colorful blooms when used for plants. Grass, too, responds dramatically to ORTHO-GRO feeding, becoming thick and green. These are only two of the many uses that you will find for this complete, “no-burn” fish fertilizer.

Try “ORTHO” and do it “the easy way.”

California Spray Chemical Co.
Manufacturers of
“Vapotane”, “Isotox”, “Buggetta”, etc.

RICHMOND, CALIFORNIA — ELIZABETH, NEW JERSEY — ORLANDO, FLORIDA — PORTLAND, OREGON — DALLAS, TEXAS — KANSAS CITY, MISSOURI

* P. helodoxa

---

The photograph above shows a small portion of the Alpine Auriculas in our cold house. For real beauty, try some of our beautifully grown seedlings for your spring garden—plants $1.00 each or six for $3.00

PRIMULA ROSEA GRANDIFLORA “DELIGHT”
Large plants of this vivid carmine beauty $1.00 each

JULIANA HYBRIDS
Kay (blue) $1.00 *Angela (pure white) $1.50
Lady Greer (cream colored) *Miss Linda (blue creeper) 1.50
“poly” type 1.00 Nettie Gale (white flushed pink) .75

SEEDS: 1952 CROP
P. denticulata Alba $1.00 P. helodoxa $1.00
P. rosea, Grandiflora Delight 1.00 P. japonica, Miller’s Crimson 1.00
P. japonica, Postford White 1.00 Gold Lace Polyanthus (hand pollinated from exhibition plants) 2.00

WOODLAND ACRES
2418 Bertha Beaverton Highway, Beaverton, Oregon. Phone, Portland CY 2-1489

* Torpen Originations.
Blue Whale

is

Sphagnum Moss

Enriched with Whale Soluble

PLANT YOUR BULBS
POT YOUR PLANTS
SET YOUR WINDOW BOXES

Mix your flower and vegetable seed plots with BLUE WHALE. No further feeding is required.

No More Laborious and Unpleasant Working with Barnyard Manures
BLUE WHALE is a complete compost free from weeds and disease

A Single-Simple-Step
To All Phases of Gardening and Fine Lawns

There is no lasting benefit in any contribution to the soil which does not eventually become Humus. A million tons of artificial will not contribute one pound of Humus to the soil.

BLUE WHALE is 100% potential HUMUS. The Whale Soluble and the Moss working together to create a continuing fertility and giving to the Flower or Vegetable a vigor and health not obtainable with inorganics.

- In bulb planting, place a generous handful of the BLUE WHALE product directly under the bulb — Will not burn.
- Place a handful of BLUE WHALE around each plant root of all Spring Flowers. With Chrysanthemum cuttings, Strawberry and Tomato plants — set the cuttings or plants right in the material.
- BLUE WHALE being entirely organic already decomposed and immediately available to the plant creates a condition which to a large extent gives a freedom from weeds, pests and disease.
- For a good velvet lawn top dress with BLUE WHALE — instructions on bag.
- BLUE WHALE IS FULLY ENRICHED — ODOURLESS — WILL NOT BURN.

Oregon Distributor for Blue Whale — CHAS. H. LILLY, Portland, Oregon
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