PRIMULA RUBRA

SEED FROM SEED EXCHANGE
American Primrose Society

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THE PICTURE ON THE COVER: Primula rubra Photo by Orval Agee

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AMERICAN PRIMROSE SOCIETY
Dear Members:

With this primula growing season about over, I have been taking stock of several new ones I have growing. Some are planted out and others I have in flats; some are growing well and others are preparing to go dormant. Those that are still blooming are Primula saxatalis; P. roseae; P. auricula; P. acaulis and P. vulgaris.

Like most gardeners I am looking forward to next year, ever hopeful that I will get everything "done." Maybe?

The past weeks have included a two-day trip across the Cascade Mountains to see and photograph the gorgeous fall foliage. Also a trip to the State Fair, where we saw the Chehalis Rare Plant Nursery's display of miniature evergreens and rock garden plants. This nursery plot won the first prize. Chehalis Rare Plant Nursery is owned by Herbert and Dorothy Dickson. Congratulations.

I would appreciate hearing from you folks especially about any growing experiences you are having, these we will share with the membership, so please write.

Sincerely,

Lou Dines
(Mrs. William Dines)

I think Primula kisoana is one of the finest of the primroses with palmately veined leaves. It is a top-notch plant in every way. The foliage, as shown in the sketch, is decorative in itself, broad-lobed and hairy. Stalks of leaves and flowers are covered with white fur and the good-sized flowers are of a better color than those of many of the cotusoides primulas. The roots run horizontally underground and new little plants appear 6 to 8 inches from the parent plant. The original plant is easily divided after blooming. Seeds rarely set on garden plants of P. kisoana and are seldom offered for sale, so I have never been able to work up a large stock of it, since anyone who sees it wants it. I was fortunate to be able to buy a few plants of it years ago. Since then we have had the usual incredible weather—freezing and thawing, little or much snow, very dry or very wet seasons—but P. kisoana is among those surely present come spring. Of course, it needs fresh soil at intervals.

Another palmate-veined primrose is P. polyneura. It and its many forms—P. Veitchii, P. lichianensis, and others—have small flowers that tend to be magenta in color (though they may be rose or crimson or purple) and usually have a dark eye. All have excellent foliage and a certain amount of attractiveness so are worth planting if you have the room.

One of this group that I particularly admire is Primula heucheri-folia. Although the leaves are much like those of P. polyneura, the flowers are quite different for they form hanging clusters of crimson or wind-colored bells. I had the plant once but parted with it to a favorite customer and have never been able to replace it. Seed is not often offered for sale and when you do get some it is a bit of trick to bring...
the plants to blooming stage, but *P. heucherifolia* is one of the "musts" on my list.

Also very desirable is *Primula geranifolia*. I've had it up from seed but not much further. I still hope to grow this primrose. I have found that many seedlings that seem to be tender and proceed to disappear from the garden are completely hardy if you can bring the plants to maturity.

*Primula Reinii* (it is in Section Reinii but for our purposes may be considered with the woodland group) is from Japan and should have the same treatment as the seedlings are tender, and if you can just get the plant started most likely it will stay with you. It should have the same treatment as the other woodland primulas.

There are other species in the cortusoides group but they are rarely offered for sale either as seeds or plants. Occasionally one such as *Primula jesoeana* is available, but it seems hardly worth having. The foliage is as nice as that of other cortusoides primulas but the flowers are very small on tall stems, so the plant looks as though it should support something more notable.

The cultural requirements are simple and pretty much the same for all of the cortusoides primulas. They need half-shade, well-drained woodland soil, and ample moisture during the growing season. The plants disappear over winter or leave a small bud at the surface of the ground. Every few years it is advisable to remove all plants from the bed, divide them, and replant in freshly enriched soil. All these primulas are hearty eaters.

They can also be planted in partly shaded positions in the rock garden but there they would receive the stone chip mulch.

*P. Sieboldii* seed is somewhat unpredictable; either all of it comes up or none does, so try again if you are disappointed the first time.

**Question:** Can one start Primrose seeds in a cool greenhouse which is attached to the cellar? It gets cool but does not go below freezing.

**Answer:** Yes. Be careful not to allow the flats to be in direct sunlight after germination begins.

**Question:** What type of soil should be used to start Primrose seeds?

**Answer:** The best mixture is: one third each of good garden soil; clean washed sand and compost or soaked peat. When one transplants the seedlings (when in second leaf) into another flat the above mixture is used with the addition of a trowelful of dry cow manure and a handful of crushed egg shells to a bucket of the mixture. This must be sifted twice before starting seeds.

**Question:** Please tell me if I can start Primula seeds in spaghnum moss.

**Answer:** There would be no food for the seedlings in pure spaghnum moss. The mixture suggested above would be best with a sifting of moss over the seeds to barely cover.

**Question:** If seeds are started in fall or winter in a greenhouse can they be planted out in spring?

**Answer:** Yes. They will bloom the following spring.

**Question:** Can Primroses be used as house plants as one uses African violets?

**Answer:** No. They can be grown in a cool greenhouse when shaded.

**Question:** Is Malethion an injurious spray for Primroses? I used it and whether this was a contributing factor or not I do not know but they all died.

**Answer:** I have never used Malethion spray so cannot tell you. I have used a soap suds and Blackleaf 40 spray but prefer to keep plants healthy with plenty of fertilizer and moisture (when needed). A good mulch of compost with a slug bait, fertilizer and tobacco dust added in early summer is splendid. More Primulas are starved to death than for any other reason except perhaps poor drainage. If you feel you need a spray an all purpose rose dust might be the best to use. Do any readers have suggestions?

**Question:** I have again lost my *P. luteola* plants. Can you suggest the proper culture or planting site?

**Answer:** *P. luteola* dislikes any stagnant moisture. They must have sharp drainage. I have mine planted as the rear of a polyanthus bed which is raised five or six inches with a little stone wall. The path is between that bed and the one behind which is also raised. The path between these two beds is filled with compost which will absorb moisture but none stands near the crown of the Primulas. *P. luteola* roots are long so they can take up the moisture. Since I have planted in this manner I have not lost any plants. (The compost in path is a
grand time saver as it's so easy to take up a trowelful if needed on a nearby plant.)

Question: Please tell me why P. polyanthus is not listed in the pictorial Dictionary.

Answer: The cultivated Species of the genus Primula are listed and P. polyanthus is not a specie. It is the result of hybridizing of several members of the Vernales group over a long period of time to produce the garden bunch type we call polyanthus.

Question: Will you kindly send me more P. Sieboldii as mine have died.

Answer: Your P. Sieboldii very likely are very much alive. In August they die down and the planting site should be marked so that the roots will not be disturbed. The pink “eyes” are forming to produce the flowers and foliage for next year. Also P. Sieboldii is often late in appearing in spring. Do not cultivate but mulch with a mixture of soil, compost and fertilizer.

PRIMROSE CULTURE

By Alice Hills Baylor

PLANT . . .
in partially shady areas in well drained

SOIL . . .
cultivated to a depth of eight inches and enriched with
well rotted (or dry) cow manure and compost or soaked
peat moss. Save enough of this humus material to

MULCH . . .
around and under leaves to a depth of one inch after
planting. Avoid having mulch on crown. This will con
serve moisture and allow a cool root run.

WATER . . .
well at planting time and soak once a week during
periods of drought. Good drainage is essential.

WINTER COVERING . . .
of evergreen branches, salt hay, excelsior or any ma
terial that will not pack. Avoid leaves. Take off covering
when temperature remains above freezing.

EXCEPTION . . .
for P. auricula add lime to soil in the form of crushed
egg shells or crushed, washed sea shells and mulch with

1968 BAMFORD "SHOW" AURICULA
WINNER GROWN BY MRS. ORVAL AGEE

An Experience Leading to the Problem of Vigour in Auriculas

By W. Ronald

(Fellow of the Royal Horticultural Society, England)

I began growing Auriculas about twelve years ago, or perhaps I should say my interest began at about that time, because I had always grown a plant or two in the garden, but of a rather poor quality.

At the time I began, I was looking for a plant for bedding purposes, one which would give a carpet of colour in Spring, when little else was in bloom but daffodils, and I needed about 500 plants to plant up the particular bed I had in mind. It was a rather exposed situation, as the climate here in North-East England is very cold and windy at least until the end of April, when temperatures rise quite sharply, and life becomes a little pleasanter.

Polyanthuses or Primroses just wouldn't do because of attacks by birds, mainly sparrows, so my choice was the garden Auricula.

The plants I began to raise from seed from local commercial sources were very bright, in a great variety of colours, and when at last I had enough to plant up the bed—I believe it took me about three years to accomplish—they were greatly admired, and even viewed from a comparatively short distance away, they looked very pretty indeed.

I had previously been successful in breeding Border carnations, and other forms of Dianthus, and now I resolved to turn my attention to the Auricula. All the books I could buy or borrow on the subject I read avidly, and now I really began to learn something about the Auricula. It took a very short time for me to realise that the plants I had so laboriously raised for my garden were just so much rubbish, judged by the standards attained by growers of Show, and Alpine Auriculas, and even by growers of good border auriculas, so I gave them away, and began once more, but this time with best quality seeds...
from the one remaining commercial source of Show and Alpine Auriculas in England.

The results of these sowings both astonished and delighted me, for here were the real plants which hitherto I had only read of — the prim Shows wearing their delicate mantles of farina—and the Alpines with their real jewel colours. They were incomparable. In a lifetime of gardening, nothing had given me greater pleasure.

Having raised the plants, I now had to decide which were good enough to retain in my "stud," and which I must discard, because at all costs I must use only the best parents. By this time I was a member of the British National Auricula & Primula Society (Northern Section), and had visited the annual show in Manchester, and I was able to obtain a very few of those varieties which had proved themselves on the show bench. Later I had the privilege of being accepted as a member of this society, and through the generosity of a leading Member, I was introduced to the Double Auricula, by way of his sending me some seeds, which were subsequently raised to mature plants, and then I began hybridising and raising them myself.

From an early stage it became obvious to me that the best colours and forms of the Auricula invariably came from those seedlings which were smaller and apparently weaker in constitution than the others in a batch. Strong growing, large plants, in my experience, produced flowers which were rather ugly, and coarse in texture, with pale and unattractive colours.

The raising of the smallest seedlings to maturity is more difficult, and having raised them, I have found it more difficult to keep the plants alive and vigorous. It seems to me that the problem of vigour generally needs more research. We must all have had cases of plants which collapse, and others which gradually die, for reasons which are not obvious to us. Many famous old varieties have gradually declined in vigour over the years, until eventually they were lost forever. We have probably all lost a plant which has been given exactly the same treatment as its neighbours in the greenhouse staging; it has been grown in the same compost, in the same size pot, and given the same care, yet it has failed to survive.

What can we do about it? I believe that we must learn more about the foods required by Auriculas, and we must pay attention first of all to achieving an ideal compost for optimum growth, and above all, we must experiment. Clearly if we are to produce plants to satisfy the demand for them from new Members in particular, we must all try to raise plants from our own crossings—for nothing could be more frustrating to a would-be Auricula grower than to be unable to obtain a good plant or two to begin his collection.

Those of us who have good plants, must be prepared at times to deprive them of the year-long shelter of the greenhouse, and put them out into the fresh air whenever possible, although it is advisable to protect them from very heavy rains.

In my own case I move out many of my plants after flowering into frames I have constructed with open sides, and glass tops, with a depth of about 12" minimum. I am convinced that this is of great benefit to the maintenance of vigour. Eventually all the plants are repotted by dealing with a proportion of them each weekend, and by September they are all moved back on to the greenhouse staging, where well-washed gravel awaits the pots. The growth of new leaves which has already begun outside in August, is accelerated in the greenhouse, and by November the plants are in tip-top condition for the winter.

Another way of maintaining vigour is to leave offsets on the plants until they can be detached with but a touch of the finger. Offsets so detached are usually well rooted, and can grow away without check. The parent plant is also left in better condition than if it had been torn, or hacked at with a knife.

Vigour is a matter which should concern all of us who grow Auriculas, and I am sure that every grower should be a researcher in his own right, to the ultimate benefit of us all.
ideal in its many variations for all the flowering plants we enjoy. Even our Southern Coast Line lies well within the Temperate Zone and while we get evidence, in the cool breezes and boisterous gales, that the controlling influences are centered well towards the South Pole, the average of conditions as affecting plant growth is equitable and mild.

Winters come and go, with few frosts and Summers bring occasional heat that is extreme over a day or so. The Eastern Seaboard facing the warm Pacific waters quickly turns to Sub-Tropical and Tropical conditions.

Orchids are grown commercially in Sydney in open beds with no more protection than simple shade and bananas are a paying crop further North.

Sugar growing is an industry along the whole of the Queensland Coast with tropical fruits.

Rainfall is variable. From a 20 inch a year it gains steadily to the North to a “rainy season” flooding measured by the foot beyond Townsville.

High altitude areas near the coast give growing conditions the equal of any wherever they might be. Further inland conditions quickly change to vast desert areas where the occasional “wet” produces huge lakes that quickly disappear again.

So far as the range of primula species is concerned, while they do grow, they fail to achieve general popularity. Commercial growers handle many as pot plants but the multitude of home gardeners our conditions encourage confine themselves to the so popular Polyanthus type.

These have followed enthusiastically the progress in variety and colour so freely provided and plants in bloom sell every year in every shop or store. My own effort has been to try to encourage the handling of plants in the seedling stage with little success.

To buy a plant in full bloom and expect it to settle to the new conditions and make adequate rooting to survive our heat of summer days is expecting too much but with the cost of seed the necessary price of seedlings seems high, yet the same person will willingly pay five and six times as much for the same plant in two months’ time.

My own experience goes back many years. Herbert Longford of Abbingdon, England, provided the early seed but a friendship with Frank Reinelt led me to better things. He generously gave me his full colour range 39 years ago and I have carried my own strain since then.

The lead he had with added knowledge and good conditions left me far behind for I ran against a problem I have only just managed to solve—a phosphate deficiency in my soil. Now I am gaining the annual improvement I knew should show—I have successfully handled many other species—and look to the future with high hopes.

 Quite naturally my strain is distinctly different to others and while for years I struggled with washy pastels, these now gain variety in the way of shadings and edgings that stronger shades miss. As well, I found a ruffling of the petals effective and have concentrated on this feature. Some of these are as heavily ruffled as the Petunias. I did have a strain of true doubles but this “ran out” in subsequent generations. The Royal Horticultural Society put out a bed from seeds I send them each year in their Wisley Gardens and they attract attention when in bloom.

Can I add a word of encouragement to anyone interested in saving seed? You can do far better for yourself than by depending on others to provide for your seeds. Not only can you gain the colours and types you yourself fancy, but the fact of hand pollinating eliminates the chance of a poorer type.
providing pollen. Where bumble bees abound there is no difficulty in seeding but even here you can outwit them if you want to.

Never can a polyanthus bloom be "self-pollinated" owing to the restrictive arrangement of pollen and stigma tip but if an immature bud is stripped of petals there is a natural protection from insect intrusion. This can be pollenated to your design and you will be assured of two sides to the pedigree.

It may seem to be unnecessary to go to this trouble but experience in the handling of species that do lend themselves to natural self-pollinating, gives me an idea that all plants welcome a dual parentage. Some will recommend "bagging" as protection in pedigree handling but I have found the bare seedbox and stigma tip left from the stripping of petals quite effective.

Just what the future holds remains to be seen and with the enthusiasm and facilities Mr. Sakata has we can no doubt look to him for progress but there still remains the opportunity for anyone to express his own taste and produce something different.

### RECOMMENDED CHANGES IN POINT SCORES

The basic change is to allow ten points for the foliage in all show plants. Its purpose is to encourage the breeding and growing of healthier more vigorous show plants.

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<tr>
<th>ALPINE AURICULA</th>
<th>EDGED SHOW AURICULA</th>
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<tr>
<td>Pip, round, flat, unnotched</td>
<td>Pip, round and flat</td>
</tr>
<tr>
<td>Color, rich, shading to edge</td>
<td>Body color, round, dark</td>
</tr>
<tr>
<td>Center, round and clear</td>
<td>Paste</td>
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<tr>
<td>Tube, round, edge level and pip</td>
<td>Tube, round, edge level with pip</td>
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<tr>
<td>Anthers, dense, curved in</td>
<td>Anthers, dense, curved in</td>
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<tr>
<td>Size, substance, condition</td>
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<td>Stem and footstalk</td>
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<th>SELF SHOW AURICULA</th>
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<td>Pip, round and flat</td>
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<td>Color, solid, no shading</td>
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<td>Tube, round, edge level with pip</td>
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A number of years ago I grew *P. Obconica* from seed and loved them but found I couldn't handle them. We got seed through the exchange and now have the white, pinks, rose, lavender and salmon, so striking but a pity they are not companionable to some people. The *P. Polynoria* seedlings are in a cold shelter and are sort of going dormant so think I'll put half out into the ground and half into a cold frame. I'm interested in the double Auriculas as well as the show varieties, sure part of my trouble is seed that is too old or not handled properly, so looking forward now to seeing what I can do with the seed you sent me.

Mrs. N. Gibbs
Bellingham, Wash.

Today I received the bulletin, membership card and other data given new members. I should like the A. P. S. Dictionary, enclosed is check. We are new to this area, left a nice rock garden up in Ohio and a retaining wall which used to delight me so very much. While we are shopping for permanent quarters here, I can be reading and dreaming. Thanks for the material which arrived today, they are very welcome.

Mrs. A. Addamiano
Alexandria, Va.

The reference to various Primula species has just arrived here and I'm so pleased to have this valuable booklet (Pictorial Dictionary) with the information just as I wanted, that I'm sending you back a note to express my pleasure.

Betty Addamiano
Alexander, Va.

Congratulations on getting a Life Membership the hard way. Could you tell me where to find a source for small hardy ferns of the Northwest. I have alpines of all sorts to trade and some fern seedlings will be available by spring. If you know anyone who might want to trade, would you give them my name? Companulas and Penstemons are other special interests of mine.

Mrs. David R. Blake
11415 Nottingham
Detroit, Mich.

Members please note.
I must let you know how the Sieboldii seed you sent me came up, every seed must have sprouted and grew. I put them in a pan of almost pure leaf mold and they grew so nice. I have transplanted them to their bed near my creek where I can water them every day when it gets dry. All of my primroses were very nice this spring. Things started out bad, it was so cold and wet most of April, then so hot all of a sudden, our Daffodils died on their stems. The Candelabras by the creek were lovely. I am so fortunate in having a small stream and woods. I am setting more and more Primroses on the banks, which are high enough on one side for regular ones and on the low wet side for the Candelabras. They grow huge like cabbages in the wet soil.

Sincerely,
Betty Sova
Perkiomenville, Pa. 18704

A long, hard and disastrous winter is coming to a close in up state N.Y. First Julies showing flower and fat, mealy buds of Frondosa give promise of another good season. Erthronium Japonica is good bud. White Trillium Nivale and Cyclamen Coum in flower.

Sincerely,
W. J. Hamilton, Jr., Ithaca, N.Y.

Last spring I enjoyed my first treat with primroses. These were plants that I grew from seed. I transplanted my seedlings into six inch clay pots keeping my fingers crossed, hoping to get them to bloom. They did in early spring, an abundance of flowers. Now I am hooked, but this year I would like to purchase the plants, because I want to enjoy specific colors. I would like to know if your Pictorial Dictionary is in color? (Answer—no, as this would be too costly). En closed is a check of $5.00 to join the Society.

Mrs. Allen Rebstock
Golden Meadows, La.

I have for a long time admired primula, and now that we are finally settled in a home, I look forward to starting a small primrose garden. I do need culture information and would also like to develop a better knowledge of the different varieties.

Sincerely,
Mrs. R. W. Piwonka
Kinderhook, N.Y.

It is with deepest regret that I will be compelled to cancel my membership to our great American Primrose Society due to eye trouble. This is a great, great loss to me for Primroses was one of my great loves and I did so enjoy the membership and contact with a few of the members. Abundant joy and success to the Society in the years to come.

Mrs. Charles Siebert
Seattle, Wash.

I do not have very good luck at planting seeds, even when I freeze them in the refrigerator before hand. Any information or literature you have available or can be referred to me would be appreciated. As well as willing to pay for same.

Robert E. Saul
Clawson, Michigan

Dear MRS TAIT,
I am enjoying the Quarterlies as always and also the benefits of the Seed Exchange from which I have had wonderful results.

Yours truly,
V. C. Costley,
Vancouver Canada

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V. C. Costley,
Vancouver Canada

PRIMROSE SEED
Hand Pollinated
Polyanthus and Acaulis
Available in individual colors or mixed at $1.00 per packet. Seed list sent upon request.

MIXED DOUBLES
No 70 Dbl. Seed
Polyanthus and Acaulis. Seed to produce at least 25% of beautiful doubles in shades of Pink, Yellow, Opal and many pastel shades of Mauve, Lilac and Penny Lavender. Priced at 100 Seeds for $3.50. Doubles Plants available at nursery.

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Rt. 4, Box 364
Gresham, Ore. 97030
the plant that I had brought home from that country several years ago, and I lost it. It has more sentimental value than beauty, but I would like to have it growing here again. It reminds me of pleasant walks in the countryside when I was stationed with the Army near Bordeaux. Being a primrose enthusiast, I hope you can give me some assistance in locating plants of this Primrose. So you are my last hope, short of a trip to Europe to get another plant and that is out of the question. Thanks in advance for any help you can give.

Sincerely,
Robert G. Kruizenga
10 Comings Ave. S.W.
Grand Rapids, Mich. 49504

(Can anyone help this gentleman find the plant he wants?)

... ... ...

I think the Primrose is a very lovely flower and can't understand why more people don't raise them. I have given many plants away, in hope friends will raise more.

Sincerely,
Mrs. R. W. Schmit
Morehead City, N.C.

---

Dear Members of the American Primrose Society:

Due to the higher cost of printing and mailing the Quarterly, I am asking you to send in your 1971 membership dues as soon as possible. Enclosed in this issue is a blank to fill out and send with your check. Money is needed to pay expenses of this issue.

I would like the month of April free of Society duties, as during this month my business here at Primrose Acres takes all of my time. Also the Primrose Shows are mostly during April.

The past years I have had to stay up nights to answer members' questions and send out membership cards, so you members could send for seeds from the Seed Exchange. I keep the Seed Exchange Chairman current on all paid-up members. Your membership must be paid before you are privileged to buy seed from the Seed Exchange.

Membership dues are due in NOVEMBER, your cooperation in this matter will be greatly appreciated.

Sincerely,
Beth Tait
(Mrs. L. Tait, Treas.)

---

There are times when gardening with a book is as good as with a trowel, often it must begin there. I have been reading an anthology from the writings of Gertrude Jekyll and came upon the following:

"Border Auriculas are making a brave show. Nothing in the flower year is more interesting than a bed of good seedlings of the Alpine class. I know nothing better for pure beauty of varied colouring among early flowers. Except in varieties of Salpiglossis, such rich gradation of colour, from pale lilac to rich purple, and from rosy pink to deepest crimson, is hardly to be found in any one family of plants. There are varieties of cloudings of smoky-grey, sometimes approaching black, invading, and at the same time enhancing, the purer colours, and numbers of shades of half-tones of red and purple, such as are comprised within the term "murrey" of heraldry, and tender blooms of one colour, sulphurs and milk-whites — all with the admirable texture and excellent perfume that belong to the "Bear's ears" of old English gardens. For practical purposes the florist's definition of a good Auricula is of little value; that is for the showtable, and, as Bacon says, "Nothing to the true pleasure of a garden." The qualities to look for in the bed of seedlings are not the narrowing ones of proportion of eye to tube, of exact circle in the circumference of the individual pip, but so on, but to notice whether the plant has a handsome look and stands up well and is delightful and beautiful thing as a whole."

The late Miss Jekyll thought poorly of florist society shows, and perhaps with good reason as she tells how pansies and carnations, to mention only two examples, were shown as stalk-less blooms laid out on a sheet of white paper, with the flattest and most perfectly circular blooms winning the honors. No attention was paid to the plant from which the circular bloom had been cut! One wonders if she ever saw the show-type Auricula displayed in Auricula Theatre, the entire plants being arranged like showcase jewels! To each his own — she considered herself a woman of limited means, but she had a perennial border 200 yards long and ten yards wide backed by a stone wall eleven feet high, plus separate rock gardens, iris garden, peony garden, aster garden, rhododendron garden and (yes) a primrose garden. It was she who originated the Munstead strain of yellow and white primroses. Most of the "florist" flowers came out of tiny back and front gardens of small cottages of ordinary working men and women.

Martha Harrison, editor,
Washington State Primrose Society Bulletin
Botanical Tour to Kashmir

In July and August of 1969, I had the good fortune to join a botanical tour to Kashmir for three weeks with Oleg Polunin as leader.

We flew from Delhi to Srinagar and stayed two days on houseboats on the Dal Lake before going up to Gulmarg. There we had two very interesting days. One afternoon spent in the local woods, we saw our first Primula rosea, also a lovely blue Salvia hyans variety and Bergenia fri-tillaria Royleii with its lemon colour. We also found Anemo- phone obitusloba in blues, yellows and whites, a native of Himalayas, and Androsace and Codonopsis amongst other plants.

The next day we rode on ponies to 11,000 feet. There Primula rosea was still with us and Bergenia fri-tillaria Royleii with its lemon coloured flowers. We also found Anemo- phone obitusloba in blues, yellows and whites, a native of Himalayas, and Androsace and Codonopsis amongst other plants.

Then we returned to Srinagar to prepare for our week's pony trek to Taunt Mul Pass, the highest point at 12,000 feet.

There were 22 on the trek with 40 pony boys and 70 ponies to carry all the supplies and equipment. We walked or rode according to the gradient and roughness of the track. Again we found Primula rosea and also macrophylla — simply lovely — along with reptans and elliptica. There too we saw blue meconopsis longifolia perched high amongst the rocks with the lovely light mauve of Paraquilegia nestling in the crevice sand also Lilium pholliphyllum and the rare Creinath oclium with its flower like a pale yellow dandelion with a nodding head.

We were now leaving the snow and ice behind and coming down through a scree to alpine meadows. In one place I saw a hillside of Eremurus coshmiriana and lower still, Delphinium in two shades of blue and also masses of pink Indigofera. Gradually I a e a v i n g all flowers behind, we reached a town called Bandipur, where the porters were paid off, and then went back to Srinagar. A very memorable and interesting trip.

I have about twelve different species growing quite happily in grit and peat here at home. Primu-la rosea, a blue Geranium and a Ranunculus have flowered so far and I am looking forward to seeing the others in bloom before the end of the summer.

Mrs. A. White
The Pond House,
Peamore, Alphington,
Exeter, Devon, England

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EUROPEAN MOUNTAIN PRIMULAS

By Fritz Kummcrt
Haupstrasses 61A, 1-3001 Maurerbach, Austria

Some years ago I became more and more interested in the Auriculastrum Section of Primulas. Some of them I had grown before, but since then I have tried to assemble a complete but small collection of Auriculastrum Primulas and their hybrids.

My primulas are grown in pots, plunged in a peat-frame, in a mixture of peat, sand, loam, Polystyrol-flakes and Perlite (Vermiculite). Some Boneemeal is added. In summer the plants are shaded and regularly fertilized with a water-soluble fertilizer, which contains nitrogen, potassium, and phosphorus, but a less than normal amount of calcium, as our water is very hard. During the winter the plants stay completely open, covered with only a thin layer of spruce-twigs. The lights are layed on only during the flowering time, as late frosts often cause scorching of buds or burning of flowers. Pests and disease are cured as necessary. The most dangerous pests are root-aphids and owl-caterpillars.

Currently, I grow a range of species and wild hybrids and will take them in groups, as they are related botanically.

Primula auricula is a very common plant here in Austria. On an excursion to our "house - moun-
tains," Schneegberg and Rax, you will find plenty of this species. The colour is a very clear and good yellow, often with farina in the form of a ring around the centre of the flower. The leaves are more or less green; you find plants without farina as well as some with a fine white covering. The margins of the leaves are mostly dentated and always cartilaginous. All forms here in Austria have a fine scent. The scent is only missing in some forms from the Southern Alps. The plant is fully hardy in the open and occurs only on calcareous soils. It was brought down to the lowlands by glaciers during the last glacier-period and can be found rarely around Vienna in the Vienna Woods and in the vicinity of Munich, in marshy areas (f. monacensis) with plain green leaves.

Closely related to Primula auricula is a south-Italian species, Primula palini. It comes from Cape Palinuri and grows there together with other interesting plants, such as Lithospermum oleifolium; it is a much larger plant, with dentated leaves, but only the teeth in this species are cartilaginous. The rosette of this plant can grow to a diameter of 30 cm. (12 inches). The flower-stalk reaches about the same height. The flowers are
clear golden-yellow also, but a bit smaller and more bell-shaped, with a fine scent. The bracts at the end of the flower-stalk, in *P. auricula* very small, are here large and leaf-like. This species is not hardy in the open and must be protected in winter by a frame or alpine house. The flower-stalk emerges very early, often as soon as November or December. The flowers are often affected by several fungi, mostly Botrytis, as the flowering time is February or March, and the weather is not always fine during those months. This species is easily propagated by cuttings in the same way as with *Lewisia tweedyi*: all new shoots are taken away and rooted as cuttings.

**Primula marginata** occurs in the Maritime Alps and is a very fine plant. The lilac-blue colour, sometimes rosy, contrasts well with the grey-green leaves, which often show a mealy dentated margin. Many forms of this species are in cultivation: “Linda Pope,” a fine rose one; “Prichard’s Variety,” a small, but very dark form; “Drake’s Form;” “Beatrice Lascair,” a dwarf; as also is “Highland Twilight.” All are very nice, but in a pot soon develop a straggling habit, the growing outward and upward, which is so typical of this species.

Here the only method is to take the side-shoots as cuttings and to pot the old plants deeper; if this isn’t possible, take the main shoot as a cutting also. Garden hybrids of this plant are often cultivated, e.g. “Marven,” a cross between Marginata and x venusta (auricula x camiolica); “Wockei,” a fine hybrid between *Primula x pubescens* (auricula x hirsuta) and marginata; and “Beatrice Wooster,” which is *Primula allionii* crossed with *P. marginata* “Linda Pope.”

**Primula camiolica** comes from Northern Yugoslavia to our gardens and has the general appearance of *P. auricula* with the exception that it has rosy or lilac flowers, which are the only parts of the plant with farina. The leaves and calyces are without any farina. The flower-stalk is mostly longer than the flower-stalk, in *P. auricula* Primula x venusta) are cultivated under the specific name. These hybrids have farina on different parts of the plant, not only on the flowers, as in *Primula camiolica*.

With one of the most spectacular of these plants, *Primula latifolia* (P. viscosa) I have not had to date the complete success I hoped for. I grow several forms, especially the vigorous variety *cynoglossifolia*, but with pot-culture I have had no flowering specimens yet. Perhaps these large plants can only be grown in the open ground successfully. The large group of the *Erythrodrosum* -Subsection is very easy to grow and to flower; all species of this subsection need a peaty, lime-free soil and a short drying period (not bone-dry!) after flowering.

*Primula pedemontana* is easy to recognize, as it is the only species with a red margin of glands on the leaves. The flowers are rosy-red or rosy-violet on a long stalk. I obtained wild plants through the kindness of a member of the A. G. S. from the Vallee de Cogne. The Cogne race of *P. pedemontana* should not be as beautiful as the forms from Mt. Cenis, which I haven’t yet seen. Like all other species of the *Erythrodrosum*-Subsection, *P. pedemontana* is easy to raise from seeds and will reach flowering size in two years.

*Primula daonensis* is a very interesting species, but not as beautiful as the related ones. The flower-stalk is mostly longer than the leaves and the flowers are a bit smaller, with a rosy or red-lilac colour.

*Primula villosa* is an endemic species of the Noric Alps, the eastern part of the Alps, and occurs only in Styria and Carinthia. It is found on siliceous mountains, usually in short grass or in rock crevices, always exposed to the south. It’s a very fine species, and, as it is easy to propagate from seeds, the seedlings can reach flowering size within one year. The lowest elevation to which this species descends is on the Renfled near Bruck Styria at 1300m. (4200 ft.), where it grows in rocks, together with *Primula minima*, *Silene acaulis f. norica*, *Campanula alpina*, *Phyteuma globulariaefolium* and *Soldanelia pusilla*; nearby grows *Gentian frigida*, related to *G. romanzovii* of the Rockies. The rosy-red flowers are large and well rounded, the leaves are strongly glandular and therefore a bit sticky.
Brought down by glaciers to the lowland, this species occurs in the sub-species *commutata* only 400 m. above sea level on the castle-hill of Herberstein in Styria.

*Primula cottia* is often mentioned as *P. villosa* f. *cottia*. This plant comes from the Cottian Alps and is not easy to distinguish from the Noric *P. villosa*. I received plants from the Val Germanasco and can see no difference. It is interesting that there are 2000 kilometers distance between these two locations, and other species of the *Erythrodrosum-Subsection* live between the two areas of this species. If all species of the *Erythrodrosum-Subsection* had developed from one ancient form, as the botanists state, how can we explain this disjunct distribution of *P. villosa* and its forma *cottia*?

*Primula hirsuta* (*P. rubra*) is the most famous plant of this group of alpine primulas. The large rosy-red flowers, with or without a white eye, rarely pure white also, are borne on short stalks, mostly shorter than the leaves. It is a variable species, which is partially explained by its large area of distribution. It occurs from the Pyrenees through the Alps eastward to Salzburg in Austria. Further east you will find only *P. villosa*. *Primula hirsuta* is as easy to cultivate as the other primulas of this group; fine forms flower twice a year, in spring and in autumn. Forms which are found at a lower elevation grow larger in cultivation than those collected at higher elevations. I myself found *P. hirsuta* in the Wallis/Switzerland at 400 m. and in the Tyrol at 2400 m. Some forms sold in England as *P. rubra*, e.g. "Boothman's Variety," are in fact *Primula x. pubescens* or *P. hirsuta x. P. auricula*.

*Primula allionii*, from the Alpes Maritimes, can't be cultivated in the open here with us, as this little species doesn’t like the winter dampness of our climate. I got plants from Mr. Schacht of Munich, which were collected at San Dalmazzo di Tenda. The small, slightly curled, sticky leaves form a small rosette. The rosy flowers sit in the center and are comparatively small. Some forms, which I got from England through the kindness of an A. G. S. member haven’t flowered as yet but should be larger and showier.

*Primula kitaibeliana* from Yugoslavia looks like a small, sticky, glandular *P. clusiana*. I got a plant from a friend, who collected in the wild, but it has not yet flowered. Last autumn a caterpillar ruined my large plans by eating away all side-shoots at the ground. Thus I can’t hope to have flowers of this species this year.

*Primula integrifolia* has entire leaves without teeth and a cartilaginous margin. The leaves turn brown in autumn after the first frost but the centre of the rosettes stays green throughout the winter. This species dislikes lime and needs some sphagnum-moss in the soil to grow well. Unfortunately, it has never flowered for me but it is a fine grower. I feel that our water is too calcareous for this
The subsection *Arthritica* encompasses four species: *Primula spectabilis, clusiana, wulfeniana,* and *glaucescens (calycina).* Sometimes these species are not true to name in cultivation, although they are easy to distinguish by looking at the leaves and the leaf-margins. The leaves of *P. spectabilis* have small transparent points (the glands are in small hollows and the leaf is there not as thick as normally) and a broad cartilaginous margin; *P. clusiana* has a small but clear cartilaginous margin; *P. wulfeniana* has a broad cartilaginous margin and dark bluish-green very stiff leaves; *P. glaucescens* has a curi ous margin. If looked at through a magnifier, you see a clear cartilaginous margin but it has slightly toothed and waved edges. All species are lime-lovers and should flower better if not over-fed.

*Primula clusiana* is a plant of the Eastern Alps and a fine species in cultivation. The large rosy-red flowers are borne on short stalks which often bear up to four flowers. There are sometimes found within the true *P. clusiana* forms which have toothed margins. In some cases these plants turn out to be hybrids with *P. minima,* but often it is the variety *admontensis,* which occurs rarely in *clusiana* populations. Often whole slopes are covered with a rosy sheen when this primula is in full flower.

*Primula glaucescens (calycina)* is found often in cultivation as it is an easy plant, and also easy to propagate. But be sure that you have a good form of this plant; the best plants bear flowers up to 4 cm. (1⅝ in.) of purple-lilac. The poor ones have small insignificant flowers, sometimes really star-shaped. This plant, in its good form, reaches 15 cm. (6 in.) in height, making it one of the taller species.

*Primula wulfeniana* from the Carinthian, Venetian, and Krainer Mountains, is a dwarf species. Unfortunately, it is shy-flowering in cultivation. I grow different forms, mostly collected in Carinthia, but rarely do I see a flower. A very small dwarf form of this species, nice in the rosettes, has never yet shown a sign of flower. The flowers are pale-lilac and not as large as those of *P. clusiana* and *P. glaucescens.*

*Primula spectabilis,* the species with the transparent points and the curious centre of the rosettes, is not represented by its best forms in my collection. Mine have borne only small and insignificant flowers not worth the trouble of cultivation.

One of the most beautiful species, but by no means easy to flower, is *Primula minima.* I am growing about twenty different forms.
of this plant and have noted great differences among them. *P. minima* needs a peaty soil with a high content of sphagnum-moss, and careful cultivation. The plant flowers in early spring, then the first growth occurs. After a summer rest (the air is too dry) the second growth occurs. Lots of buds are formed but, for some unknown reason, all these buds are killed! At this point you must assist your plant with shade and liquid fertilizer to form another mass of buds which will open in spring at the right time. In our lowland conditions Primulas of the *Auriculastrum-Section* often react this way: they make two mountain-year’s growth within one lowland-year. The colour of *P. minima* ranges from light rose, rarely white, to deep violet-rose, but flowers are never produced in profusion. But from wild collected seeds and more beautiful forms in the wild. It is an easy plant and the parent of the mass of our auriculas in the garden. This hybrid is fertile and sets seeds.

**Primula x beminae** (*P. latifolia x hirsuta*). I have one form of this hybrid, obtained from a friend in Switzerland. The leaves resemble those of *P. hirsuta* but the flowers are more bell-shaped and more violet, and show the influence of *P. latifolia*. This hybrid also sets seeds.

**Primula x muretiana** (*P. latifolia x integrifolia*). The hybrids between these two species are nice plants, with small, slightly dentated leaves and flowers of a fine shade of violet. Regrettably, it flowers very sparsely. No seeds are set.

**Primula x heerii** (*P. integrifolia x hirsuta*). This is the most beautiful of the hybrids except for *P. x steinii*. Really dwarf, rich flowering, easy to grow, but very slow to propagate: that’s a short capsule description of this plant. It needs lime-free soil and a hard planting. No seeds are set.

**Primula x steinii** (*P. minima x hirsuta*). Many names occur in this group, e.g. PP forsteri, pseudofors teri, kellereri, bileckii, and all are the nicest things you can imagine. Very small, with large flowers in colors from pale lilac-rose to dark red. They often flower in autumn and need special treatment as mentioned with *P. minima* to flower

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**FINANCIAL REPORT OF 1969-1970 SEED EXCHANGE**

**RECEIPTS:**
- *Received from Mr. Elmer Baldwin* $148.10
- Collected for Seeds $659.03

Total Receipts $807.13

**DISBURSEMENTS:**
- Printing $259.84
- Supplies 94.14
- Seed Purchased 70.05
- Sponsored Memberships 25.00
- Postage 67.70
- Ads in Quarterly 39.00
- Int. Reply Coupons 3.00
- Airmail Letters 3.90
- Incidents 6.50
- Service Charge (Bank) 4.21

Balance on Hand $233.79

Total Disbursements $573.34

*Mr. Elmer Baldwin also furnished the new Seed Exchange Chairman with Seed Envelopes, and also sponsored quite a few of our members, who give us seeds. Your Seed Exchange Chairman is grateful for this help.

Respectfully submitted,

Fayme Haverty

Seed Chairman
well in spring again. Cultivation in a lime-free soil and careful shading during summer and some liquid fertilizers: that is my recipe for success. These forms normally set no seeds, but sometimes success is reported, e.g. P. x forsteri 'Dianne' from Jack Drake.

**Primula x intermedia (P. clusiana x Primula)**. Two forms occur not far from my home on the Schneeberg: 1. The form nearer to clusiana, with dentated leaves and large rose-red flowers nestling in the leaves and 2. the form nearer to minima with a minima type rosette, but twice or three times as large and with violet to rosy-violet flowers. Both grow well, but do not flower as freely as do the other hybrids. No seeds are set (as opposed to the opinion of Farrer). Seeds are set after they flower but I hope no seeds are set. Some seeds are set from plants which have not flowered. These forms normally set no seeds, but sometimes success is reported, e.g. P. x forsteri 'Dianne' from Jack Drake.

**Primula x xochinensis (P. wulfeniana x minima)**. One form which I grew for many years is very fine, dwarf and rich-flowering. Last summer friends collected six different forms for me in Carinthia of which I can't say anything until after they flower but I hope for a fine display this spring. No seeds are set. I hope that I will be able to inform you soon about further successes with alpine primulas. I especially want to try to make artificial hybrids between well-growing species and thus help to enlarge the available varieties of these wonderful plants.

Reprint from the Alpine Garden Club Bulletin of British Columbia.

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