

1953 Year Book



Polyanthus "Crown Pink"

Quarterly of the American Primrose Society

Volume 10

Spring, 1953

Number 4

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QUARTERLY

of the

AMERICAN PRIMROSE SOCIETY

Volume 10

April, 1953

Number 4

Linda A. Eickman

The Winner of the A.P.S. Quarterly's Premier Award for Hybridizing for 1953

ELLA TORPEN

Many of the members of the American Primrose Society know about "Crown Pinks" but few know the "Linda Eickman Story."

She was born on a small farm near Appleton, Wisconsin, and spent many happy hours hunting wild flowers in the fields and woodlands surrounding her home. This interest continued all through her professional experience, and during her many duties she managed to take courses in Landscape Engineering and Gardening. Her first interest with Primroses was manifested in a window-box garden at the Kenosha Hospital. Later, after she went to live on the farm, she received her first good seed from Toogoods in England. She could never throw away her first plants and as she got better plants she planted the old ones under the apple trees in the orchard on the Dayton farm where they naturalized.

In the middle forties she definitely began the pursuit of the lovely pinks, "Crown Pinks" and salmon rose, "Warm Laughter." This was done in the beginning with two Polyanthus, a chance plant of uncertain pink, and a white of good form. Hand pollinating was done with meticulous care, never using anything but well-stalked Polyanthus as breeding stock. She got every bit of information on hybridizing that the library and her good friends in the Society could offer. Failure followed upon failure but always there were a few plants saved to start again. Personal tragedy, deaths, late freezes, damping off from the use of uncertain products, and many other disappointments did not deter her from her purpose.

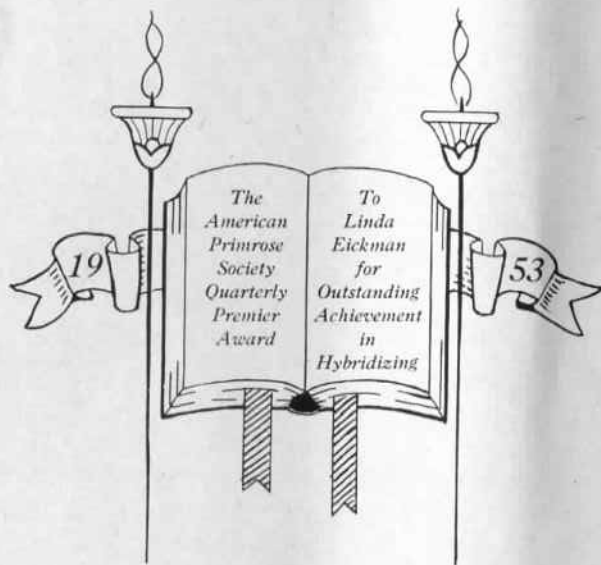
- 1916: A. B. Degree from Lawrence College, Appleton, Wisconsin.
- 1922: Completed nurses training at Wesley Hospital, Chicago, Illinois.
- 1922-27: Was Assistant Principal and teacher of nursing arts at Kenosha Hospital at Kenosha, Wisconsin.
- 1928-31: Served in the Nursing Education office at Harborview Hospital, in Seattle, Washington.
- 1933: M. A. Degree in Education, University of Washington.
- 1934-40: As Superintendent of Nursing and as a member of the University of Oregon faculty she joined in the reconstruction and building up of nursing service and nursing student practice at the Multnomah County Hospital in Portland, Oregon.
- 1940: Retired to her brother's farm near Dayton so that she could care for her aging mother.
- 1948: A.P.S. Blue Ribbon for "Crown Pink."
- 1948: A.P.S. President's Trophy for best commercial seedling in the show.

Each spring meeting of the Society found Linda Eickman with a basket of her improved seedlings, showing the results of the current year's effort. Amateurs and growers grew to love her and each year to expect greater achievement.

The time finally came to name the strain of which she was the sole originator. The seeds were proving about 60% true and she planned to put them on the market. As she worked with her plants the old hymn whose first line is "Majestic sweetness sits enthroned" kept going constantly through her reverent mind, and so she named her strain "Majestic." The naming of "Warm Laughter" is a story in itself. She noticed, as people passed her Primroses at the A.P.S. Show, that their faces lighted up when they saw the new pure clear colors. Her imaginative mind caught the image of "Warm Laughter." The high crown and the baby pink were the attributes which made the name "Crown Pink" the natural choice for her true pink Polyanthus. It is of great inspiration to us, that although interested in the commercial production of seeds, Miss Eickman took the time and nurtured the inspiration which enabled her to make this lasting contribution.

The photographs of the seedlings on the cover and back of this Quarterly, taken by John Bacher, our own "Johnny Appleseed," only approximate the beauty of the mature plants of "Crown Pink" and "Warm Laughter." Now the seed is even more true and the plants have gained in vigor without losing a quality of color.

We present to you this gracious, generous, and humble lady. It is with the greatest pleasure that the Staff of the American Primrose Society Quarterly presents Miss Linda A. Eickman its Premier Award for Hybridizing for 1953.



"The Possible's slow fuse is lit by the imagination."

—Emily Dickinson

THE A.P.S. QUARTERLY PREMIER AWARD FOR 1954

Who will be the winner of the Quarterly Premier award for 1954? Members are asked to be on the lookout for candidates for this award. Pictures of plants should be submitted in both black and white as well as in color. The plants in question should be seen by a competent judge and as many others as possible, and signed statements as to the Show Points should be obtained from them. All pictures of the entries will become the property of the Quarterly. If adequate postage is enclosed the prints will be returned. The judges for the Quarterly Award will be the Quarterly Staff.

The Pictures on the Covers

FLORENCE LEVY

"Linda Eickman's "Crown Pink" Polyanthus is undoubtedly the most true and beautiful pink Polyanthus in existence. The color photograph does it a slight injustice as there is actually no trace of blue, simply a clear, limpid, true pink.

Another outstanding characteristic of not only her "Crown Pink" but of her Coral and "Warm Laughter" Polyanthus (as originated by her rather than others who may have worked with her strain) is the true Polyanthus form . . . the straight, sturdy stalk without acaulis-Polyanthus traits.

Adventure With P. Cusickiana

MRS. A. C. U. BERRY

Primula Cusickiana has been a "problem child" to me for many, many years. It is the only primrose that grows wild in Oregon, so perhaps our members would be interested in some of my experiments with it.

There was a time when I had never even heard of it: After a correspondence with a friend in Scotland about Primroses, came the question—did I know anything about Primula Cusickiana that grew in Oregon? I started asking questions of everyone and finally Mrs. Sherrard told me to ask Dr. I. N. Gabrielson, who was then stationed here working on a biological survey. When I finally found him it was July. He knew "Cooky" as we came to call this Oregon species, of course, but just laughed at me when in my excitement, I wanted to know if we couldn't drive to the mountains immediately to collect it. I'd never heard of a Primrose that hurried into and out of bloom in May, and then in a few weeks died down completely leaving not a trace.

The next spring Dr. Gabrielson was in the Willows early with a friend who took him in a car which was equipped with four chains, nevertheless they stuck in the snow several times before they finally found those entrancing flowers, whose leaves were growing right out of the snow. He brought down several clumps in bloom, so beautiful, and with the loveliest perfume—"like violets!" Well, I sent them to England and Scotland and shared them with a friend from Vancouver, B. C. As far as I know, a few of mine were the only ones to survive and flower. I had potted them up and put them on the north side of the house, and once a week I gave them a little water. I knew they were dry in nature, but my heart failed me at withholding water completely. That summer we had a visit from two young Englishmen who had come out on a plant and seed-collecting trip. So sure was I that I had mastered "Cooky's" queer ways that I gave them the plants that had flowered in my garden, to take home with them. Alas, never again have I been so successful with this species.

The next year we went to try to collect it ourselves. We waited too long, the season had been a very early one, and we were giving up in despair when some impulse led us through large pine trees growing in a clearing. There, in a semicircle, a dozen feet from the trunks, was "Cooky" in seed—almost dormant. We collected plants and seeds. Nothing ever came of it all, the expired seeds did not germinate.

The next year, back we went again to find that sheep had been driven to the high pastures over that way and no vegetation was left. We walked on and on, looking everywhere, hour after hour, without result, till we were so tired and hungry that we decided to have lunch; just as we gave up, the wind came over our way with a most

heavenly perfume. We dropped everything and dashed over, and there was "Cooky" growing in glorious abundance! Growing up on top of little tufts of soil with grass around. We even found an albino and a rose colored form—how I wish I had left them there! It was a breath-taking sight, and although I have since found it again in other spots, I have never seen one so completely beautiful.

The first time we found them under pines in partial shade, again in full sunshine, another under pines in full shade, the latter growing so thickly together we could hardly tell the plants apart. What growing hints can one get from all this? It was hard to figure out, but the one constant requirement seems to be the drying out in summer, with just enough moisture to keep the roots plump. Until that time, the plants collected had fair roots, but the last time a couple of years ago, we found it with huge matted roots. I never saw anything like it; this time it was growing on a gentle slope in what looked and felt like pure clay, which seemed almost like gumbo, and it took ages to wash the roots free of dirt. Some of these plants are showing growth in several gardens here, and we can hope that perhaps someone will succeed. It would be a miracle indeed to go out into my garden, or across the town, some early spring, and suddenly be aware of that fragrance I know so well: this is the stuff gardener's dreams are made of.

So we will hope that this is not the end of my story, and that my dreams may yet come true. I am not the only one who has been interested in "Cooky." She has stirred



P. Cusickiana as photographed in the Wallowa Mts., by Stanley Anderson

the imagination of a photographer friend of mine, Stanley Anderson, so that he took the train to Joseph, packed in to the 5000 foot level of the Wallawas, and spent the night in a sleeping bag, in order to photograph *P. Cusickiana* in its natural setting. When he awoke in the morning the bed of *Primula* and his sleeping bag were covered with snow. The accompanying picture was the result of his trip.

The year Dr. Richard Bond and I went to the Wallawas the snow lay late and we had to wade mile after mile through rolling and melting snow up over our knees! But it was in bloom even then. We can truly say that *Primula Cusickiana* is unpredictable.

Further Notes on Native American *Primula*

MRS. JOHN KARNOPP

P. Cusickiana is named for its discoverer, William Conklin Cusick, who collected this species on the rocky hillsides of Union County in Eastern Oregon. William Cusick's life was colorful from the time he came over the Old Oregon Trail with his parents in 1852, while he was a volunteer in the army service when the Indians of Eastern Oregon threatened the settlers, while he taught many years at the Willamette University, and while he collected the thousands of plants he later classified and willed to the University of Oregon.

P. Cusickiana is a lovely flower, the corolla is usually deep violet, sometimes white, and is slightly farinose around the eye. It is a perennial with smooth, non-mealy foliage; the leaves are about four to six inches long, oblong-spathulate, entire or slightly toothed. The flower stems are from three to six inches tall, fairly slender, bearing an umbel of two to four blossoms, one half to five eighths of an inch across, with rounded lobes. The calyx is long and glandular and is cut to the middle into lanceolate acute lobes with five lines of white farina extending down the sinuses to the base. Mrs. A. C. U. Berry, Dr. I. N. Gabrielson, and Dr. Richard Bond, all have been impressed by its quality of fragrance, which fills the air and reminds one of violets held close to the face.

The December, 1952, issue of the Journal of the Royal Horticultural Society carries a splendid article on new *Primula* introductions by the eminent *Primula* authority, Dr. H. R. Fletcher. I quote from it. "For *P. Cusickiana* we are indebted to Mrs. Berry of Oregon, who fifteen years ago sent seeds to Mrs. Crewdson of Kendal. The seeds germinated and Mrs. Crewdson has been clever enough never to kill the resulting plants. In early spring these plants break into growth, grow with great rapidity, and in three or four weeks' time decide that it is time to be dormant again, and die down as quickly as they have appeared. In 1947 Mrs. Berry sent to Mrs. Crewdson by air mail a plant which in 1951 produced three flowers. *P. Cusickiana* is a native of Eastern Oregon, North Nevada, and Idaho, at elevations of 4,000 to 7,000 feet, where, according to Gabrielson, 'it grows on wet hillsides...and blooms while surrounded by melting snow banks...when in bloom the trickling snow water runs all about the base of the plant, although the crown usually sits on tiny bog or astride a small stone sufficiently elevated to raise it well above the water. Mrs. Crewdson sent this plant to the Joint Rock Garden Plant Committee. It is not the easiest thing in the world to provide such conditions in this country...and she is to be culturally commended (though she wasn't) for having nurtured her plants for so long."

As far as is known there have been only two places in the world where *P. Cusickiana* has bloomed in 'captivity', in Mrs. Cicely Crewdson's garden in England and in Mrs. A. C. U. Berry's garden in Portland, Oregon.

Seed Distribution

We are to have a SEED DISTRIBUTION for 1953. A formal announcement will be made in the July Issue complete with the rules as well as the names of those in charge. Be sure to plan on hybridizing and on saving seed for the Society Exchange. We already have had a contribution from "down under," from Mr. Hilary Dowling of Victoria, Australia. We have heard glowing accounts of results of New Zealand Polyanthus seed, both as to size of flower and hardiness. We have another contribution of note, from Mr. Peter Klein of Tacoma, which includes *P. capitata*, Ludlow & Sherriff No. 17514 and *P. Cockburniana*. This seed is 1952 seed however, and we are asking that the seed sent in for exchange be from the 1953 crop.

D.M.

Procedures In Pollinating

Mrs. J. V. Roberts

Those of the old school of bees or fairies—if there be any left—will not be interested in this little piece; nor will the individual who with brush in hand flits from bloom to bloom dabbing pollen here and there, all the time fancying that he or she has turned the trick, when the bee, who may have gotten up much earlier in the morning, has already accomplished the work in much the same fashion.

Neither mystery nor extraordinary skill is involved in hybridizing; however, exacting care in performing each step in pollinating is absolutely necessary for specific results.*

The first step is to get a stock of first quality plants, choosing colors which especially appeal to your taste. If you are patient and want a large stock from which to choose, get the seeds from the best strains on the market; if not, visit the gardens of the breeders who have pioneered for years in this work, and buy plants. (If you do not take up too much of their precious time they will help you with advice as well as with the selection of your plants.) In this manner you will save years and will profit by the great advances others have made.

Watch your plants and study them until you have formulated your plans and have a mental picture of the plant you wish to produce. The actual process of pollinating is quite simple.

1. Preparation of the *seed* parent: Pick the plants best suited to your purpose: many hybridizers pot up their seed plants because it is said that a plant whose roots are trimmed will produce more seed. One grower uses a well ventilated screen porch for his own most particular crosses. The plant, being portable, is more readily available as each stigma becomes receptive. Emasculate all buds just before they begin to open leaving only the calyx holding the pistil. Bag with cellophane and wait until the stigma is clear and sticky. It is then receptive to pollen, which should be applied thickly. Bag again to prevent foreign agents entering. If introducing more than one cross on an individual plant mark each blossom with a small jewelers tag on which is a record of the pollen cross. These records are invaluable for future work and are a source of great interest when the parentage of a lovely Primula is in question.

2. Preparation of the *pollen* parent: Get a flower from the pollen parent as soon as the pollen has a powdery look, and tear the blossom in two all the way down to the calyx. Bend the corolla backward until the anthers are exposed enough to brush their pollen on the pistil. This pollen blossom may be saved in the refrigerator for several days, so that the procedure may be repeated a second and a third time to be absolutely sure of "a take." (Many times a pollen blossom may come from a friend's garden and be quite precious.)

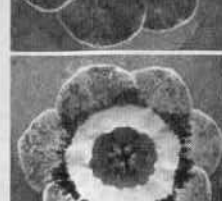
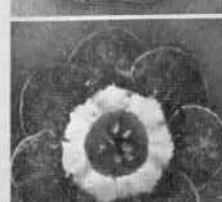
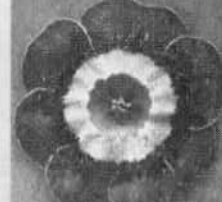
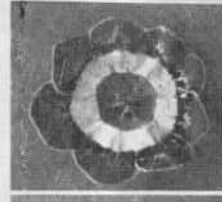
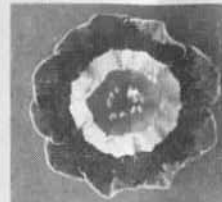
It is true that a greater percentage of the seeds are viable from the legitimate cross, "thrum on pin," but many prefer the illegitimate cross, "thrum on thrum," which gives fewer seedlings, but a greater percentage of thrum-eyed plants. Seldom, unless tempted by exceptional color or form, ever use a pin eyed plant either as a pollen or a pistillate parent.

When your seedlings have bloomed, cross pollinate those showing superior characteristics in form or color. You really have to be patient as the second year does not give the results you may begin to expect in the third year. You should continue this procedure year after year, always discarding to the compost pile every slightly inferior plant. Bring in new "blood" from carefully selected plants to avoid the weakening sometimes induced by interbreeding. By intelligent handling and ideals kept high, anyone can eventually grow beautiful and distinctive Primroses from their own crosses.

*The article "On Pollinating," by Florence Levy, first published in the A.P.S. Quarterly, April 1944, and repeated July 1951, is recommended reading for all those interested in this subject.

The Properties of the Show Auricula

Mr. Dan Bamford, Manchester, England



So that there will be no misunderstanding between us, let me make it quite clear that I am only an ordinary amateur Gardener but it has been my hobby since boyhood. From those early days to the allotted span, I have grown most things, Orchids, Eastern Rhododendrons, Lilies and Camellias, Primulas, Alpines, etc., but the Auricula and Gold Laced Polyanthus have journeyed with me from the beginning and I hope will continue with me to the end. I knew most of the Old Lancashire Auricula Growers of my generation and I have no fear when I say that those old Veterans knew as much about this flower as anyone, anywhere, and I say in all humility that after being in so close contact with them. I should consider that I was lacking in intelligence if I could not say that I claim to know a Good Auricula when I see one. So—that ends the introduction.*

I will begin with the Auricula and although most of the properties are those laid down by the old Florists, some of the dictums are my personal ones, for that reason I lay myself open to attack and I hope any member who takes exception to any statement will say so, openly and in no uncertain manner, and spare no punches *it is thus that progress is made.*

Here then is the standard of perfection to be aimed for:

(1) The pips must be circular in outline and every petal round at the edge; they must not be pointed or the flower becomes what the old Florists termed "Starry" or "Mouse Eared." There must be no notches or serratures in the petals anywhere. The face of the pip should be flat; if the petals cup inward, or incline backward the refined appearance of the flower is very much reduced.

(2) All the colour zones in the edged varieties should be as near equal in width as possible, i.e., the tube, centre, body colour and edge colour.

(3) The tube should occupy the centre of the flower, perfectly circular and well filled with anthers which curl inward and completely cover the pistil. The pistil must not protrude beyond the anthers; if it does it is a disqualification. The tube and anthers should be as near golden yellow as possible, as one old grower phrased it, "The anthers should be shining little spangles like Gold Dust," but to attain this is rather a tall order.

(4) The centre should be perfectly round, free from cracks, the powdering or mealing must be heavy and smooth thus giving a dense white ground with no appearance of a granular surface.

(5) The body colour must be circular where it joins the centre but the outer edge may flash a little into the edge colour. In my eyes the flashing adds to the refinement of the flower as it eliminates what would otherwise be excess formality. The body colour must be on no account strike through to the edge of the petals, this is a

*Mr. Cyril Haysom, Editor for the National Auricula and Primrose Society, Southern Section, believes with many of the best growers in England and Scotland that Mr. Bamford is the best Judge of Auriculas alive today.

serious defect as it gives the flower a rough appearance. This fault usually occurs when there is excess body colour. There must be no trace of meal on the body colour due to "picking up." If meal has been blown or splashed on by a drop of water, that is careless handling and is no fault of the flower.

(6) The White Edged variety must have a heavy deposit of meal over the green petals which should exhibit a dense smooth coating. In the Green Edged variety the colour should preferably be a rich dark green. The Grey Edged variety has a light deposit of meal over the green petals which gives it its grey appearance. In some seasons the density of the meal deposits will vary, sometimes it will tend towards the green and yet in other seasons be whiter. A really good Grey Edged Auricula, when at the height of its form, is indeed a flower of matchless beauty and refinement, not excelled in any flower; it displays all the splendours of the age in which it was reared. To recall these two famous Grey Edged Auriculas *George Lightbody* and *Lancashire Hero*, when they were in the prime of life, carrying 12 perfect large pips in the truss is something to cause a thrill. They were "period pieces" in the Floral World but 'alas' Lightbody is very old and extremely rare, and Lancashire Hero is no more. I hope you in America will produce something equally worthy.

The foregoing standards of perfection will obviously never be achieved, there will always be slight deviation somewhere. It is that which makes the raising of Auriculas so fascinating. You can live to any old age and at the end still be striving for that little elusive something. As one old Manchester professor put it, "Human effort can never achieve absolute perfection, we can only strive to reach it as far as is humanly possible."

Where can we depart from the standards of perfection without unduly impairing the refinement of the flower?

1st: I would say that the tube is better smaller than larger.

2nd: The centre looks rather better when a little larger than too small.

3rd: The body colour looks better if it is slightly narrower than if too wide. If too wide the flower begins to appear "selfy" (a word used by the old florists.) I have made no mention of the colour of the body colour. There is some difference of opinion about this, but I am going to state my views. I might clash with one or two of my English friends, but it doesn't matter, we are in free countries and can express ourselves without being thrown out of the Society. I would stress most strongly that the body colour should be as near Black as possible. We know it is not absolutely Black but unless it is held up to the light it is indistinguishable from it. The Black body colour was always favoured by the old Florists in Lancashire and I still agree with them. The striking contrast between the Black body colour and the White, Grey and Green Edge and the white centre appeals to my sense of the artistic. It seems somehow to be in harmony with the distant past from which it has reached us, and in tune with lilting minuets Beethoven and Mozart played with the soothing twang of the harpischord. The Purple, Pink, Plum, etc., body colours seem to be more in keeping with the Jazz Band which, to me, is much too modern for this classic flower.

Nevertheless, if members raise some with the lighter body colours and the flowers are up to standard in all other respects I would say "Keep them" and even "Name them" but I would never aim to produce them. Readers will notice the striking contrast between the Black body and edge colours in the two illustrations "Hinton Admiral" & "Donald Haysom." I am indebted to my friend Mr. Cyril Haysom for again coming to my assistance with these photographs and one showing individual pips, some good, some bad which will demonstrate to readers the difference between a good and bad Auricula. I must express my thanks to my friend for the loan of these.

At this stage it will perhaps be interesting to members who are not acquainted with this flower if we discuss each pip.

Beginning at the top the first flower is rough, curly and not flat, there is too much body colour which strikes through to the edge. The centre is not round, neither is the



Green Edged Show Auricula "Donald Haysom" courtesy of Mr. Cyril Haysom.

eye. The petals are not symmetrical and the outline is not good. It is a very undesirable customer and should not even be given away, it should go on the bonfire. The second flower is equally undesirable, unlike the first it has practically no body colour and should follow the first to the bonfire. The third flower is better but the outline is not too good, the individual petals are not regular and tend to be pointed in places. The mealy center cuts through the body colour and the flower does not lie perfectly flat. Some growers would keep it, but it is not up to standard and a Judge of Auriculas would quickly detect all its faults. It is impossible to comment on the colours until perfect colour reproduction is available.

The three bottom pips are good exhibition flowers and could be put on any show bench with confidence. The fourth one is obviously a Green Edge, the fifth one Grey and the last one a White Edge. I make no comment on these but any member can direct questions about them, to your Horticultural Advisor, Mrs. Ben Torpen.

AURICULAS, SHOW

Meritorious—Well-balanced, crisp, healthy foliage. A strong stem, sufficiently long to bear the truss well above the foliage. A truss consisting of not fewer than five fully developed pips (three in a seedling) carried on peduncles sufficiently long to avoid overlapping of the pips. A perfectly flat, round, smooth-edged corolla consisting of six lobes without notches or serrations. A circular tube with a diameter approximately equal to one-sixth of the diameter of the corolla, slightly raised at the edge of the paste, of a deep yellow colour and filled by the anthers, hiding the stigma. A pure white, smooth paste, free from crack or blemish, circular in outline, and of a width equal to that of the ground colour and edge together. A dense ground-colour, forming a perfect circle near the paste, the darker and richer the colour the better, though red should not be regarded as a fault. A bright green, grey, white or other unshaded self-coloured edge of about the same width as the ground colour.

Defective—Foliage which is ill-balanced limp or unhealthy. A stem which is weak or short. Truss which has fewer than five well-developed pips (fewer than three in a seedling) or has peduncles which are too short to prevent overlapping of the pips. A corolla which is not flat, circular or smooth-edged, or has fewer than six lobes, or has notched or serrated lobes. A tube is irregular, or has a diameter exceeding one-sixth of that of the corolla, or is pale-coloured, or has a visible stigma. A paste which is not pure white, or is rough, cracked or blemished, or lacks a circular outline, or is of a width which is not approximately equal to that of the combined ground colour and edge. A ground colour which has not a perfectly circular outline, or is wider than half the width of the paste, or which lacks density or richness. An edge which is not self-coloured or which is wider than half the width of the paste.

Foliage, stem and truss	7 points
Corolla	2 points
Tube	2 points
Paste	3 points
Ground Colour	3 points
Edge	3 points
	20 points

AURICULAS, ALPINE

Meritorious—Foliage, stem, truss, pip and corolla as in Show Auriculas. A circular tube, filled by the anthers, hiding the stigma. A golden, yellow, cream or white centre, destitute of farina. A richly coloured, but not necessarily dark edge, without trace of coarseness, shaded to a paler tint.

Defective—Foliage, stem, truss and pip as in Show Auriculas. A tube which is irregular, pin-eyed, or showing the stigma at all. An edge which is not richly coloured.

Foliage stem and truss	8 points
Pip	4 points
Tube	2 points
Centre	3 points
Edge	3 points
	20 points

*POINTS FOR SHOW AURICULAS

	Points
1. <i>Tube</i> —Rich yellow, circular, outer edge level with expanded pip	10
2. <i>Anthers</i> —Dense, curving evenly inward, covering the stigma	10
3. <i>Paste</i> —Smooth and dense, free from cracks, centre circular, meal in grey edged variety dense enough to give a grey appearance. White edged variety dense enough to be pure white without showing any green petal. Green edged variety free from meal and preferably dark green.	25
4. <i>Body Colour</i> —Circular where it joins the centre, feathering a little into edge colour (Body colour preferably Black)	15
5. <i>Stem & Footstalks</i> —Stem strong enough to carry the truss well above the foliage and rigid enough to allow each pip to display itself without crowding.	10
6. <i>Pip</i> —Round and flat, no notches in petals, seven petals in a flower, colour zones of equal width	20
7. Size, substance and general refinement	10
	100

* These points were prepared by Mr. Dan Bamford and approved by Mr. Cyril Haysom.

Auricula Show Points at Home and Abroad

For Show Points there are several schools of thought. It is the desire of the Quarterly Staff to present the whole picture so that we may hurry the day when we can have International Point Scores for our Primulas. We are presenting the draft of the proposed R.H.S. point scores for Show and Alpine Auriculas, together with Mr. Dan Bamford's (above) and our own. At this time our Society tends to be more conservative on these points than those proposed for Royal Horticultural Society by the Northern Section of the National Auricula and Primula Society of England. We tend to follow more closely the scores laid down by the old florists and adhered to at the present time by Mr. Dan Bamford, Mr. Cyril Haysom, and I believe, the Southern Section of the National Auricula and Primula Society of England. We also prefer the 100% scoring rather than the 20% because we feel that it gives a judge a greater opportunity to be just in his judgments. An Auricula is a complicated flower, as are all florists flowers, and we feel that these need more points, to aid in ease of judging, than the garden varieties do. The A.P.S. has held Judging Schools conducted by Mrs. Florence Levy, and it is her considered opinion that the student judge is confused when forced to use fractions. We feel that it is rather splendid that a Judge as accomplished as Mr. Dan Bamford, who knows immediately just how to classify an Auricula, champions the type of score which can be easily understood and practiced by those who are less accomplished.

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 and 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.

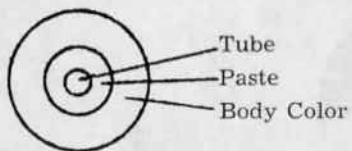
The annual subscription, including a monthly magazine, is \$3.00 payable to the Secretary, C. B. Saunders, Husseys, Green Street Green, Farnborough, Kent, England.

American Primrose Society

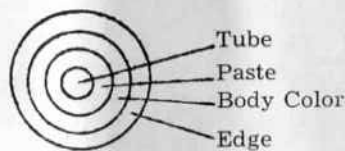
Official Point Score Chart

This chart has been prepared in the belief that exhibitors and others interested should have available for quick reference an index of the points judges have to take into consideration in making their decisions. Primulas not described in this chart are rated by judges upon the basis of how nearly they approach perfection for their kind.

SELF SHOW AURICULA



EDGED SHOW AURICULA

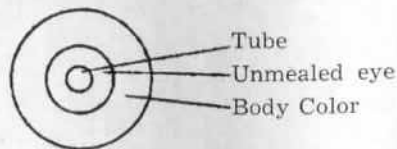


APS Point Score - January, 1952

Qualifications for benching: Plants other than seedlings will not be judged unless they have five fully developed pips in the truss. All Show Auriculas must be thrums. Green edged, grey edged, white edged or self-colored.

FLOWER	85 points	
Corolla round, smooth on the edge, perfectly flat, symmetrically displayed in uncrowded position	25	
Tube yellow or lemon, round, filled with anthers	10	
Paste smooth, solid, pure white	20	
Edge, body color and paste of approximately equal width	10	
Body color dense, forming a perfect circle next to the paste	20	85
PLANT	15 points	
Stalk strong and sufficiently long to bear the truss above foliage	15	15 100

ALPINE AURICULA—DIAGRAM AND POINT SCORE



APS Point Score - January, 1952

Qualifications for benching: Same as for Show Auriculas—Plants other than seedlings will not be judged unless they have five fully developed pips in the truss. All Alpine Auriculas must be thrums. Body color shaded to a paler tint.

FLOWER	50 points	
Flat, fully open pips	10	
Circular florets, no notch in petals	15	
Bright, clear, rich color, shading to paler tint	15	
Center (eye) round and clear—yellow, cream or white destitute of farina	10	50
PLANT HABIT	50 points	
Umbel symmetrical	15	
Stalk, strong, proportionately tall	20	
Handsome, healthy foliage	15	50 100

GARDEN AURICULAS

APS Point Score

Qualifications: All hybrid Auriculas that are not Shows, Alpines or Fancies and that are grown outdoors for garden use.

FLOWER	55 points	
Clear Color	15	
Substance, substantial as opposed to flimsy	15	
Clear center (may be mealed paste or unmealed eye)	10	
Thrum (preferred to pin, but pin-eyes acceptable)	10	
Fully open blossoms when mature, either flat or ruffled	5	55
PLANT HABIT	45 points	
Umbel symmetrical, compact, well bloomed	10	
*Stalk, sturdy enough to carry umbel erect, proportionately tall, with or without meal	20	
Foliage, healthy, pest free, of good substance, with or without meal	15	45 100

EXPLAINING THE ONE CHANGE

*In the original score Stalk was given 15 points, Foliage 20. A stalk sufficiently strong to hold the umbel erect is obviously more important. The foliage is almost always healthy and pest free.

AURICULAS—FANCIES

Qualification for benching: Auriculas with leaf tissue in petals, but not qualifying as Show Auriculas such as: all green; yellow body color with leaf tissue in it; no paste or imperfect paste; pin-eyes or any Show Auricula with defects enough to disqualify as such but of sufficient interest to warrant showing.

APS Point Score - January, 1952

Large, showy flowers	65	
Regular umbel with numerous florets	10	
Strong stalk	15	
Handsome, healthy foliage	10	100

SPECIES

A very simple score has been arranged for the judging of species, including their natural variations. The April Shows in the northwest usually catch the *Denticulatas*, *Roseas*, a few *Sieboldii*, *Japonicas* and *Pulverulentas*.

APS Point Score

Free from disease	20	
(Free as possible from weather and insect damage)		
In full bloom (not mostly in bud, nor with many faded flowers.) Streaked flowers are usually a sign of virus.		
In species with color variations such as <i>Denticulatas</i> , <i>Sieboldii</i> , <i>Japonica</i> color should be as clear as possible.		
Often these species have poor color forms	30	
Vigorous, healthy appearance generally, and well grown*	50	

*(A number of species grown with careful protection develop very long stalks. Where species characteristics are known, over-slim and drawn-out plants should lose points.)

JULIANAS

New APS Point Score Adopted January, 1952

FLOWER		50
Color—Clear, pure, rich	.....	15
RARE COLOR—New, unique, unusual	.....	5
Substance—Substantial	.....	10
Eye—Clear, very small, circular or non-existent	.....	5
Perfection of form (pleasing, open, symmetrical)	.....	10
Texture—Luminous and silky	.....	2½
Thrum	.....	2½
PLANT HABIT		50
Floriferousness	.....	20
Miniature foliage, creeping rootstock as near type of P. Juliae as possible	.....	20
Cultural Excellence	.....	10
		<u>50</u> 100

SHOW POLYANTHUS (Gold or Silver Laced)

APS Point Score

Anthers—Well up to level of pip and folded	.....	10	points
Color—Gold center free from discoloration, body color uniform, red or black, cut sharp and circular upon inner edge by the center. Lacing to be even and of the same shade as the center, and struck through to the center	.....	25	points
Flower or Pip—Flat, smooth, circular. Width from middle of tube to edge of gold center to be about equal to that between center and the edge of the petals	.....	30	points
Stem and Footstalks—Stem to carry its head well above foliage, footstalks stiff upon the truss and allowing room to stand out of each others way	.....	10	points
Size and Substance—As large as possible, without coarseness	.....	25	points
Pin or Pistil must not show above or amongst the anthers			
Penalty: Disqualification.			
Total	.....	100	points

*Acaulis Primroses

APS Point Score

Flower		50	points
Clear color	.....	15	points
Good texture	.....	15	"
Well opened floret	.....	10	"
Size	.....	5	"
Clear eye	.....	2½	"
Thrum eye	.....	2½	"
Plant		50	points
Habit of growth	.....	25	points
(floriferousness, 15; florets in full view, 10)			
Foliage	.....	25	points
(healthy, well -grown, free from disease or pests, not gross or over -fertilized)			

THE SCOTTISH ROCK GARDEN CLUB

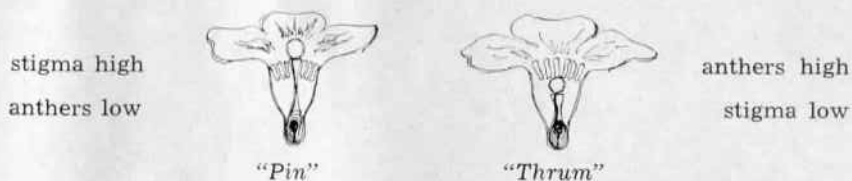
Annual subscription \$1.50, personal check or bank draft. Two journals a year. Frequent articles on Primulas. Liberal seed exchange. Seeds of 72 varieties of Primula distributed last year. Write for membership forms and for information to—Major-General D. M. Murray-Lyon, Honorable Publicity Manager,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

POLYANTHUS, or *ACAULIS-POLYANTHUS PRIMROSES

A.P.S. Point Score

FLOWER		50	points
Clear color	.....	15	points
Good texture	.....	15	"
Fully opened floret (ruffled, frilled, or flat)	.....	2½	"
Size, must be over 1 inch	.....	10	"
Clear eye	.....	5	"
Thrum eye	.....	2½	"
PLANT		50	points
Umbel, full and short enough to make compact, symmetrical truss	.....	10	points
Stem, sturdy, round, tall enough to hold umbel above foliage	.....	20	"
Foliage, same as *acaulis	.....	20	"

*acaulis—P. vulgaris Hudson



The Auricula Month by Month

C. G. HAYSOM, Totten, Southampton, England

APRIL—This is the month that determines whether the previous eleven months' work has been sound or faulty. With the advent of this month stray blooms will begin to appear, and by the third week the plants should be well in bloom. Careful attention must be paid to watering, for it will be fatal to the bloom should any plant become too dry. As they come into bloom the early morning sun is beneficial; but in the middle of the day, when the sun is bright, they should be protected. When the plants are well in bloom hot sun must never reach them or the bloom will soon spoil. Abundance of air must be given and the plants kept as cool as possible. If required for exhibition some of the blooming stems may require support, and the pips will want arranging in some cases to show the truss off to the best advantage.

MAY—As the plants go out of flower, re-potting can be commenced. The compost should consist of 2 parts good fibrous loam, 1 part well decayed leaf-mould or Sorbex and 1 part coarse sand. To a barrow load of this compost add a 5-inch potful of steamed bone flour and some finely crushed charcoal. When obtainable some well rotted cow manure can be used. After shaking out the plant from the old soil, examine the root stock and if this is found to be decayed, cut it back till it appears quite sound and dress the cut with powdered charcoal and lime. Should any root aphid be present, wash the roots in a nicotine insecticide. Potting should be done with perfectly clean pots using 3- or 4-inch pots according to the size of the plant and under-pot rather than over-pot. All offsets not taken off in February should now be taken and dibbled in round the edge of small pots. After the plants have been re-potted, if possible stand them out in the open in a cool place shaded from hot sun such as under a north wall and cover the plants in the event of heavy rain. If no outside position is available, the plants should be kept shaded and as cool as possible in the house or frame. Watering should be done very carefully until the plants have become established.

JUNE—This month should see all repotting finished. Just sufficient water to keep the plants from flagging is all that is necessary so long as they are kept clean and cool.

Hybridizing Gives a New Meaning to 'Spring'

VERNE BENEDICT,* AUBURN, WASHINGTON

I think one of the saddest things about men is their fear of beauty. I used to observe this without realizing it was fear. At Primrose Shows I see men whose overcoats weigh heavily upon them, who look puzzled and a little martyred and somehow embarrassed by their wife's enthusiasm. They are pleased when someone they know comes near enough to begin male conversation or at least to confer the benediction of sympathy.

Last year at one of the shows I met a man who taught me that it is not enough to appreciate what is beautiful, one should also understand how beauty comes to be. "These Primroses don't look much like the ones we have at home," he said. "They must be a different kind." When I tried to explain how hybrids are created by cross-pollination, his quickening interest soon exhausted what little information I had. I determined to increase my knowledge so that in time I could relate the whole "Primrose Story."

Whenever I feel light-hearted and spacious I always think about seeing Ivy Southern. She is a joyous person. You are welcome where she is. We got to her place late in the morning and she was having a cup of tea and we sat in front of a huge window beyond which I saw an apple tree just coming into bloom.

"Tell me about the birds and the bees," I said.

"They do what comes naturally," she said. "Don't you?"

"Not when a stranger comes up and asks me to explain how Primroses are married and I really don't know."

"Sure and that is simple. Go bring me the two kinds of flowers, pin and thrum,[†] and I'll show you."

She held both flowers toward me. "Now, the parts of the flower: These colored petals uniting to form a tube make up the *corolla*, the little green cup below the corolla is called the *calyx*. Here in the thrum flower you see the *anthers* like a little yellow tuft in the corolla tube, while in this flower, a pin-eye, the *stigma* and part of the *style* protrudes from the corolla tube.

"To make a marriage of these two we remove the corolla, called emasculating the flower, from the pin-eyed one. Carefully tear the corolla down to the calyx"—with folded forefingers under the petals and her thumbs on the top on either side of the corolla she gently tore the colored crown in two and pulled it apart and down—"and now you see mama Pistil. The little lady's head is the stigma, her long slender waist is called the style and below swells the ovary. Attached to the inside of the crown tube is the Primrose papa. In this flower he sits below the stigma. In the thrum he sits above and you must be careful not to shake his pollen down on the stigma when you remove him if you are wanting to cross that stigma with pollen from another flower. The marriage-makers[†] say the children are lovelier if the pollen parent—papa—is a thrum. So we'll tear the corolla from this thrum flower—and now, shall we pollinate?"

"The stigma is usually receptive as soon as the flower opens, and you see the anthers are fluffy and bright yellow showing the pollen is mature. An easy way to transfer pollen is to tear off the flower with the attached stamens, as I did, turn it so the stamens are on the outside, then use this as one would a brush to rub pollen on the stigma of the plant

*Mr. Verne Benedict's first article as Regional Editor for Washington, was written in answer to the questions of those who say, "I've read about 'Pollenizing' and 'hybridizing' again and again and it seems a mysterious and unmanageable rite."

that is to bear seed. This is the mother or pistillate parent. One must be sure the sticky stigma is well covered with pollen, and as rain would wash it off pollinating should be done on a clear day or under cover. It is well to cover the umbel you have crossed with a plastic or cellophane bag to keep insects from undoing your careful play. Here I have crossed thrum to pin. That is the natural or legitimate cross.

"On the stigma tip the pollen grains absorb moisture and germinate, grow down the style in a lengthening tube, and when they reach an ovule break, fertilizing the ovule, and from that union seeds are born.

"When the ovules have been fertilized the petals and pistil wither, the ovary enlarges, becoming the seed pod. The seeds stay attached to the placenta until maturing about the middle of July. As the seed ripens the pod turns yellow, finally showing a small hole in the top of the capsule, this widens and the seeds come loose from the placenta. Seeds are very easily scattered if the plant is shaken. You should gather the pods at the first sign of the top opening. Dry in an open container . . . Are you alert?"

"And reverent," I said.

"And if you plant the seeds right away," she concluded, "new faces will smile in next April's rain, saying to you and to me 'Love, it's wonderful!'"

[†]There are many theories about the use of "pins" and "thrums" in different combinations. Some breeders seldom use a "pin" unless it is a part of a very unusual plant, others insist on the "legitimate cross."

Florence Levy

The friends of Mrs. Levy may have been missing the touch of artful grace which she gave the *Quarterly* as Editor. She, as Editor Emeritus, is still interested in the *Quarterly*, old friends may have noticed her style of writing in the "Picture on the Cover" page 23 of the January issue. We are always anxious to publish an article by Mrs. Levy and as soon as she can spare the time from Barnhaven business, I am sure that she will favor us. In the meantime, newer members can brighten up their enthusiasm by reading her articles in old *Quarterlies*. Some issues of these earlier *Quarterlies* are in short supply, and prices for them are scheduled to be raised. We are making a special offer, however, at this time, for immediate acceptance, on the following:

Vol. I, No's 1, 2 and 3, \$1.00. An article on Asiatics and a discussion of *The Standard of Excellence for Polyanthus*.

Four of any of the following @ \$1.50, or 50c each.

Vol. II, No. 3. *Blue Primroses*.

Vol. III, No. 1. "P *aurantiaca*" and "Understand the Asiatics."

Vol. IV, No. 4. *How Polyanthus are Judged*.

Vol. V, No. 2. An article on plant hunters.

Vol. V, No. 3. *Old and Modern Potting Composts for Auriculas*.

Vol. VI, No. 2. *The Denticulata-Cachemiriana Merry-Go-Round*.

Vol. VII, No. 2. *A Primula Manual for Newer Members*.

Vol. VIII, No. 1. *Summer Seeding*.

Vol. VIII, No. 2. *Jack-in-the-Green*.

Vol. VIII, No. 4. *Selecting and Forcing Plants for the Show*.

Vol. IX, No. 1. *On Pollinating*. (A timeless and informative article.)

This particular collection of the writings of Mrs. Levy may be purchased for \$4.00.



Ladybug, Ladybug, Don't Fly Away

By M. C. GOLDMAN, Assistant Editor, Organic Gardening Magazine

Mr. and Mrs. O. B. Lester Rt. 1, Sonora, California, have capitalized on their knowledge of "ladybugs," those beneficial insects which labor diligently to keep soft-bodied, injurious insects in check in our gardens. Beyond making them a means of livelihood, they have devotedly pledged and given long days of arduous, determined work to developing this natural aid and to spreading awareness and utilization of it.

The good work of the ladybug is important—but too little-known. The ladybug—or more formally and accurately, *Hippodamia convergens*, as this ladybird beetle is scientifically designated—is that colorful little bug familiar to us all. This species is common throughout North America, particularly along the mountainous western coastal range. The long, pointed eggs are laid at the seasonal rate of 200 to 500 by each female after a single mating. What is decidedly more noteworthy, however, is the fact that these insects—mamas, papas, young 'uns, the whole family—all have ravenous appetites and their choice and only dish is plant-damaging, crop-hampering insect pests.

Gathering these ladybugs, providing them for plant growers and disseminating the how and why of their use—these are the important tasks of the Lesters. They scale mountains and rock ledges, ford rivers and streams, and intrude their stubborn profiles into the snows of the Sierra Nevadas and the Coast Range of California in quest of the beetles and their larvae. They take what is equivalent to loving, parental care of the gathered insects, keeping them cool, healthy, and necessarily hungry. In distributing them to farmers and gardeners, the Lesters provide extremely helpful suggestions along with the merely commercial service. Both the Lesters lecture to gardening, farming, and civic groups. With an eye to improved use of these beneficial insects, there is constant research and experimentation.

Interesting and unusual indeed is the Lesters' entomological stock in trade; yet, far more than interest or curiosity should be shown by every gardener regarding the application of the ladybug's anything but lady-like habits.

And precisely where do they contribute such a big aid? Well, according to the U. S. Dept. of Agriculture's latest yearbook, "Their (ladybugs) combined action in destroying the eggs and young of destructive, plant-feeding insects is of great value to those who raise crops and flowers." And, according to an increasing number of happier gardeners, farmers, nurserymen, and just plain plant lovers, that value is practical and easily secured. The bugs feed extensively on a great many species of adult injurious insect pests and on

the eggs and larvae of several others. Especially well do they help to control and eliminate sundry species of aphid, a particularly obstinate foe of plant life. A single adult ladybug beetle consumes conservatively about 56 aphid daily, while each larva does no small share by gulping down about 25 a day! Besides the aphid, the ladybug dotes with encouraging effectiveness on other soft-bodied insects and the eggs and larvae of the Colorado potato beetle, the alfalfa weevil, and scale insects. Moreover, while the insect pests are still present, the ladybug will continue to lay eggs and reproduce, thereby continuing a natural cycle of protection.

The bugs are currently marketed by the gallon which provides a quantity of approximately three hundred thousand. The selling price varies somewhat in accordance with the length of time that cool-storing has been necessary, but it is certainly never prohibitive considering the service and saving they can and do render. Don't let the quantity scare you—the price is well within reach of any gardener.

This article was condensed from the original which appeared under the same title in the December, 1952, Organic Gardening Magazine, Emmaus Pennsylvania.



Ladybugs are 1/5 gallon for \$3.00, and 1 gallon for \$10.00. Postage extra. Shipped Air express, 1/2 postage paid east of the Rockies. Live delivery is guaranteed. Full directions included with all orders. O. B. Lester, Route 1, Sonora, California.

Trying For Doubles

LOU ROBERTS

Establishing a strain of double primroses shouldn't be difficult, with the knowledge we have available on the how and why of their behavior under hybridizing.

Donald O'Connell in his article on "Hybridizing for Double Primroses" in the October 1945 issue of the A.P.S. Quarterly, explains why many doubles have no pollen and are incapable of setting seed. Since no doubles appear after the first cross when pollinating with pollen from doubles, every plant resulting from this cross should be saved as a seed parent to be pollinated with double pollen. The next generation is said to give twenty percent doubles. This is hard to believe, and most growers are not so optimistic, and feel quite lucky if they get five per cent.

It is advisable to use acaulis* for breeding. The Polyanthus crosses often result in floppy flowers because the double blossom is too heavy for the stalk and pedicel. With the acaulis cross a nosegay effect may be achieved with a compact mound of blossoms surrounded by a precise formation of leaves.

The chief problem will be in acquiring the pollen bearing doubles. The old lavender and white are barren, Marie Crousse, and an occasional yellow, or the old purple, Arthur Du Molin, will probably be the best sources of pollen.

No words can express the thrill and almost disbelief which assailed Rae Berry and me when we first saw the hundreds of unbelievably beautiful double Primroses near Bellevue three years ago. They were from seed from England, with a ten per cent guarantee for doubles. Our Society has slides which show these magnificent many colored plants, and it is a good thing, because the plants were, for the most part, lost due to moving and a deep freeze which followed almost immediately after. We have tried to get seed from the same man in England, but have had no answer to our many letters.

All this goes to prove that it *can* be done. This is a challenge!

*vulgaris

Primula Species and Synonyms

The taxonomy of the genus *Primula* has interested the botanists for many years. Pax, in his monograph on Primulaceae (1905) arranged the species then known in 21 sections, grouping them according to their probable relationships. Sir I. Bayley Balfour made alterations in the system of Pax, and in 1928 William Wright Smith and George Forrest made a revision of the sections. For the most recent critical review of the sections see the monographs by Sir William Wright Smith and Dr. H. R. Fletcher in Transactions of the Royal Society of Edinburgh, vol. 60 part ii, vol. 61, parts i, ii, iii; Transactions and Proceedings of the Botanical Society of Edinburgh, vol. 33, parts ii, iii, iv; vol. 34, parts i, iv; and Journal of the Linnean Society (Botany), vol. 52, pp. 321-35.

The number in parentheses after the name of each species in the check list indicates the Section in which it is included. The alphabetized species are indicated by the use of heavy type. The synonyms are indicated by asterisks. Type was not available for umlauts and accents and the spelling used is the same as if these marks were present. We are not indifferent to the time honored conventions, but we have had to compromise because of the excessive cost of printing. We believe that we have included all the synonyms established since the 1928 Conference. We have added others which are still in common use.

The following abbreviations have been used: subsp. = subspecies, var. = variety, f. = form, p.p. = pro parte, (f. after the name of an author = fils, in English, Junior.)

The Sections into which the genus has been divided are: (1) AMETHYSTINA, (2) AURICULA, (3) BULLATAE, (4) CANDELABRA, (5) CAPITATAE, (6) CAROLINELLA, (7) CORTUSOIDES, (8) CUNEIFOLIA, (9) DENTICULATA, (10) DRYADIFOLIA, (11) FARINOSAE, (12) FLORIBUNDAE, (13) GRANDIS, (14) MALACOIDES, (15) MALVACEAE, (16) MINUTISSIMAE, (17) MUSCARIOIDES, (18) NIVALES, (19) OBCONICA, (20) PARRYI, (21) PETIOLARES, (22) PINNATAE, (23) PYCNOLOBA, (24) REINII, (25) ROTUNDIFOLIA, (26) SIKKIMENSIS, (27) SINENSES, (28) SOLDANELLOIDEAE, (29) SOULIEI, (30) VERNALES.

- *acaulis (Linnaeus) Hill = vulgaris
- *adenantha Balfour f. & Cooper = bellidifolia
- *admontensis Gusmus = Clusiana var. crenigera
- advena W. W. Smith (18)
- advena var. argenta W. W. Smith
- advena var. concolor W. W. Smith (18)
- aemula Balfour f. & Forrest (18)
- *aequalis Craib = denticulata
- aequipila Craib = ovalifolia
- aerinantha Balfour f. & Purdom (17)
- Agleniana Balfour f. & Forrest (18)
- Agleniana var. alba Forrest
- Agleniana var. atrocrocea Ward
- Agleniana var. thearosa Ward
- x Alleen Aroon = orange f. of x Lissadell (4)
- *ajanensis E. Busch = Matsumurae
- *albiflos Ward ex Balfour f. = calliantha var. albiflos
- algida Adam (11)
- Aliciae Taylor MSS, ex W. W. Smith (29)
- Allionii Loiseleur (2)
- Allionii x marginata
- Allionii x rubra = x Ethel Barker
- alpicola Stapf (26)
- alpicola var. alba W. W. Smith (26)
- alpicola var. luna (Stapf) W. W. Smith & Fletcher
- alpicola var. violacea (Stapf) W. W. Smith
- x alpigena Dalle Torre & Sarntn = minima x daonenensis (2)
- *alpina Loiseleur = viscosa
- *alpina Salisbury = auricula
- x alpina Schleicher = auricula x viscosa (2)
- *aliphila Balfour f. & Farrer (7)
- *alta Balfour f. & Forrest = denticulata subsp. alta
- *altaica Lehmann = farinosa var. denudata
- *altaica Pallas ex Ledebour = elatior subsp. Pallasii
- *altaica Turczaninow = intermedia
- amabilis Balfour f. & Forrest (18)

- x ambigua Beck = veris subsp. Columnae x vulgaris (30)
- ambita Balfour f. (19)
- *americana Rydberg = incana
- amethystina Franchet (1)
- amethystina subsp. argutidens (Franchet) W. W. Smith & Fletcher
- amethystina subsp. brevifolia (Forrest) W. W. Smith & Fletcher
- amoena M. Bieberstein (30)
- *amoena subsp. Meyeri (Ruprecht) W. W. Smith & Forrest = amoena var. Meyeri
- amoena var. grandiflora Kusnetzow (30)
- amoena var. hypoleuca Kusnetzow
- amoena var. intermedia Kusnetzow
- amoena var. kasbek Kusnetzow
- amoena var. Meyeri (Ruprecht) Boissier
- amoena var. sublobata Kusnetzow
- *androsacea Pax = Forbesii subsp. androsacea x anglica Pax = veris x vulgaris subsp. Sibthorpii (30)
- *angustidens (Franchet) Pax p.p. = stenodonta
- *angustidens (Franchet) Pax p.p. = Wilsoni
- angustifolia Torrey (20)
- x anisiaca Stapf = elatior x vulgaris (30)
- anisodora Balfour f. & Forrest (4)
- x anisodoxa = helodoxa x anisodora (4)
- annulata Balfour f. & Ward (16)
- apennina Widmer (2)
- apocrita Balfour f. & Forrest (17)
- *artica Koidzumi = Tschuktschorum
- *arctotis Kerner = x pubescens
- *Arendsii Pax = obconica
- *argutidens Franchet = amethystina subsp. argutidens
- aromatica W. W. Smith & Forrest (14)
- asarifolia Fletcher (19)
- assamica Fletcher (11)
- x Asthore hort. = Beesiana x Bulleyana (4)
- *atricapilla Balfour f. & Cooper = bellidifolia

- atrodentata W. W. Smith (9)
- *atrotubata W. W. Smith & Forrest = malvacea
- *atroviolacea Jacquem = macrophylla
- *atuntziensis Balfour f. & Forrest = minor
- Aucherii Jaubert & Spach (12)
- aurantiaca W. W. Smith & Forrest (4)
- aureata Fletcher (21)
- *aureostellata Balfour f. & Cooper = Dickieana var. aureostellata
- auricula Linnaeus (2)
- auricula subsp. Balbisii (Lehmann) Widmer
- *auricula var. albocincta Widmer = auricula
- *auricula var. ciliata (Moretti) Koch = auricula subsp. Balbisii
- auricula var. monacensis Widmer
- auricula var. Obristii (Stein) Beck (2)
- auricula var. serratifolia Ludi
- auricula var. Widmerae Pax
- auricula x carniolica = x venusta
- auricula x daonenensis (oemensis) Pax = x discolor
- auricula x integrifolia Pax = x Escheri
- auricula x latifolia Widmer = x pubescens
- auricula x rubra (hirsuta) Pax — p.p. = x pubescens
- auricula x villosa Pax = x Gobellii
- auricula x viscosa Pax = x alpina
- auricula subsp. Balbisii x tyrolensis = x obovata
- auricula var. ciliata x tyrolensis Pax = x obovata
- auriculata Lamarck (11)
- auriculata var. calva Hausskn. & Bornmuller
- x austriaca Wettstein = veris subsp. canescens x vulgaris (30)
- *austrolisteri Balfour f. = Listeri
- Baileyana Ward (25)
- *Balbisii Lehmann = auricula subsp. Balbisii
- baldschuanica Fedtschenko (11)
- x Barbara Barker hort. = (marginata x Linda Pope) x (x Juleika Dobson)
- barbatula W. W. Smith (16)
- *Barbeyana Petitmengin = Forbesii
- barbicalyx Wright (19)
- *barbybotrys (Handel-Mazzetti) = malvacea
- *Barnardoana W. W. Smith & Ward = elongata
- bathangensis Petitmengin (15)
- *Baumgartenia Degen & Moesz = Wulfeniana
- Bayernii Ruprecht (18)
- Beesiana Forrest (4)
- Beesiana Forrest var. leucantha (Balfour f. & Forrest) Fletcher
- *begoniiformis Petitmengin = obconica var. rotundifolia
- bella Franchet (16)
- bella subsp. Bonatiana (Petitmengin) W. W. Smith & Forrest
- bella subsp. coryphaea (Balfour f. & Ward) W. W. Smith & Forrest
- bella subsp. cyclostegia (Handel-Mazzetti) W. W. Smith & Forrest
- *bella subsp. moschophora W. W. Smith & Forrest = moschophora
- bella subsp. nanobella (Balfour f. & Forrest) W. W. Smith & Forrest
- bella subsp. sciophila (Balfour f. & Ward) W. W. Smith & Forrest
- bellidifolia King ex Hooker f. (17)
- *Benkoiانا Borbas = elatior subsp. carpathica x Berninae Kerner = rubra x viscosa (2)
- bhutanica Fletcher (21)
- *bicolor Rafinesque = vulgaris
- x biflora Huter = glutinosa x minima (2)
- *x Bilekii Sundermann = x Steinii
- *Biondiana Petitmengin = stenocalyx
- *biserrata Forrest = serratifolia
- blandula W. W. Smith (11)
- blattariformis Franchet (15)
- blattariformis subsp. Tenana (Bonati ex Balfour f.) W. W. Smith & Forrest
- *blattariformis var. Duclouxii Bonati = blattariformis subsp. Tenana
- *Blinii Leveille = incisa
- *Bonatiana Petitmengin = bella subsp. Bonatiana
- *Bonatii Knuth = obconica
- Boothii Craib (21)
- borealis Duby (11)
- boreo-calliantha Balfour f. & Forrest (18)
- Bornmulleri Pax (12)
- *bosnaica Beck = x ternoviana
- *Boveana Dchaine = verticillata subsp. Boveana x Bowlesii Farrer = pedemontana x villosa (2)
- brachystoma W. W. Smith (4)
- bracteata Franchet (3)
- bracteosa Craib (21)
- x Bractworth = bracteosa x Edgeworthii
- *brennia Gusmus = x Steinii
- brevicula Balfour f. & Forrest (18)
- *brevifolia Forrest = amethystina subsp. brevifolia
- x breviflorus Borbas = elatior x veris subsp. Columnae (30)
- breviscapa Franchet
- *brevistylis D.C. Fl. Franc. = x variabilis
- *Brodheadae M. E. Jones = angustifolia
- bryophila Balfour f. & Farrer (18)
- bullata Franchet (3)
- bullata var. rufa (Balfour f.) W. W. Smith & Fletcher
- Bulleyana Forrest (4)
- burmanica Balfour f. & Ward (4)
- Buryana Balfour f. (28)
- Buryana var. purpurea Fletcher
- *cachemiriana Munro = denticulata
- *cadinensis Porta = daonenensis
- x Caesarea Farrer = minima x Clusiana (2)
- *calicula Balfour f. & Forrest = yunnanensis
- *caliciphila Hutchinson = rupestris
- caldaria W. W. Smith & Forrest (11)
- caldaria var. nana W. W. Smith & Forrest
- Calderiana Balfour f. & Cooper (21)
- Calderiana var. aculeosens (Balfour f. & W. W. Smith) Comb. nov.
- Calderiana var. alba (W. W. Smith) Comb. nov.
- calliantha Franchet (18)
- calliantha var. albiflos W. W. Smith & Forrest
- calliantha var. nuda Farrer ex W. W. Smith
- callifolia W. W. Smith (21)
- *calycina Duby = daonenensis
- *calycina Reichenbach = spectabilis
- *cana Balfour f. & Cave = Caveana
- Candicans W. W. Smith (16)
- *candidissima W. W. Smith & Forrest = sinuata
- *Candolleana Reichenbach = integrifolia
- Candolleana x graveolens = x Muretiana
- capitata Hooker (5)
- capitata subsp. Craibiana (Balfour f. & W. W. Smith) W. W. Smith & Forrest
- capitata subsp. crispata (Balfour f. & W. W. Smith) W. W. Smith & Forrest
- capitata subsp. lacteocapitata (Balfour f. & W. W. Smith) W. W. Smith & Forrest
- capitata subsp. Mooreana (Balfour f. & W. W. Smith) W. W. Smith & Forrest
- capitata subsp. sphaerocephala (Balfour f. & W. W. Smith) W. W. Smith & Forrest
- capitellata Boissier (11)
- *cardioides (Merrill) W. W. Smith & Fletcher (6)
- *cardiophylla Balfour f. & W. W. Smith = rotundifolia
- *carniolica Pollini = spectabilis
- carniolica Jacquin (2)
- *carniolica Wulfen p.p. = Wulfeniana
- *carnosula Balfour f. & Forrest = gemmifera var. zambalensis
- *carpathica (Grisebach & Schenk) Fuss = elatior subsp. carpathica
- x Carueli Porta = glaucescens subsp. longbarda x spectabilis (2)
- *cashmeriana = denticulata
- *caucasica Koch = algida
- Cavaleri Petitmengin (14)
- Caveana W. W. Smith (25)
- Cawdoriana Ward (28)
- celsiæformis Balfour f. (15)
- *cephalantha Balfour f. = Mairei
- cerina Fletcher (18)
- cernua Franchet (17)
- chamaedoron W. W. Smith (21)
- chamaethauma W. W. Smith (21)
- chamaethauma var. chiukiangensis Chen
- *Chamissonis E. Busch = borealis
- chapaensis Gagnepain (6)
- chartacea Franchet (21)
- chasmophila Balfour f. ex Hutchinson (28)
- *chimogenes Fletcher = Calderiana alba
- chionantha Balfour f. & Forrest (18)
- chionogenes Fletcher (21)
- chionota W. W. Smith (21)
- chionota var. violacea W. W. Smith
- chlorodryas W. W. Smith (10)
- chrysochlora Balfour f. & Ward (4)
- *chrysocha Balfour f. & Forrest = gemmifera var. zambalensis
- *chrysophylla Balfour f. & Forrest = dryadifolia
- chumbiensis W. W. Smith (26)

Heavy Type = Alphabetized Species; * = Synonyms.

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chungensis Balfour f. & Ward (4)
 * *x chunglenta* = *chungensis* x *pulverulenta* (4)
 * *Churchilli* Gusmus = *Clusiana* var. *crenigera*
ciutarifolia Pax (22)
 * *ciliata* Moretti = *auricula* subsp. *Balbisii*
 * *ciliata* Schrank = *rubra*
ciliata x tyrolensis = *x obvata*...
cinerascens Franchet (7)
cinerascens subsp. *sinomollis* (Balfour f. & Forrest) W. W. Smith & Forrest
 * *citrina* Balfour f. & Purdom = *flava*
Clarkei Watt (11)
Clusiana Tausch (2)
 * *Clusiana* E. Weiss = *Wulfeniana*
Clusiana var. *crenigera* Beck
Clusiana x minima = *intermedia*
 * *Clusii* Wiest = *Clusiana*
Clutterbuckii Ward (11)
Cockburniana Hemsley (4)
Cockburniana x (*X Unique*) = *X Excelsior*
coerulea Forrest (21)
 * *conata* Duthie = *stenocalyx*
 * *Columnae* Schur = *elatior* subsp. *carpathica*
comata Fletcher (21)
 * *Comberi* W. W. Smith (11)
 * *commutata* Schott = *villosa* subsp. *commutata*
 * *compantha* Balfour f. & Forrest = *pulchella*
 * *concholoba* Stapf & Sealy (17)
concinna Watt (11)
 * *confinis* Schott — *rubra*
 * *congestifolia* Forrest = *dryadifolia*
 * *conica* Balfour f. & Forrest = *deflexa*
conoclea W. W. Smith (25)
conspersa Balfour f. & Purdom (11)
 * *Cooperi* Balfour f. (4)
 * *cordata* Balfour f. = *rotundifolia*
 * *cordifolia* Pax = *rotundifolia*
 * *cordifolia* Schur = *veris* subsp. *Columnae*
 * *coronaria* Salisbury = *veris*
 * *x coronaria* = *minima* x *daonensis* (2)
 * *x coronata* Porta = *x alpigena*
cortusoides Linnaeus (7)
cortusoides var. *tomentella* Regel
 * *Coryana* Balfour f. & Forrest MSS. = *boreo-*
calliantha
 * *coryphaea* Balfour f. & Ward = *bella*
 subsp. *coryphaea*
 * *cottia* Widmer = *villosa* f. *cottia*
 * *Craibeana* Balfour f. & W. W. Smith =
capitata subsp. *Craibeana*
crassa Handel-Mazzetti (21)
 * *crenata* Fuss = *auricula*
 * *crenata* Lamarck = *marginata*
 * *crenata* Salzer = *elatior* subsp. *carpathica*
 * *crispa* Balfour f. & W. W. Smith = *glomerata*
 * *crispata* Balfour f. & W. W. Smith = *glomerata*
crocifolia Pax & K. Hoffman (18)
 * *x Crucis* Bowles = *marginata* x *viscosa* (2)
cuneifolia Ledebour (8)
cuneifolia subsp. *hakusanensis* (Franchet)
 W. W. Smith & Forrest
cuneifolia subsp. *heterodonta* (Franchet)
 W. W. Smith & Forrest
cuneifolia subsp. *saxifragifolia* (Lehmann)
 W. W. Smith & Forrest
 * *cuneifolia* var. *Dubyi* Pax = *cuneifolia*
Cunninghamii King ex Craib
 * *x eupularis* Pax = *veris* subsp.
macrocalyx x *vulgaris*
Cusickiana A. Gray
 * *cyanantha* Balfour f. & Forrest = *Watsoni*
 * *cycanocephala* Balfour f. = *denticulata* subsp. *alta*
 * *cyclophylla* Balfour f. & Farrer = *dryadifolia*
 * *cyclostegia* Handel-Mazzetti = *bella*
 subsp. *cyclostegia*
 * *cylindriflora* Handel-Mazzetti = *Faberi*
 * *cynoglossifolia* = *viscosa*
 * *dahurica* Lehman = *intermedia*
 * *danubialis* C. Richter = *elatior*
daonensis Leybold (2)
darialica Ruprecht (11)
darialica subsp. *farinifolia* (Ruprecht)
 Kusnetzow
Davidi Franchet
 * *davosiana* Sundermann = *x Heerii*
 * *davurica* Spreng = *farinosa* var. *denudata*
 * *debilis* Bonati = *pellucida*
decipiens Duby (11)
 * *declinis* Balfour f. & Forrest = *szechuanica*
 * *decurva* Balfour f. & Forrest = *szechuanica*
deflexa Duthie (17)
 * *delicata* Forrest = *spicata*

densa Balfour f. (19)
denticulata Smith
denticulata subsp. *alta* (Balfour f. & Forrest)
 W. W. Smith & Forrest
 * *denticulata* subsp. *cachemiriana* (Munro)
 W. W. Smith & Forrest = *denticulata*
 * *denticulata* subsp. *cycanocephala* (Balfour f.)
 W. W. Smith & Forrest = *denticulata*
 subsp. *alta*
 * *denticulata* subsp. *erythrocarpa* (Craib)
 W. W. Smith & Forrest = *erythrocarpa*
 * *denticulata* subsp. *Harsukhii* (Craib)
 W. W. Smith & Forrest = *denticulata*
 * *denticulata* subsp. *Hoffmeisteri* (Klotzsch)
 W. W. Smith & Forrest = *denticulata*
 * *denticulata* subsp. *paucifolia* (Craib)
 W. W. Smith & Forrest = *denticulata*
 * *denticulata* subsp. *stolonifera* (Balfour f.)
 W. W. Smith & Forrest = *pseudodenticulata*
deorum Velenovsky (2)
 * *Deschmani* Gusmus = *x vohinensis*
deuteronana Craib (21)
 * *Dianae* Balfour f. & Cooper = *Calderiana*
diantha Bureau & Franchet (18)
 * *Dickieana* Watt (1)
Dickieana var. *aureostellata* (Balfour f. & Cooper) Fletcher
Dickieana var. *chlorops* W. W. Smith & Forrest
Dickieana var. *Gouldii* Fletcher
 * *Dickieana* var. *Pantlingii* (King) W. W. Smith & Forrest = *Dickieana*
dietyophylla W. W. Smith (19)
didyma W. W. Smith (26)
 * *Dielsii* Petitmengin = *tongolensis*
 * *x digenea* Kerner = *elatior* x *vulgaris* (30)
 * *Dinyana* Lager = *x Muretiana*
 * *x discolor* Leybold = *auricula* x *daonensis* (2)
 * *discolor* Schur = *veris* subsp. *Columnae*
 * *diversa* Gusmus = *x Steini*
 * *dolomitis* hort. Llewelyn = *auricula* subsp.
Balbisii
 * *domestica* Hoffmannsegg = *veris*
 * *doshongensis* W. W. Smith = *genestieriana*
Drummondiana Craib (21)
dryadifolia Franchet (10)
dryadifolia f. *Jonarduni*
 * *drymophila* Craib = *sonchifolia*
 * *x dsehungdiensis* = *Poissonii* x *secundiflora*
 (26)
Dubernardiana Forrest (3)
Duclouxii Petitmengin (14)
dumicola W. W. Smith & Forrest (19)
 * *x Dumoulinii* Stein = *x Facchinii*
Duthieana Balfour f. & W. W. Smith (18)
eburnea Balfour f. & Cooper (28)
Edgeworthii Pax (21)
 * *x Edina* = *Bullejana* x *Beesiana* (4)
efarinosa Pax (11)
effusa W. W. Smith & Forrest (14)
egaliksensis Wormskiod (11)
egaliksensis f. *violacea* Fernald
elatior (Linnaeus) Hill (30)
elatior subsp. *carpathica* (Fuss) W. W. Smith & Forrest
elatior subsp. *cordifolia* (Ruprecht) W. W. Smith & Forrest
elatior subsp. *intricata* (Godron & Grenier) Ludi
elatior subsp. *leucophylla* (Pax) Harrison
elatior subsp. *Lofthousei* (Harrison)
 W. W. Smith & Fletcher
elatior subsp. *Pallasii* (Lehmann)
 W. W. Smith & Forrest
elatior subsp. *pseudelatior* (Kusnetzow)
 W. W. Smith & Forrest
elatior subsp. *Ruprechtii* (Kusnetzow) Harrison
 * *elatior* var. *decipiens* Sonder = *x media*
elatior var. *diaphana* Domin
elatior var. *Lingelsheimii* Pax
elatior var. *obscura* Harrison
 * *elegans* Duby = *rosea* var. *elegans*
Elizabethae Ludlow MSS. ex W. W. Smith (18)
elliptica Royle (11)
Ellisiae Pollard & Cockerell (20)
elongata Watt (18)
epilosa Craib (21)
erodioides Schlechter (22)
 * *erosa* Hooker f. = *glomerata*
erosa Wallich (9)
 * *erratica* W. W. Smith (11)
erythra Fletcher (26)
erythrocarpa Craib (9)
 * *x Escheri* Brugger = *auricula* x *integrifolia* (2)

Esquirolii Petitmengin (21)
euchaetes W. W. Smith (17)
eucyelia W. W. Smith & Forrest (7)
Eugenia Federow (7)
euosma Craib (21)
 * *exaltata* Lehmann = *farinosa* var. *denudata*
 * *x Excelsior* = *Cockburniana* x *X Unique* (4)
exigua Velenovsky (11)
 * *ximia* Greene = *Tschuktchorum* var. *artica*
 * *excapa* Hegetschweiler & Heer = *rubra*
Faberi Oliver (1)
 * *x Facchinii* Schott = *minima* x *spectabilis* (2)
farosa Balfour f. & Craib (21)
faleifolia Ward (18)
 * *x Falkneriana* Porta = *elatior* x *vulgaris* (30)
 * *x fallax* C. Richter = *elatior* x *veris*
 subsp. *canescens* (30)
 * *fallax* Gusmus = *intermedia*
 * *farinifolia* Ruprecht = *darilialica*
 subsp. *farinifolia*
farinosa Linnaeus
 * *farinosa* subsp. *davurica* (Sprengel)
 W. W. Smith & Forrest = *farinosa*
 * *farinosa* subsp. *exigua* (Velenovsky)
 var. *denudata*
 W. W. Smith & Forrest = *exigua*
 * *farinosa* subsp. *fistulosa* (Turkevitz)
 W. W. Smith & Forrest = *fistulosa*
 * *farinosa* subsp. *incana* (Jones)
 W. W. Smith & Forrest = *incana*
 * *farinosa* subsp. *intercedens* (Fernald)
 W. W. Smith & Forrest = *intercedens*
 * *farinosa* subsp. *intermedia* (Sims)
 W. W. Smith & Forrest = *intermedia*
 * *farinosa* subsp. *magellanica* (Hooker f.)
 W. W. Smith & Forrest
 * *farinosa* subsp. *mistassinica* (Michaux) Pax =
mistassinica
 * *farinosa* subsp. *modesta* (Bisset & Moore)
 Pax = *modesta*
 * *farinosa* subsp. *scotica* (Hooder)
 W. W. Smith & Forrest = *scotica*
 * *farinosa* subsp. *specuicola* (Rydberg)
 W. W. Smith & Forrest = *specuicola*
 * *farinosa* var. *alba* Saundersae Farrer =
farinosa var. *albiflora*
farinosa var. *albiflora* Pax
farinosa var. *chrysophylla* Trautvetter & Meyer
farinosa var. *denudata* Koch
farinosa var. *flexicaulis* (Beauverd) Hegi
 * *farinosa* var. *gymnophylla* Trautvetter & Meyer =
farinosa var. *denudata*
 * *farinosa* var. *Hornemanniana* (Lehmann)
 Pax = *farinosa* var. *denudata*
farinosa var. *littoralis* Heslop-Harrison
 * *farinosa* var. *magellanica* (Lehmann)
 Hooker f. p.p. = *decipiens*
farinosa var. *pygmaea* Gaudin
farinosa var. *xanthophylla* Trautvetter & Meyer
Farreriana Balfour f. (18)
fasciculata Balfour f. & Ward (11)
Fauriae Franchet (11)
fea Ward (28)
Fedtschenko Regel (11)
Fernaldiana W. W. Smith (11)
Filchnerae Knuth (22)
filipes Watt (19)
firmipes Balfour f. & Forrest (26)
fistulosa Turkevitz (11)
flabellifera W. W. Smith (28)
flagellaris W. W. Smith (16)
 * *x flagellicaulis* Kerner = *veris* x *vulgaris* (30)
flava Maxim (11)
 * *flavicans* Handel-Mazzetti = *ambita*
 * *flexilipes* Balfour f. & Forrest = *firmipes*
flexuosa Turkevitz (11)
 * *Floerkeana* Facchini = *x Facchinii*
 * *x Floerkeana* Schrader = *glutinosa* x *minima* (2)
floribunda Wallich (12)
floribunda var. *isabellina* Hort. (12)
 * *florida* Balfour f. & Forrest = *incisa*
Florindae Ward (26)
 * *Fluggeana* Lehmann = *elatior* f. *Perreiniana*
Forbesii Franchet (14)
Forbesii subsp. *androsacea* (Pax)
 W. W. Smith & Forrest
 * *Forbesii* subsp. *Barbeyana* Petitmengin =
Forbesii
 * *Forbesii* subsp. *delicata* (Petitmengin)
 W. W. Smith & Forrest = *malacoides*
 * *Forbesii* subsp. *Duclouxii* (Petitmengin)
 W. W. Smith & Forrest = *Duclouxii*

Forbesii subsp. *hypoleuca* (Handel-Mazzetti)
 W. W. Smith & Forrest
Forbesii subsp. *melantha* (Balfour f. & W. W. Smith) W. W. Smith & Forrest
Forrestii Balfour f. (3)
 * *x Forsteri* Stein = *x Steini*
fragilis Balfour f. & Ward (11)
frondosa Janka (11)
 * *Gageana* Balfour f. & W. W. Smith = *Kingii*
 * *Gagnepainiana* Handel-Mazzetti = *szechuanica*
Gambeliana Watt (25)
 * *Gammieana* King ex Balfour f. = *Calderiana*
gemmaifera Batalin (11)
 * *gemmaifera* subsp. *chrysocha* (Balfour f. & Forrest) W. W. Smith & Forrest = *gemmaifera*
 var. *zambalensis*
 * *gemmaifera* subsp. *conspersa* Balfour f. & Purdom = *conspersa*
 * *gemmaifera* subsp. *monantha* W. W. Smith & Forrest = *gemmaifera* var. *monantha*
 * *gemmaifera* subsp. *rupestris* (Pax & K. Hoffman)
 W. W. Smith & Forrest = *gemmaifera* var.
rupestris
 * *gemmaifera* subsp. *zambalensis* (Petitmengin)
 W. W. Smith & Forrest = *gemmaifera*
 var. *zambalensis*
gemmaifera var. *amoena* Chen
gemmaifera var. *Licentii* (W. W. Smith & Forrest)
 W. W. Smith & Fletcher
gemmaifera var. *monantha* (W. W. Smith & Forrest) W. W. Smith & Fletcher
gemmaifera var. *rupestris* (Pax & K. Hoffmann)
 W. W. Smith & Fletcher
gemmaifera var. *zambalensis* (Petitmengin)
 W. W. Smith & Fletcher
Genestieriana Handel-Mazzetti
 * *gentianoides* W. W. Smith = *tongolensis*
Geraldinae W. W. Smith (16)
geraniifolia Hooker f. (7)
 * *Giraldiana* Balfour f. = *muscaroides*
Giraldiana Pax (17)
glabra Klatt (11)
 * *glacialis* Franchet = *brevicula*
glandulifera Balfour f. & W. W. Smith (16)
glaucescens Moretti (2)
glaucescens subsp. *calycina* (Duby) Pax
glaucescens subsp. *longobarda* (Porta) Widmer
glomerata Pax (5)
glutinosa Wulfen (2)
 * *glycosma* Petitmengin = *Wilsoni*
 * *x Gobellii* Kerner = *auricula* x *villosa* (2)
 * *x Goppertiana* Pax = *elatior* x *veris* subsp.
macrocalyx (30)
gracilenta Dunn (17)
gracillipes Craib (21)
 * *graminifolia* Pax & K. Hoffman =
sinoplanginea var. *graminifolia*
grandis Trautvetter (13)
Griffithii (Watt) Pax (21)
 * *hakusanensis* Franchet = *cuneifolia*
 subsp. *hakusanensis*
Halleri J. F. Gmelin (11)
Handeliana W. W. Smith & Forrest (18)
 * *Harrissii* Watt ex Balfour f. = *rosea*
 var. *Harrissii*
 * *Harrowiana* Balfour f. & Cooper = *eburnea*
 * *Harsukhii* Craib = *denticulata*
hazarica Duthie (11)
 * *x Heerii* Brugger = *rubra* x *integrifolia* (2)
helodoxa Balfour f. (4)
 * *helvonea* Balfour f. & Ward (18)
 * *Hemsleyi* Petitmengin = *gemmaifera*
Henrici Bureau & Franchet (3)
Henryi (Hemsley) Pax (6)
 * *heterochroma* Stapf = *vulgaris* subsp.
heterochroma
 * *heterodonta* Franchet = *cuneifolia* subsp.
heterodonta
heucherifolia Franchet (7)
 * *Heydei* Watt = *minutissima*
hidakana Miyabe & Kudo (24)
hilaris W. W. Smith (21)
 * *hirsuta* Allioni p.p. = *rubra*
 * *hirsuta* Villars = *viscosa*
 * *hirsuta* var. *angustata* Widmer = *rubra*
 * *hirsuta* var. *ciliata* (Schrank) Pax = *rubra*
 * *hirsuta* var. *excapa* (Hegetschweiler & Heer)
 Pax = *rubra*
 * *hirsuta* var. *nivea* (Sims) Pax = *rubra*
 * *Hoffmanniana* W. W. Smith (21)
 * *Hoffmeisteri* Klotzsch = *denticulata*

Hookeri Watt (21)
 *Hopeana Balfour f. & Cooper = sikkimensis var. Hopeana
 *Hornemanniana Lehmann p.p. = stricta
 *x hortensis Wettstein (The Auricula of Gardens) (2)
 Huana W. W. Smith (6)
 humilis Pax & K. Hoffman (29)
 Hunnewellii Fernald (11)
 *hupehensis Craib = odontocalyx
 x Huteri Kerner = one of the crosses of glutinosa x minima (2)
 hyacinthina W. W. Smith (17)
 hylebia W. W. Smith (21)
 *hylophila Balfour f. & Farrer = odontocalyx
 *hymenophylla Balfour f. & Forrest = polyneura
 *hypoleuca Handel-Mazzetti = Forbesii subsp. hypoleuca
 ianthina Balfour f. & Cave (4)
 imperialis Junghuhn (4)
 imperialis var. gracilis Pax
 Inayatii Duthie (11)
 ineana Jones (11)
 incisa Franchet (29)
 *incisa Lamarck = integrifolia
 *indobella Balfour f. & W. W. Smith • tenuiloba
 *ingens W. W. Smith & Forrest = sinopurpurea
 inopinata Fletcher (17)
 integrifolia Linneus (2)
 integrifolia x latifolia Widmer = x Muretiana
 integrifolia x minima = x intermedia
 integrifolia x viscosa = x Berninae
 integrifolia x viscosa = x Heerii
 intercedens Fernald (11)
 interjacens Chen MSS. (14)
 *intermedia Facchini = x variabilis
 intermedia Sims (11)
 x intermedia Portenschlag = Clusiana x minima (2)
 *Intricata Godron & Gren = elatior subsp. intricata
 x Inverleith = Bulleyana x pulverulenta (4)
 *involuta Sweet = verticillata subsp. Boveana
 involucreta Wallich (11)
 *involuta subsp. yargongensis (Petitmengin)
 W. W. Smith & Forrest = yargongensis
 ioessa W. W. Smith (26)
 ioessa var. subpinnatifida (W. W. Smith)
 W. W. Smith & Fletcher (26)
 *ionantha Pax & K. Hoffman = ruszeola
 irregularis Craib (21)
 Jaffreyana King (11)
 japonica A. Gray (4)
 *jesoana Nakai = Loeseneri
 jesoana Miquel (7)
 Jigmediana W. W. Smith (28)
 *Jonarduni W. W. Smith = dryadifolia f. dryadifolia
 jueunda W. W. Smith (21)
 jueunda var. pontica W. W. Smith
 Juliae Kusnetzow (30)
 *x Juliana = (vulgaris x elatior) x veris (30)
 *junior Balfour f. & Forrest = calliantha
 x Juribella Sundermann = minima x tyrolensis (2)
 kamuiana Miyabe & Tawakali (4)
 *kanseana Pax & K. Hoffman = stenocalyx
 Kaufmanniana Regel (7)
 x Kelleri Widmer = x Steinii
 x kewensis hort. = floribunda x verticillata (12)
 khasiana Balfour f. & W. W. Smith (4)
 kialensis Franchet (11)
 *kichanensis Franchet ex Petitmengin = yunnanensis
 Kingii Watt (1)
 kisoana Miquel (7)
 Kitabeliana Schott (2)
 kiuchiangensis Balfour f. & Forrest (8)
 Klaveriana Forrest (21)
 Knuthiana Pax (11)
 x Kolbiana Widmer = viscosa f. graveolens x daonensis (2)
 kongstungensis Ward (11)
 kwanstungensis W. W. Smith (19)
 kweichouensis W. W. Smith (19)
 Lacei Hemsley (12)
 laeata W. W. Smith (21)
 laeinata Pax & K. Hoffman (11)
 *lactecapitata Balfour f. & W. W. Smith = capitata subsp. lactecapitata
 lactiflora S. Turkevitz (7)
 lactiflora var. lactea Schipczinsky
 lactiflora var. lactiocortusoides Schipczinsky
 laeta W. W. Smith (21)

*lanata Pax & K. Hoffman = heucherifolia
 *lancifolia Pax & K. Hoffman = ruszeola
 *latifolia Lapeyrouse = viscosa
 latisepta W. W. Smith (7)
 laurentiana Fernald (11)
 laxiuscula W. W. Smith (9)
 *Legendrei Bonati = Souliei subsp. Legendrei
 *Lesueana Camus = x variabilis
 *leimonophila Balfour f. = Virginis
 *lepida Duby = farinosa var. denudata
 *lepta Balfour f. & Purdom = apocrita
 leptophylla Craib
 *leptopoda Bureau & Franchet = stenocalyx
 *leucantha Balfour f. & Forrest = Beesiana var. leucantha
 *leucochnoa Handel-Mazzetti = melanops
 *leucophylla Pax = elatior subsp. leucophylla
 *leucops W. W. Smith & Ward = rigida
 *lhasaensis Balfour f. & W. W. Smith = Jaffreyana
 *Licentii W. W. Smith & Forrest = gemmifera var. Licentii
 *lichiangensis Forrest = polyneura
 *lichiangensis var. hapala Balfour f. = polyneura
 limbata Balfour f. & Forrest (18)
 *Limprichtii Pax & Hoffman = ovalifolia
 *limnoica Craib = denticulata subsp. alta
 x Linda Pope hort. = marginata x auricula (2)
 x Lindsay MacWatt = rubra x Border Auricula (2)
 x Lissadell = pulverulenta x Cockburniana (4)
 *Listeri Forrest = sinolisteri
 Listeri King ex Hooker f. (19)
 *Listeri subsp. australisteri (Balfour f.)
 W. W. Smith & Forrest = Listeri
 Littledalei Balfour f. & Watt (25)
 *Littoniana Forrest = Viali
 *Littoniana var. robusta Forrest = Viali
 *Loczii Kanitz = stenocalyx
 Loeseneri Kitazawa (7)
 *Lofthousei Harrison = elatior subsp. Lofthousei
 *longiflora Allioni = Halleri
 longipes Freyn & Sintenis (18)
 longipinnatifida Chen (29)
 *longiscapa Komarov = fistulosa
 *longobarda Porta = glaucescens subsp. longobarda
 Ludlowii W. W. Smith (28)
 luteola Ruprecht (11)
 *Maclareni Balfour = Loeseneri
 *Macounii Greene = Tschuktschorum var. arctica
 *macrocalyx Bunge = veris subsp. macrocalyx
 macrocarpa Maximowiczii (11)
 macrophylla Don (18)
 macrophylla var. Aitchisonii Pax
 macrophylla var. lanceolata Watt
 macrophylla var. macrocarpa (Watt) Pax
 macrophylla var. Moorcroftiana (Wallich) Pax
 macrophylla var. ningida W. W. Smith
 *macropoda Craib = ovalifolia
 magellanica Lehmann (11)
 Maguirei L. O. Williams (20)
 *maikhaensis Balfour f. & Forrest = Umbrella
 *Mairei Leveille (17)
 malacoides Franchet (14)
 *malacoides subsp. pseudomalacoides (Stewart)
 W. W. Smith & Forrest = malacoides
 mallophylla Balfour f. (4)
 malvacea Franchet (15)
 malvacea var. alba Forrest
 *malvacea var. intermedia W. W. Smith & Forrest = malvacea
 marginata Curtis (2)
 marginata x viscosa = x Crucis
 x Marven = x venusta x marginata (2)
 Matsumurae Petitmengin (11)
 Maximowiczii Regel (18)
 *Maximowiczii var. brevifolia Pax = Maximowiczii
 *Maximowiczii var. Dielsiana Pax = Maximowiczii
 Maximowiczii var. eupreps W. W. Smith
 x media Peterman = elatior x veris (30)
 *Meeboldii Pax = macrophylla var. Moorcroftiana
 megascaeifolia Boisson (30)
 *megascaeifolia f. superba Pax = megascaeifolia
 *meiantha Balfour f. & W. W. Smith = Forbesii subsp. meiantha
 melanodonta W. W. Smith (4)
 melanops W. W. Smith & Ward (18)
 *melichlora Balfour f. & W. W. Smith = spathulifolia
 membranifolia Franchet (11)

*Menziesiana Balfour f. & W. W. Smith = bellidifolia
 Merrilliana Schlecter (22)
 *metria Balfour f. & Cooper = umbratilis
 *Meyeri Ruprecht = amoena var. Meyeri
 *microdonta Franchet ex Petitmengin = sikkimensis
 *microdonta var. alpicola W. W. Smith = alpicola
 *microdonta alpicola f. micromeres W. W. Smith & Ward = sikkimensis var. pudibunda
 mieroloma Handel-Mazzetti (4)
 *micropetala Balfour f. & Cooper = bellidifolia
 *microstachys Balfour f. & Forrest = blattariformis
 minima Linneus (2)
 minima x Clusiana = x intermedia
 minima x daonensis = x alpigena
 minima x spectabilis = x Facchinii
 minima x tyrolensis = x Juribella
 minima x villosa = x Sturii
 minima x viscosa = x Steinii
 Minkwitziae W. W. Smith (7)
 minor Balfour f. & Ward (18)
 minutissima Jacquemont ex Duby (16)
 mishmiensis Ward (18)
 mistassinica Michaux (11)
 mistassinica var. noveboracensis Fernald
 Miyabeana Ito & Kawakami (4)
 modesta Bisset & Moore (11)
 *modesta subsp. ajanensis (E. Busch)
 W. W. Smith & Forrest = Matsumurae
 *modesta subsp. Fauriae (Franchet)
 W. W. Smith & Forrest = Fauriae
 *modesta subsp. yuparensis (Takeda)
 W. W. Smith & Forrest = yuparensis
 mollis Nuttall ex Hook (7)
 monantha W. W. Smith & Forrest = gemmifera var. monantha
 *Monbeigii Balfour f. = Dubernardiana
 *Moorcroftiana Wallich = macrophylla var. Moorcroftiana
 *Mooreana Balfour f. & W. W. Smith = capitata subsp. Mooreana
 Morsheadiana Ward (4)
 *moschophora Balfour f. & Forrest (16)
 moupinensis Franchet (21)
 *muliensis Handel-Mazzetti = boreio-calliantha
 *multicaulis Petitmengin = Forbesii subsp. androsacea
 x Murbeckii B. Lindquist = elatior x variabilis (30)
 x Muretiana = integrifolia x viscosa
 muscaeroides Hemsley (17)
 *muscaeroides subsp. conica (Balfour f. & Forrest) W. W. Smith & Forrest = deflexa
 museoides Hooker f. ex Watt (16)
 mystrophylla Balfour f. & Forrest (10)
 *nana Wallich = Edgeworthii
 *nanobella Balfour f. & Forrest = bella subsp. nanobella
 *nemoralis Balfour f. = sinuata
 nepalensis W. W. Smith (21)
 *neurocalyx Franchet = malvacea
 nipponica Yatabe (8)
 nivalis Pallas (18)
 nivalis var. colorata Regel
 *nivalis var. farinosa Koch non Schrenk = longipes
 *nivalis var. farinosa Schrenk
 *nivalis var. melanatha Franchet = ruszeola
 *nivalis var. sinensis Pax p.p. = sinopurpurea
 nivalis var. subintegerrima Regel
 Normaniana Ward (7)
 nutantiflora Hemsley (11)
 nutans Delavay ex Franchet (28)
 obeonica Hance (19)
 *obeonica subsp. barbicalyx (Wright)
 W. W. Smith & Forrest = barbicalyx
 *obeonica subsp. begoniiformis (Petitmengin)
 W. W. Smith & Forrest = obeonica var. rotundifolia
 *obeonica subsp. densa (Balfour f.)
 W. W. Smith & Forrest = densa
 *obeonica subsp. parva (Balfour f.)
 W. W. Smith & Forrest = parva
 *obeonica subsp. Petitmengini (Bonati)
 W. W. Smith & Forrest = Petitmengini
 *obeonica subsp. sinolisteri (Balfour)
 W. W. Smith & Forrest = sinolisteri
 *obeonica subsp. Vilmoriniana (Petitmengin)
 W. W. Smith & Forrest = Vilmoriniana
 *obeonica subsp. werringtonensis (Forrest)
 W. W. Smith & Forrest = obeonica var. werringtonensis

obeonica var. nigroglandulosa
 W. W. Smith & Fletcher
 obeonica var. rotundifolia Franchet
 *oblanceolata Balfour f. = Wilsoni
 obliqua W. W. Smith (18)
 obovata (Hemsley) Pax (6)
 x obovata Huter = auricula subsp. Balbisii x tyrolensis (2)
 obsessa W. W. Smith (11)
 obtusifolia Royle (18)
 ocellus W. W. Smith (16)
 *ochracea Pax & K. Hoffman = orbicularis
 odontica W. W. Smith (1)
 odontocalyx Pax (21)
 *oenensis Thomas = daonensis
 *officialis Hill = veris
 *officialis (Linnaeus) = veris
 *officialis var. canescens f. ceta Beck = veris subsp. canescens f. calvescens
 *officialis var. Columnae (Tenore) Pax = veris subsp. Columnae
 *officialis var. macrocalyx (Bunge)
 C. Koch = veris subsp. macrocalyx
 *Okamotoi Koidzumi = Reinitii
 *Olgae Regel = auriculata var. calva
 *operculata R. Knuth = Cockburniana
 optata Farrer (18)
 orbicularis Hemsley (18)
 *oreina Balfour f. & Cooper = Jonarduni
 oreodoxa Franchet (19)
 *oresbia Balfour f. = incisa
 *orestora Craib & Cooper = atrodentata
 ossetica Kusnetzow (11)
 ovalifolia Franchet (21)
 oxygraphidifolia W. W. Smith & Ward (11)
 Palinuri Petagna (2)
 *Pallasii Lehmann = elatior subsp. Pallasii
 palmata Handel-Mazzetti (7)
 x Pandora hort. = scapigera x Edgeworthii
 *pannonica Kerner = veris subsp. canescens
 Parryi A. Gray (20)
 Patschiana (Hemsley) Pax (6)
 parva Balfour f. (19)
 *parvifolia Duby = borealis
 *parvula Pax & K. Hoffman = Souliei subsp. Legendrei
 *patens Turczaninow = Sieboldii
 *patens var. genuina Skvortzow = Sieboldii
 *patens var. Manshurica Skvortzow = Sieboldii
 *paucifolia (Hooker f.) Watt ex Craib = denticulata
 Pauliana W. W. Smith & Forrest (7)
 *Paxiana Gilg (non O. Kuntze) = Loeseneri
 *pectinata Balfour f. & Forrest = incisa
 pedemontana Thomas (2)
 pedemontana x marginata = x Mountfort (2)
 pedemontana x viscosa = x Bowlesii (2)
 pellucida Franchet (14)
 *penduliflora Franchet ex Petitmengin = nutans
 Petiotii W. W. Smith (21)
 petiolaris Wallich in Roxburgh (21)
 Petitmengini Bonati (19)
 *petraea Balfour f. & Forrest = minor
 *petrocharis Pax & K. Hoffman = Walshii
 pinnatifida Franchet (16)
 *pintchouanensis Petitmengin = bathangensis
 *planiflora Handel-Mazzetti = Poissonii
 poeciliformis Hooker f. (19)
 Poissonii Franchet (4)
 *Poissonii subsp. angustidens (Franchet)
 Pax ex W. W. Smith & Forrest = stenodonta
 *Poissonii subsp. Wilsoni (Dunn)
 W. W. Smith & Forrest = Wilsoni
 *polia Craib = ovalifolia
 polonensis Ward (4)
 polyneura Franchet (7)
 *polyphylla Franchet ex Petitmengin = pseudodenticulata
 *polyphylla var. monticola Handel-Mazzetti p.p. = pseudodenticulata
 *polyphylla var. monticola Handel-Mazzetti max. p.p. = pseudodenticulata var. monticola
 *x Portae Huter ex Kerner = x discolor
 praetermissa W. W. Smith (16)
 *praticola Craib = taliensis
 Pratii Hemsley (11)
 *prenantha Balfour f. & W. W. Smith (4)
 *prionotes Balfour f. & Watt = Waltoni
 *proba Balfour f. & Forrest = calliantha
 prolifera Wallich (4)

*propinqua Balfour f. & Forrest = boreio-calliantha x Prospect = Wollastonii x Reidii (29)
 *pseudobracteata Pettimengin = Henrici
 *pseudocapitata Ward = capitata subsp. sphaerocephala
 *pseudodenticulata Pax (9)
 *pseudodenticulata var. monticola Handel-Mazzetti — pro maximum parte
 *pseudoeclator Kusnetzow = elatior subsp. pseudoeclator
 *pseudoforsteri Gusmus = x Steinii
 *pseudoglabra Handel-Mazzetti (11)
 *pseudomalacoides Stewart = malacoides
 *pseudopetiolaris Pax & K. Hoffmann = Drummondiana
 *pseudosikkimensis Forrest = sikkimensis
 *pubescens Loisleur = rubra
 *pubescens Reichenbach = pedemontana
 *x pubescens Jacquin = auricula x rubra (2)
 *pudibunda W. W. Smith = sikkimensis var. pudibunda
 *pulchella Franchet (11)
 *pulchelloides Ward (11)
 *pulchra Watt (21)
 *pulverulenta Duthie (4)
 *pulverulenta x Bulleyana = x Ladybird
 *pulverulenta x Cockburniana = x Unique
 *pulvinata Balfour f. & Ward = bracteata
 *pumila Kerner = alpigena
 *pumilio Maximowiczii (11)
 *Purdonii Craib (18)
 *x purpurascens (Camus) Beck = elatior f. colorata x vulgaris (30)
 *purpurea Royle = macrophylla
 *pusilla Wallich (16)
 *pynoloba Bureau & Franchet (23)
 *pygmaeorum Balfour f. & W. W. Smith = pumilo
 *racemosa Leveille = celsiaformis
 *radicata Balfour f. & W. W. Smith = Warshenewskiana
 *x radiflora Lange & Mortensen = veris x vulgaris (30)
 *Ragotiana Leveille = sinuata
 *ranunculoides Chen (22)
 *redolens Balfour f. & Ward (3)
 *reflexa Pettimengin = orbicularis
 *refracta Handel-Mazzetti = Duclouxii
 *Reginella Balfour f. = fasciculata
 *Reidii Duthie (28)
 *Reinii Franchet (24)
 *reptans Hooker f. (16)
 *reticulata Wallich (26)
 *rhaetica Guadichaud-Beaupre = x alpina
 *x rhenaniana hort. (probably marginata hybrid)
 *rhodantha Balfour f. & W. W. Smith = Warshenewskiana
 *rhodochroa W. W. Smith (16)
 *Riae Pax & K. Hoffmann = amethystina
 *x Richterii Pax = veris subsp. canescens x acaulis (30)
 *rigida Balfour f. & Forrest (18)
 *rimicola W. W. Smith (16)
 *riparia Balfour f. & Farrer = cinerascens
 *Rockii W. W. Smith (3)
 *rosea Royle (11)
 *rosea subsp. elegans (Duby) W. W. Smith & Forrest = rosea var. elegans
 *rosea var. elegans (Duby) Hooker f. (11)
 *rosea var. Harrisii (Watt ex Balfour f.) W. W. Smith & Fletcher
 *rosiflora Balfour f. & W. W. Smith = Warshenewskiana
 *Rosthornii Diels = malvacea
 *rotundifolia Wallich (25)
 *Roylei Balfour f. & W. W. Smith = Calderiana
 *rubicunda H. R. Fletcher (16)
 *rubra J. F. Gmelin (2)
 *rubra x daonensis = x Seriana
 *rubra x integrifolia = x Heerii
 *rubra x minima = x Steinii
 *rubra x viscosa = x Berninae
 *rufa Balfour f. = bullata var. rufa
 *ruperstris Balfour f. & Farrer (27)
 *rupicola Balfour f. & Forrest (29)
 *rupicola var. albicolor W. W. Smith & Fletcher
 *Ruprechtii Kusnetzow = elatior subsp. Ruprechtii
 *Rusbyi Greene (20)
 *russeola Balfour f. & Forrest (18)
 *x salisburgensis Floerke = minima x glutinosa (2)
 *x Sancta Coronae Beck = veris x vulgaris (30)

*Sandemaniana W. W. Smith (28)
 *sapphirina Hooker f. & Thomson ex Hooker (29)
 *satanensis Balfour f. & Farrer = polyneura
 *saturata W. W. Smith & Fletcher (15)
 *saxatilis Komarov (7)
 *saxifragifolia Lehmann = cuneifolia subsp. saxifragifolia
 *scandinavia Brunn (11)
 *x scapeosa hort. = scapigera x bracteosa (21)
 *scapigera Craib (21)
 *scapigera x bracteosa = x scapeosa
 *scapigera x Edgeworthii = X Pandora
 *Schlagintweitiana Pax (11)
 *sciophila Balfour f. & Ward = bella subsp. sciophila
 *scopulorum Balfour f. & Farrer = kialensis
 *scotica Hooker (11)
 *Scullyi Craib = gracilipes
 *seclusa Balfour f. & Forrest = mollis
 *secundiflora Franchet (26)
 *secundiflora x Poissonii = x dschungdiensis
 *senanensis Koidzumi = tosaensis
 *x Sendtneri = auricula x pedemontana (2)
 *septemloba Franchet (7)
 *septemloba var. minor Ward
 *x Seriana Widmer = rubra x daonensis (2)
 *serratifolia Franchet (4)
 *serratifolia var. roseo-tincta Forrest
 *serratifolia var. unicolor Forrest
 *Sertulum hort. nec. Franchet = erratica
 *Sertulum Franchet (11)
 *sessilis Royle ex Craib (21)
 *Sharmae Fletcher (11)
 *Sherriffae W. W. Smith (28)
 *shwellicalliantha Balfour f. & Forrest = bryophila
 *silaensis Pettimengin (1)
 *siamensis Craib (28)
 *sibirica Jacquin (11)
 *sibirica var. arctica Fernald = egaliksensis f. violacea
 *sibirica var. integrifolia (Oeder) Pax = sibirica
 *Sibthorpii Hoffmannsegg = vulgaris subsp. Sibthorpii
 *Sieboldii E. Morren (7)
 *Sieboldii f. incisa (Miquel) Makino (according to Hiroshi Hara)
 *sikkimensis Hooker (27)
 *sikkimensis var. Hopeana (Balfour f. & Cooper) W. W. Smith & Fletcher
 *sikkimensis var. lorifolia W. W. Smith
 *sikkimensis var. pudibunda (W. W. Smith) W. W. Smith & Fletcher
 *sikuensis Balfour f. & Farrer = polyneura
 *silaensis Pettimengin (1)
 *x sileniflora H. Schmidt = elatior x veris (30)
 *sinensis Sabine ex Lindley (27)
 *sinodenticulata Balfour f. & Forrest = denticulata subsp. alta
 *sinolisteri Balfour f. (19)
 *sinolisteri var. aspera W. W. Smith & Fletcher
 *sinomollis Balfour f. & Forrest = cinerascens subsp. sinomollis
 *sinomollis var. alba Balfour f. & Forrest = subsp. sinomollis
 *sinonivalis Balfour f. & Forrest = limbata
 *sinoplaginacea Balfour f. (18)
 *sinoplaginacea var. graminifolia (Pax & K. Hoffmann)
 *sinopurpurea Balfour f. (18)
 *sinuata Franchet (21)
 *siphonantha W. W. Smith (28)
 *Smithiana Craib (4)
 *soldanelloides Watt (28)
 *sonchifolia Franchet (21)
 *Sorachiana Miyabe & Takeda (11)
 *x sordida Beck = elatior x veris (30)
 *Souliei Franchet (29)
 *Souliei subsp. Legendrei (Bonati) W. W. Smith & Forrest
 *spathulifolia Craib (16)
 *spectabilis Trattinick (2)
 *specuicola Rydberg (11)
 *spelunicola Pettimengin = pellucida
 *sphaerocephala Balfour f. & Forrest = capitata subsp. sphaerocephala
 *spicata Franchet (28)
 *x Steinii Oerbst = rubra x minima (2)
 *stenocalyx Maximowiczii (11)
 *stenodonta Balfour f. (4)
 *stephanocalyx Handel-Mazzetti = bathangensis
 *Stirtoniana Watt (16)
 *stolonifera Balfour f. = pseudodenticulata

*stragulata Balfour f. & Forrest = bella subsp. sciophila
 *stricta Hornemann (11)
 *strumosa Balfour f. & Cooper (21)
 *strumosa var. perlata W. W. Smith & Fletcher
 *strumosa x Calderiana (21)
 *Stuartii Wallich (18)
 *x Sturii Schott = minima x villosa (2)
 *subtropica Handel-Mazzetti = Vilmoriniana
 *subularia W. W. Smith (16)
 *suffrutescens A. Gray (8)
 *sulphurea Craib (21)
 *sulphurea var. rosea Pax & K. Hoffmann = pulchelloides
 *sumatrana Merrill (4)
 *sylvicola Hutchinson = cinerascens subsp. sinomollis
 *szechuanica Pax (18)
 *szechuanica Pax forma ex W. W. Smith & Ward = advena
 *Takedana Tatewaki (24)
 *taliensis Forrest (21)
 *tangutica Duthie (18)
 *tangutica var. serrata W. W. Smith & Fletcher
 *Tanneri King (21)
 *tanuopoda Balfour f. & W. W. Smith (11)
 *tapeina Balfour f. & Forrest = Henrici
 *taraxacoides Balfour f. = sonchifolia
 *Tayloriana H. R. Fletcher (11)
 *Tenana Bonati ex Balfour f. = blattariformis subsp. Tenana
 *tenella King ex Hooker f. (16)
 *tenuloba Hooker f. (16)
 *x ternoviana Kerner = veris subsp. Columnae x vulgaris (30)
 *tibetica Watt (11)
 *x tomentosa (Beck) Pax = veris x Columnae x vulgaris (30)
 *x Tommasinii Godron & Grenier = veris subsp. Columnae x vulgaris (30)
 *tongolensis Franchet (21)
 *tosaensis Yatabe (24)
 *triloba Balfour f. & Forrest (10)
 *x tristis Pax = veris x subsp. Sibthorpii (30)
 *x truncata Lehmann = x Sturii
 *Tsangii W. W. Smith (19)
 *tsariensis W. W. Smith (19)
 *tsariensis var. porrecta W. W. Smith
 *tsaronensis Balfour f. & Forrest = muscaroides
 *Tschuktschorum Kjellman (18)
 *Tschuktschorum var. arctica Fernald
 *Tsongpenii Fletcher (10)
 *turkistanica Regel = nivalis
 *tyrolensis x Wulfeniana = x Venzoi (2)
 *tyrolensis Schott (2)
 *tzetsouensis Pettimengin (25)
 *umbrolypha Handel-Mazzetti = bracteata
 *umbrellifolia Balfour f. & Cooper (28)
 *umbrellifolia var. alba Fletcher
 *Umbrella Forrest (11)
 *uniflora Klatt (28)
 *urticifolia Maximowiczii (11)
 *vaginata Watt (7)
 *Valentiniana Handel-Mazzetti (1)
 *x variabilis Goupil = veris x vulgaris
 *Veitchiana Pettimengin (21)
 *Veitchii Duthie = polyneura
 *Velenovskiy Fritsch = veris subsp. Velenovskiy
 *x venusta hort. = auricula x carnioleica (2)
 *x venusta x marginata = x Marven (2)
 *veris Linnaeus (30)
 *veris subsp. canescens (Opiz) Hayek
 *veris subsp. Columnae (Tenore) Ludi
 *veris subsp. Columnae var. valesiana Ludi
 *veris subsp. genuina (Pax) Ludi
 *veris subsp. macrocalyx (Bunge) Ludi
 *veris subsp. macrocalyx var. montana (Domin) Ludi
 *veris subsp. Velenovskiy (Domin) Ludi
 *veris var. alba Harrison
 *veris var. ampliata (Koch) Ludi
 *veris var. ascapa (Goiran) Ludi
 *veris var. blumbellata Goupil
 *veris var. obscura Harrison
 *veris var. longifolia Ludi
 *veris var. pallescens Harrison
 *veris var. praticola (Domin) Ludi
 *veris var. purpurascens Diard ex Harrison
 *veris var. tomentosa Harrison

veris x vulgaris = the following:
 x variabilis, x Flagellicaulis,
 x radiflora, x Sanctae Coronae
 veris x vulgaris subsp. Sibthorpii
 (Hoffmannsegg) W. W. Smith & Forrest =
 the following: x anglica, x tristis
 veris subsp. canescens x vulgaris = the following:
 x austriaca, x gaisbergensis,
 x Richterii, x Wiesbaurii
 veris subsp. Columnae x vulgaris = the following:
 x ternoviana, x Tommasinii,
 x ambigua, x Brandisii, x tomentosa
 vernicosa Ward (21)
 *vernicosa var. violacea W. W. Smith (21)
 *verticillata Forskall (12)
 *verticillata subsp. Boveana (Decaisne) W. W. Smith & Forrest
 *verticillata subsp. simensis (Hochstetter) W. W. Smith & Forrest
 *Viali Delavey ex Franchet (17)
 *x Viatans = Viali x nutans (17)
 *Vilmoriniana Pettimengin (19)
 *villosa Jacquin (2)
 *villosa subsp. commutata (Schott) Widmer
 *villosa subsp. Jacquini Pax = villosa
 *violacea W. W. Smith & Ward (17)
 *violarius W. W. Smith & Fletcher (7)
 *Virginis Leveille (1)
 *viscosa Allionii (2)
 *viscosa f. cyanoglossifolia Widmer = viscosa
 *viscosa f. graveolens (Hegetschweiler & Heer) Pax = viscosa
 *viscosa f. pyrenaica Pax = viscosa
 *viscosa f. graveolens x daonensis = x Kolbiana
 *vittata Bureau & Franchet = secundiflora
 *x vochinensis Gusmus = minima x Wulfeniana (2)
 *vulgaris Hudson (30)
 *vulgaris subsp. balearica (Willkomm) W. W. Smith & Forrest
 *vulgaris subsp. heterochroma (Stapf) W. W. Smith & Forrest
 *vulgaris subsp. Ingwerseniana Harrison
 *vulgaris subsp. Sibthorpii (Hoffmannsegg) W. W. Smith & Forrest
 *vulgaris var. alba Goupil
 *vulgaris var. atlantica Maire & Wilczek
 *vulgaris var. calva Beauverd
 *vulgaris var. caulescens (Koch) Miller Christy
 *vulgaris var. hypoleuca Beauverd
 *vulgaris var. obscura Harrison
 *vulgaris var. pulchella (Heldreich) W. W. Smith & Fletcher
 *vulgaris var. purpurea Maulny
 *vulgaris var. pubescens Harrison
 *vulgaris var. sileniflora Murr ex Ludi
 *vulgaris var. truncata Beauverd
 *vulgaris var. viridimaculata Harrison
 *Waddellii Balfour f. & W. W. Smith (16)
 *Walshii Craib (16)
 *Waltoni Watt MSS. ex Balfour f. (26)
 *Wardii Balfour f. = yargonensis
 *Warshenewskiana Fedtschenko (11)
 *Watsoni Dunn
 *Wattii King ex Watt (28)
 *werringtonensis Forrest = oboconica var. werringtonensis
 *Wettsteinii Wiemann = x intermedia
 *Whitei W. W. Smith (21)
 *x Widmerae (Pax) Dalle Torre & Sarnth = x alpigena
 *x Wiesbaurii Pax = veris subsp. canescens x vulgaris (30)
 *Wigramiana W. W. Smith (28)
 *Willmotiae Pettimengin = Forbesii
 *Wilsoni Dunn (4)
 *Winteri Watson = Edgeworthii
 *Wollastonii Balfour f. (28)
 *Wollastonii x Reidii = x Prospect
 *Woodwardii Balfour f. (18)
 *Wulfeniana Schott (2)
 *xanthopa Balfour f. & Cooper (29)
 *yargonensis Pettimengin (11)
 *Youngeriana W. W. Smith (18)
 *Younghusbandiana Balfour f. = Caveana
 *Yuana Chen (18)
 *yunnanensis Franchet (11)
 *yuparensis Takeda (11)
 *zambalensis Pettimengin = gemmifera var. zambalensis

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 JOHNSON, Dennis Rt. 1, Box 83, Cornelius
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 MINARIK, Miss Ann 8530 N.W. Ogden St.
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 HANNON, Mrs. John P. 17300 S.E. Oatfield Rd., zone 22

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HARTSHORN, Mrs. H. A. 7080 S.W. Canyon Crest, zone 1
HENDERSON, Mrs. Don 1600 S.E. Waverly Dr., zone 22
*HIGGINS, Mrs. Carroll S. 3914 S.E. Harold, zone 2
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 WAY, W. W. 605 Star Route, Union
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 WILSON, Miss Elsie Horsley Gate, Holmesfield, Sheffield, England
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The President's Message

As I look out the window the rain is coming down heavily in quick silver shafts. Through the silver I can see that the loveliest of the acaulis (next year I will try to call it by its true name, "vulgaris"), in the bed outside is one of Marguerite Clarke's incomparable blues. The Cowichan seem to have folded to wait for the sun, the fine reds to grow less distinguished, but this blue with its rimming of white is covered with blossoms lovelier than sapphires. I know I must use its pollen on a near double I have been lucky enough to get from seed. It caused quite a bit of comment at the Show last year because if its odd but distinguished coloring, sort of a blue-lavender, rimmed purple, with a small butter yellow eye. I shared it with D.B.W. and I know that between us we will never lose it.

My sorrow of this year has made me turn to hybridizing with a zest I have never known before. The earth holds comfort for me and my own plants are a source of delight. Most of the seedlings of course, will go to the compost heap, but, there is a bronze in bud (Mrs. McHenry's wonderful King Midas strain provided the pistillate parent) and I have peeked inside the bud and I can tell that it is a beauty!

You will notice on our Treasurer's report that our balance is smaller than in 1951, but there is a reason for this. In moving our printing from Gresham to Portland we had to pay up in full and since then have paid for each Quarterly when the bills have come in. We are now paying for office supplies which were formerly paid for by Lou and Florence Levy. We have separated the offices of Corresponding Secretary and Treasurer. There are no salaries paid to anyone at this time and the officers of the Quarterly Staff take care of their incidental expenses. We are hoping to increase our Savings, but this is quite a task as we use the money we get from plant sales to help to defray the Show costs. Over the years the Portland branch of the Society has shouldered its own expenses and has even added to the Treasury in excess of its membership fees.

This last year has seen many changes. Florence Levy, our beloved Editor Emeritus, is busy trying to make up, to her home and business, for all the hours she spent on the Quarterly. We must never forget that she paid others to work on her business while she edited the Quarterly. The Levys have done a tremendous business this year and have 120,000 seedlings to ship. This is why we have not heard from her in the Quarterly and why she is not as yet able to keep up with her correspondence.

Mrs. Worthington and Mrs. Griffin are trying to build up the size of the Quarterly through advertising. I hope the members will mention the Quarterly when they do business with the advertisers and in this way help to keep the Quarterly of good size. Of course, the gross printing and engraving costs of the Quarterly are much more than is taken in by the A.P.S. Treasury each year, and these problems have been shouldered by these two women and for this reason we as members owe them all the help we can give them by supporting the advertisers. Do not be alarmed when you see a sixteen page Quarterly in July, this is the regular size for the summer issue. The Editor is also a gardener and needs her Spring for work with her Primroses.

There is a wonderful mystical law of nature that the three things we crave most in life, happiness, freedom, and peace of mind, are always attained by giving them to someone else. In what better fashion can we do this than to hybridize Primroses and to share them?

Sincerely,
 Mary Zach

Report From the Corresponding Secretary

Portland is losing one of its most zealous Primrose growers. DR. RICHARD M. BOND, formerly a member of our Board, was Regional Biologist for the Federal Soil Conservation Service here, and has been transferred to the Virgin Islands to serve as officer in charge of the U. S. Department of Agriculture's experiment and extension program there. During the past year, Dr. Bond was on leave, working in a private capacity in the Islands. He learned to enjoy living there. This Spring, when he returned to close his affairs in Portland, he presented a large portion of his collection of plants to the Society. Most of these will be sold in our Spring sale for the benefit of the treasury. Dr. Bond says his one regret in moving to the Virgin Islands is that he cannot grow Primroses there, and that he must learn to console himself with Orchids. It was he who helped Florence Levy and Dr. Riddle with the Official Point Scores. His scientific training together with his willingness to help others, has endeared him to many members. A phrase from a letter from Mrs. Berry seems especially appropriate, "Dr. Bond was here for a few minutes last night, we had a lot of fun. How I wish he lived here. He certainly "sparked things up."

Our friend, MR. HENRY SCHILPZAND and his family are all safe, although several of his neighbors, on the Island of Texel, in Holland, were lost in the recent floods. His nurseries are luckily in a situation which was out of the flood area. A modest purse was made up at the April meeting of the A.P.S. to assist the Texel flood victims.

Treasurer's Report for 1952

Balance: Dec. 1, 1951	\$ 350.99
RECEIPTS: Memberships and subscriptions	\$1,325.52
Sale of Quarterlies	66.12
Incidentals	9.70
Total receipts	1,401.34
	<hr/>
	1,752.33
DISBURSMENTS: Cash	85.00
Quarterly Account (Levy)	723.07
Quarterly Account (Worthington)	399.95
A.P.S. Show	\$239.20
Meetings	40.23
	<hr/>
	279.43
Less Plant sales	264.85
	<hr/>
Total Expense Local	14.58
Secretary-Treasurer	160.00
Office Expenses	38.96
Incidentals	49.21
Advertising	97.75
Kodachromes	10.14
Total disbursements	1,578.66
	<hr/>
Balance on hand Dec. 1, 1952	173.67
In Savings Account	500.00

Respectfully submitted, Mrs. Earl A. Marshall, (Secty-treas., 1952).

Report From the Editor

Seeds have come from all over the world mostly because D.B.W. has joined the Scottish Rock Garden and Alpine Garden Societies and I am a member of the Royal Horticultural Society. The combined memberships are only about \$7.50 a year. The seeds, and the thrills of selecting and receiving them, are worth much more.

As Easter approaches, I am puzzled again about those who have no gardens; those who follow the sea or who live in municipal apartments. What thrill can possibly sustain one as hybridizing does? It is said that hybridizers never commit suicide and that they live longer than other people do, and I know the reason. It is because they must see the blooms each Spring while they are doing pollinating for the following year.

Miss Eickman has asked me to give particular credit to Florence Levy who has for many years helped her in her hybridizing, through personal advice, as well as by her lectures and writings.

The Annual Report for 1952 of the National Auricula and Primula Society, Southern Section, contains a fine article "Auriculas—The Past and Future" by C. G. Haysom, and another "Double Primroses" by Major H. C. H. Taylor. It will be sent to you together with an invitation to join the Society, for forty cents. The membership is about \$1.50, one publication a year. Send to Edwin C. R. Hill, c/o C. L. Hearn & Partners, King's Head Yard, Borough High Street, London, S.E. 1 England.

Mr. Aymon Correvon, of Floraire, Geneva, Switzerland, has consented to be our Swiss Editor. He reads and writes German and English almost as well as he does French and perhaps will translate some of the very fine research papers in those languages. He has promised to write of his experiences in collecting and growing Primula, and "of how a rare station of Primula pedemontana disappeared thanks to the barrage of Tigne." His acceptance is really a stroke of luck for the Society as there are few people in the world who have known as many Primulas as Mr. Correvon. Primulas that we nurture carefully under a shelf of rock or in our cold houses grow wild in the Alps near his home. "Floraire" has long been recognized as the foremost Alpine Nursery and Seed House in Europe.

There is a revision of K. C. Corsar's "Primulas in the Garden." If your local book store does not have it in stock, write to Mrs. Bristol, c/o The J. K. Gill Company, 408 S. W. Fifth Avenue, Portland, Oregon, and she will send you a copy postpaid for \$3.75. This book has many very fine illustrations and is well written by a man who grows most of the plants he is writing about. We will carry an article by Mr. Corsar in the near future.

Florence Levy and I went up to Friday Harbor, in the San Juan Islands, to visit the Friday Harbor Primrose Club. Mrs. Levy gave an inspiring and informative talk on Primulas in general and the A.P.S. slides were shown. We were the house guests of one of the members, Mrs. Edna Wright, who has a charming home and a beach of her own on the Sound. Mrs. H. C. Price, Mrs. A. G. Middleton and Mrs. John Haubner furnished, prepared, and served a delightful luncheon for members and their guests. We were entertained for dinner at the home of Mrs. Albert Jensen by the members of the Executive Board and we talked about the time when Friday Harbor would be known throughout the world for its interest in and knowledge of the Primulas of the Vernales Section. The Island itself is a beauty spot and we were fortunate in that we were able to visit the sight of the historic English Camp where the famous "Pig War" took place. This was a wonderful "War," according to the present owner of the site of the British Camp; The American soldiers and the English soldiers became such good friends that they sent messages to Headquarters that if bloodshed were wanted other soldiers would have to be imported, because of the friendships which had struck up between the men in the two camps. Mrs. Ben Hannah, Friday Harbor, Washington, will be glad to conduct tests on any seeds from Primulas from the Vernales Section, i.e., any type of Polyanthus, Julianna, vulgaris, etc., which you would care to send her.

Have you sent for the seed list from Jack Drake, Inshriach Nursery, Aviemore, Inverness-shire, Dept. P., Scotland? He will have an exciting list of seeds for 1953.

Mr. R. H. Briggs, Hon. Secretary of the National Auricula & Primula Society, NORTHERN SECTION, wishes me to tell you about the publication of the Society's YEAR BOOK, which contains "many items of interest to lovers of Primulas, Auriculas and Polyanthus." The price is 5/ or \$1.00/ Postpaid, remittance to be sent to R. H. Briggs, "High Bank" Rawtenstall, Lancs, England. S.W.

Show News

DOROTHY MARSHALL

Of the coming shows, the most ambitious plans, judging by the schedule, seem to be those from KIRKLAND, WASHINGTON, where the East Side Garden Club is holding its Sixth Annual Primrose Show the 17th, 18th, and 19th of April. With nineteen divisions and many trophies offered, the show promises to surpass former efforts there, which have always been distinguished. Some of the best slides in the A.P.S. collection are of plants and of exhibits from the Kirkland Show. Others on the committee are Mr. Glen Hunt, Mr. Virgil Adams, Mrs. William Massey, Mrs. F. H. Wallick, Mrs. J. N. Allison, Mrs. L. C. Murdock, Mrs. W. A. Sutherland, Mrs. Viola Saunders, Mrs. Earl Staley, Mrs. H. Warneck, Mrs. Laurence Wilch, Mrs. J. L. Lacy, Mrs. Harry Diehm, Mrs. C. A. Klumb, Mrs. L. R. Griswold, Mrs. Mary Larson, Mrs. Byron Byrne, Mrs. Eugene Shepley, and Mrs. E. T. Wold.

The American Primrose Society is fortunate in being able to welcome into affiliation the TACOMA PRIMROSE SOCIETY and the CLARK COUNTY PRIMROSE SOCIETY. The officers of the Tacoma Society are Mr. Mike Kneip, President, Mr. Peter Klein, Vice-President, Mrs. Mildred Hewett, Secretary-Treasurer. 5916 So. Alder, Tacoma 9, Washington, telephone HA. 9500. They announce their meetings with a mimeographed news letter which is charmingly edited by Mrs. Patten. Their Show dates are the 18th and 19th of April.

The CLARK COUNTY PRIMROSE SOCIETY has just organized and it includes Primrose enthusiasts in the Vancouver, Washington, area. Mrs. Clara Noce is President, and Mrs. Viola Hershey, Secretary. Mrs. Otto Zach has entertained some of the Officers at her home and they in turn asked her to dinner and to attend their first meeting. We are all anxious to see their display which they are staging in the A.P.S. show at Gresham

THE MT. ANGEL PRIMROSE SOCIETY is planning to include daffodils with Primroses this year in their show which will be held on the 19th of April. The Shows held at this pretty Oregon town have a fine reputation for standards of excellence. The Mt. Angel members are famous for their hospitality. Miss Juliana Dehler is making the arrangements and Mrs. Roy Palmer is Show Chairman.

The committee for the shows in the Portland area have been very active in perfecting their plans. The GRESHAM SHOW the 10th, 11th and 12th of April, features Polyanthus especially, and while it is a noncompetitive event, the great interest being given by the participating commercial growers should make it an outstanding event. Mrs. H. A. Hartshorn and Mrs. T. W. Blakeney are chairmen, with Mrs. Orval Agee and Mrs. C. Y. Griffin assisting.

The LATE SPRING SHOW at the Woman's Club, in Portland, the 25th of April, is to be more in the English manner, and features Auriculas, although advantage is being taken of the lateness of the date to give special attention to Asiatics and Primula species. The committee includes Mrs. O. J. Zach, Mrs. John Karnopp, Mrs. O. M. Babbitt, Mrs. Herbert Clarke, Mrs. Ben F. Smith and Mrs. B. E. Torpen.

JEFFERSON HIGH SCHOOL is planning to hold their Fourth Primrose Show in conjunction with their usual May Day celebration. The Show was very successful last year and it was interesting to note that their enthusiasm for Primroses led them to make a fine display. The Klat-a-wa Club sponsors the Show each year and each member participates exactly in the pattern of the more adult Societies.

We have not heard when the WASHINGTON STATE PRIMROSE SOCIETY will hold its 1953 Show but we have heard that their Treasurer is Jessie A. Kidd, 12216 Des Moines Way and that their Secretary is Mrs. H. W. Clark, 10528-8th., N.E. Seattle, 55, Washington.

The Annual Spring Show of the VANCOUVER ISLAND ROCK and ALPINE GARDEN SOCIETY is being held on the 8th and 9th of April, 1953, at the Crystal Gardens, Victoria, B.C. According to Joan B. Kennedy, their Secretary, P.O. Box 146, Victoria, B.C., "Worthy of mention is the fact that this Show is possibly the best of its kind, if not the only one of its kind in North America. Entry forms may be obtained from the President, Major Alan B. Morkill, 750 Pemberton Road, Victoria, B.C.

Reports on the Shows should be sent to MISS IVIE SPENCER, 9236 S.W. 40th, Multnomah 19, Oregon, as she is the SHOW REPORTER for the Quarterly. The July Quarterly will have only sixteen pages, but there will be room for news of general interest.

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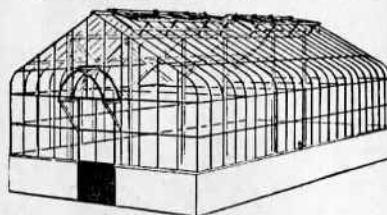
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In the species of the Section Auricula we have:

P. auricula subsp. Balbisii	P. marginata	P. tyrolensis
P. clusiana	P. x pubescens Hene	P. rubra (hirsuta)
P. glaucescens	P. x pubescens Janet	P. Wulfeniana

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	marginata	.50
capitata subsp. Mooreana	.25	pulverulenta	.25
denticulata (cashemiriana John's variety)	.50	rosea grandiflora	.30
chionantha	.30	saxatilis	.30
farinosa	.35	rubra (hirsuta)	.50
glaucescens	.50	Viali	.50

Remittance, permit, shipping, and postage information on Page 29 January Quarterly.

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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)	\$1.70
Candelabra	
XXXIII pt. 3 (1942)	\$1.70
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Sikkimensis, Souliei, Rotundifolia	
XXXIV pt. 1 (1944)	\$1.70
Cortusoides, Malvacea, Pycnoloba, Dryadifolia, Capitatae	
XXXIV pt. 4 (1948)	\$1.70
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.

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

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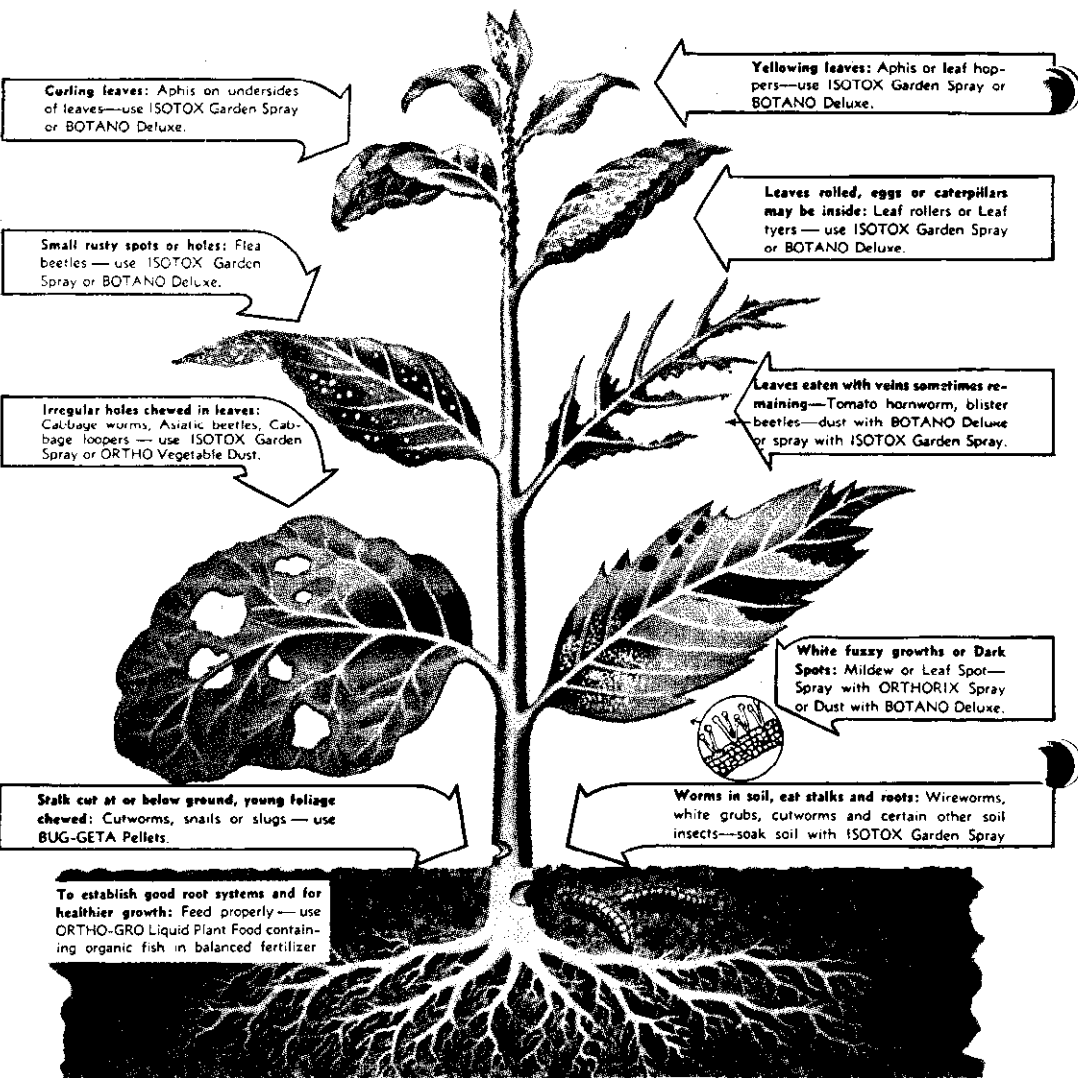
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The BLUE WHALE graciously consented to relinquish it's contracted space on the back cover, and move to page 48, so that Miss Eickman might have the space for her picture of Warm Laughter.

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I would like to show you my field of exceptional Pansies and since I cannot ship plants, please come to my garden.

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The Primrose Killer

By E. M. Llewellyn, former Editor, Stars & Stripes

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Root weevils are the basic primrose killer. These are the small white grubs that feed in the roots of primroses, strawberry plants, azaleas, raspberries, rhododendrons, and many other garden treasures. CARCO-X mixed with water, one teaspoonful to the quart, is the combination that gives protection. Soak the soil around each plant with this solution so that it will penetrate deeply under the plants and all around the roots. This treatment at this season is ideal for it will destroy the larvae from eggs laid by the adult pest earlier this year.

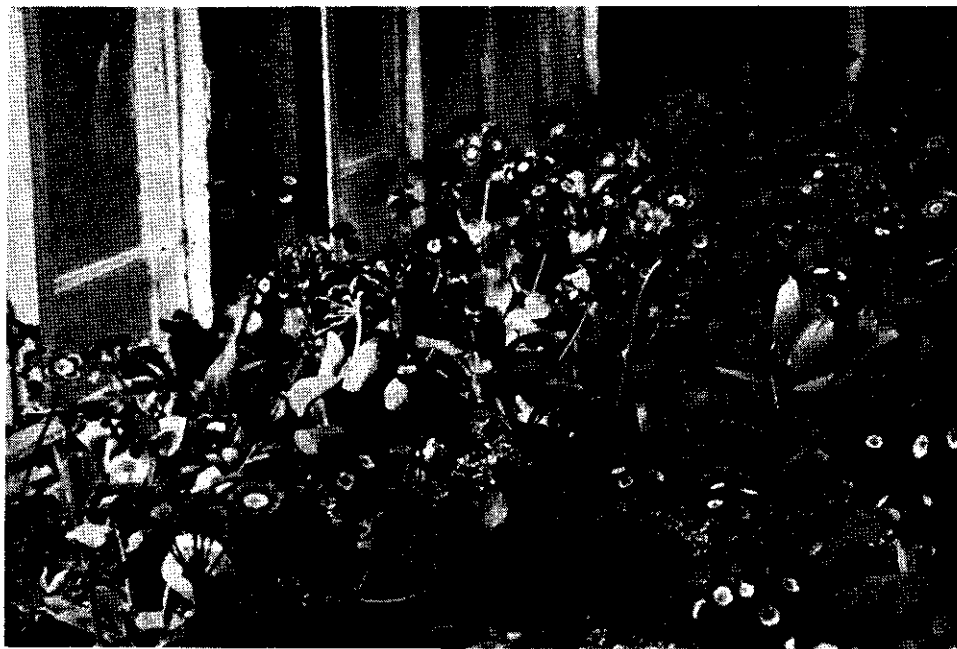


In the CARCO-X test gardens at Sumners, visitors will find a wide variety of plants, shrubs and trees which enjoy the protection of CARCO-X treatments. These include azaleas, Irish yews, Lawson cypress, Blue Canyon cypress, junipers, laurels, spruces, heathers, Candle pines, Camellias, daphnes and border flowers. This display is kept in order to show compatibility of the various shrubs and tender plants to the powerful, protecting CARCO-X Treatment.

Tests to prove control of root rot and root weevil action have established beyond question of a doubt that CARCO-X used as directed can be backed by the Getzum guarantee of complete satisfaction.

Primrose growers interested in using CARCO-X can have this product shipped to them postpaid at \$1.20 a half pint, \$1.75 a pint, \$2.85 a quart, and \$6.45 a gallon. With each order you will receive FREE the booklet "Debugging Made Easy" which will provide you with complete year round information on the proper use of CARCO-X. Address all mail and orders to Getzum Products, Box 37 PS-4., Sumner, Washington.

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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 \$5.00

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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 "poly" type)	1.00	*Miss Linda (blue creeper)	1.50
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SEEDS: 1952 CROP

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

Orders being accepted now for Polyanthus seedlings to be ready for delivery in June, prices listed in catalog to be had for the asking. "Crown Pink" and "Warm Laughter" seedlings at \$6.00 per dozen.

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HOW TO USE VITALERTH
4" potted plants use what will stay on a dime, applied once in 3 weeks. Larger plants proportionately more. Rosebushes need 1 heaping Tablespoon twice a year, spring & fall. Lawns, 20-25 lbs. per 1000 sq. ft. 2 or 3 times a year.

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Blu-Ox is clean to handle, is rich in bacteria, is odorless, singularly free from weed seed, straw, and other fibrous litter.

Blu-Ox is sun dried and finely ground and is enriched with Natural ground Phosphate in Pkgs. of 30 & 80 lbs.

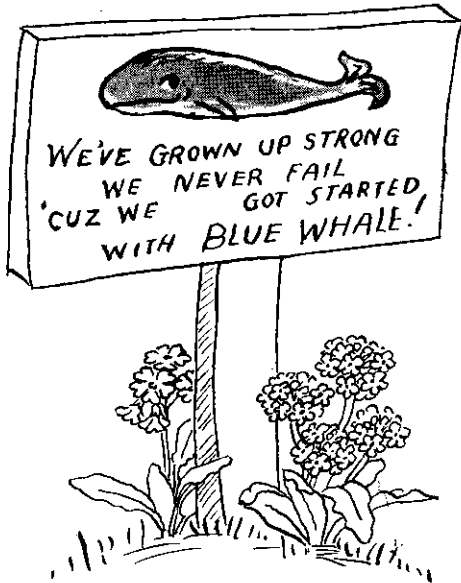
Natural Ground Phosphate, Phosphoric acid, is used by plants in quite large quantities. It stimulates root growth, increases buds, improves color of flowers and seed. Will give many days of earlier maturity. The real value of **Natural Ground Phosphate** is its ability to enrich the soil in minerals for many years from just one application. It is economical, 80 lbs. will cover 2,000 sq. ft. and last 4-7 years. It will help to loosen heavy clay soil, and give body to sandy soil.

WHERE TO BUY—Go to your local garden store, ask for these fine products.

FOR INFORMATION—Call Jamison Fertilizer Service, SUNSET 7705.

7941 S.E. Johnson Creek Blvd.

Portland, Oregon



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 artificials 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

Washington Distributor for Blue Whale — VIC NELSON COMPANY, Seattle, Washington



BLUE WHALE is a Product of ACME PEAT PRODUCTS, Ltd., Vancouver, B. C.

Linda A. Eickman

241 East Sheridan Street, Newberg, Oregon
Originator of the Majestic Strain Polyanthus

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That the Perfection of Color
and Vigor of

“Crown Pink”

and

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are even more pronounced

as a result of careful selection and

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1953 seed crop available about July first

at \$5.00 per packet, \$2.50 per half packet.



Polyanthus "Warm Laughter"