The primula has a colorful history, intimately entwined with that of all western horticulture, with the birth and development of printing and botanical illustration in Europe, the expansion of the British Empire, and the consequences of post World War II Asian politics. . . .

The first descriptions of primulas are found in the early European herbals, which appeared with the development of movable type in the 16th century. . . . As the number of medicinal gardens increased, so did the precision and content of the herbals. Eventually plants came to be cultivated for aesthetic value as well, and when the first horticultural collectors began to assemble and describe their curiosities, an increasing number of primulas were included.

—from "This Article Will Lead You Down the Primrose Path"
by G. K. Fenderson
Horticulture, June 1977

Exotic candelabras add color and charm to a "recycled" garden in Tacoma. John and Clara Skupen fashioned their garden from an old mill site. Clara Skupen is pictured.

Listen to the peacocks squawk a welcome. Hear the water splashing across the rocks, bubbling along the streams.

Smell the great floral shrubs, the pungent herbs, the damp sawdust, the encircling evergreens.

See the magnificent springtime colors—orange and yellow azaleas, the huge rhododendron blossoms. Look for the pathways that wind into sheltered coves of color and the wild ducks paddling nonchalantly across a pond.

Ah—candelabras
Let all of this form the backdrop—and then revel in the candelabras. Patches of pink beside a pond. Ribbons of rose along a stream. Fiery splashes of orange and yellow.

John and Clara Skupen have created one of the Northwest's most interesting gardens—a secret spot tucked into a narrow wooded gully that spills open to Commencement Bay at Tacoma, Wash.

Old mill site
It was not a ready-made setting. The determined couple took over an old mill site and worked for two decades to fashion a setting for their home. Many little streams trickle out of the hillside and wander through the woods and pools.

A garden is never "finished." Each year the Skupens push back a hillside boundary, build a new bridge, rework a terrace, reconstruct a walkway. And some years they have to thin out the profuse clumps of candelabras.

Exotic plants
It is the exotic candelabra primroses that set the garden apart. The lush green leaves and tall spikes of color create a breathtaking sight.

Candelabra primroses resemble their more common polyanthus cousins except there is a lot more to them. Flowers come in whorls up the stems. Several whorls bloom at one time, and stems can grow up to five feet tall.
Most candelabras have large leaves, usually a foot or more long. They grow even larger after the blooming period.

**How to get more**

The plants grow into large clumps. Desirable varieties may be increased by dividing the clumps.

Seed is copiously produced, and it germinates readily if it falls in a moist area. Almost all candelabra species cross pollinate freely, and seedlings will not come true unless the parent plants are isolated. (The exception is *P. japonica*, which has 44 chromosomes instead of 22 like the rest of the section.)

Thirty species are listed in the candelabra section. All come from the far east and most from the moist meadows of the Himalayas and the mountains of western China and Burma.

**Shade, please**

These plants all like a little shade and a good moist loam. They do very well along stream banks, but they usually will rot in stagnant locations.

Popular species include *P. aurantiaca*, reddish orange flowers, 12-18 inches; *P. beesiana*, rose, magenta or purple, 24 inches plus; *P. bulleyana*, orange-yellow, 36 inches plus; *P. burmanica*, red-purple with yellow eye, 30 inches; *P. cockburniana*, fiery orange, 12 inches.

Other popular plants include *P. heldoxa*, golden yellow, 48 inches; *P. japonica*, white, pink, rose, red 30 inches; *P. pulverulenta*, pink to crimson, 36 inches plus.

**Hybrids galore**

There are many hybrid strains. Some are *P. x Red Hugh*, red; *P. x Edina*, salmon; *P. x Inshriach*, yellow-salmon shades; and *P. x Asthore*, which comes in a wide range of colors.

Most candelabras are available from specialty seed houses and society seed exchanges. APS has a good selection of candelabras in the seed exchange.

Unfortunately seeds don't come packaged with streamlets and old mill sites. But you can use your imagination, can't you?
Good-natured candelabras. They're popular garden plants now, but they are relative newcomers in cultivation. Only eight plants in the candelabra section were described before 1913. That year Balfour named them "section candelabra of the genus primula" at the primula conference of the Royal Horticultural Society. P. prolifera, P. imperialis, P. japonica, P. serratifolia, P. poissonii, P. cockburniana, P. wilsoni and P. stendonta were the only plants described at that time.

Discoveries
In the 1920s and 1930s a number of other species were discovered during expeditions to the Himalayan kingdoms and China. Many of those will be found today in any good collection of candelabras. But a few of the species are not in cultivation. We meet their names in accounts of the great plant hunters and lesser-known members. Someday they may add variety to botanical literature of the genus.

It's time to get acquainted with these lesser-known members. Someday they may give us pleasure in our gardens.

A rare one
P. brachystoma was found by Farrer in 1920, the year of his death, on the Burma-China frontier. It is extremely rare in nature and it is unlikely that it is ever was in cultivation. It is allied to two other yellow flowered obscurities of the section, P. prenantha and P. morsheadiana. P. brachystoma is a small plant when compared with the commonly cultivated candelabras. It has yellow flowers, no farina and—most uncommon—leaves which are pointed rather than rounded at their tips.

P. chrysochlora also is yellow and completely without farina. It was collected only once in 1916 by Kingdon-Ward in China. It is petite and likely has never entered cultivation.

Someday little-known candelabras may add variety to our gardens.

P. cooperi was collected in 1913 in Sikkim. It is yellow, without farina, of small stature, with coarsely toothed foliage and a very short corolla tube.

Imposter
This species probably is not in cultivation. However, a purple-flowered primula which was inadequately described for identification was erroneously given a Royal Horticultural Society award of merit in 1913 as P. cooperi. It is possible that material of this imposter is still in cultivation as P. cooperi.

P. khasiana occurs in the hills of East Pakistan. It was collected as early as 1850, but I find no record of its cultivation.

Within reach
It is closely allied to P. prolifera, but it differs by being more leafy and without farina. It includes the presence of leaflike bracts. This yellow-flowered plant may prove tender in northern gardens, but it does remain within reach of present day collectors.

P. malliophylla was first found by Farrer in 1916 in eastern Szechwan. It has had a confused nomenclatural history, but it is unlikely ever to have been cultivated.

It has a hairy scape, a most unusual feature in its section. The flowers are a deep yellow orange, and the plant is completely without farina.

A small one
P. melandonta was discovered by Kingdon-Ward on the Tibet-Burma frontier in 1926. It is one of the smallest members of its section, allied to the beautiful P. serratifolia but lacking the latter's bicolor corolla. It has a smaller rosette of foliage.

This desirable little plant was collected only once, and undoubtedly it is not in cultivation. It has rich deep yellow flowers in single—or rarely—double whorls.

White flowers
P. microloma is the only member of the candelabra section in which the type specimen of the species has white flowers. It was found by Dr. Handel-Mazzetti before 1924 in the cold temperate fir forests of northwestern Yunnan.

It is a very small plant, without farina, with foliage rarely exceeding 9 cm in length. The flowers are more campanulate than those of other members of its section. It—along with P. brachystoma, P. morsheadiana, P. prenantha and P. polonensis—sometimes approaches the sikkimensis section in appearance.

From Tibet
P. morsheadiana may not be separable from P. prenantha. It was discovered by Kingdon-Ward in 1924 in southeastern Tibet.

It has golden yellow flowers, which are more flat than those of P. prenantha. It has no farina and carries a single whorl of nodding flowers.

Though early collections never led to its establishment in cultivation, it is possible that material from post-World War II expeditions exists today.

P. prenantha is a widespread Himalayan native of small stature with narrow, nodding yellow blooms—rather unlike most candelabras. It has no farina.

Simple beauty
It is not a showy plant, but it could be said to have the same quiet attractiveness of a species like P. veris. It has been in cultivation on occasion. Perhaps it can be found in current seed exchanges.

If P. prenantha may be thought of as a Himalayan P. veris in a non-technical sense, then P. polonensis may likewise be compared to P. elatior. It is without farina and has a yellow, larger and more rounded corolla than the closely allied P. prenantha.
P. polonensis was found by Kingdom-Ward in 1928 in Assam. It has been in cultivation sporadically since then, and it could be found in current seed exchanges. It has been cultivated under glass in pots which had their bases submerged in water. This system could be used with other semi-tropical members of the candelabra section.

Red — but plain

P. stenodonta is one of the few red to purple members of the section not in cultivation. It was found by Delavay in northeastern Yunnan prior to 1886. It has no faunia and resembles the P. anisodora-wilsoni complex as well as P. beesiana.

It is not a showy member of the section. Its absence from cultivation is not to be unduly regretted.

P. sumatrana is most unlikely to be hardy. It was discovered in the mountains of Sumatra in 1939 by Ripley and Ulmer. It is described as a dwarf P. imperialis, yet it is distinct from the latter, which is not recorded as ever exhibiting dwarf phases.

References:


APS loses worker, friend

Elmer Baldwin, longtime member of American Primrose Society, died in June. He was 78.

Mr. Baldwin and his wife, Hilda, recently completed the year-long task of indexing the society's Quarterly. That index is included in the mailing of this issue.

In a telephone conversation from their home in Syracuse, New York, Mrs. Baldwin said her husband slipped into a coma after suffering a cerebral hemorrhage. He had been hospitalized for several days so he could receive oxygen to relieve extreme breathing difficulty caused by emphysema.

Since Mr. Baldwin could not tolerate social gatherings where smokers were present, he turned to the garden for his pleasure. He served willingly and effectively as seed exchange chairman for APS and recently as manager of the rock garden society slide exchange. He was a frequent contributor to the Quarterly and prepared the cultural chart which is presented to new members.

He retained his keen mental faculties in spite of physical suffering. Mrs. Baldwin said he gave her instructions about planting some seedlings the day before his death.

He was a valuable and treasured member and friend. He will be missed.

References:


G.K. Fenderson, a landscape gardener, has served as president of the Eastern Chapter. He is writing a book on primroses and has an article in the June 1977 issue of Horticulture.

Beth Tait wins national honors

Top honors at the national show at Redmond, Wash., went to Beth Tait. Numerous trophies, including the prized Bamford trophy for best show auricula seedling, were included in Mrs. Tait's sweepstakes point total. Her Bamford plant, which has been named American Beauty, is an intense red self.

The Rae Berry trophy for best species, a large antique copper milk jug, was won by Vickey Sauer of Renton with a nice P. chionantha.

Good participation

The show was held Apr. 30-May 1, a week later than originally scheduled because of difficulty in finding adequate quarters. This, coupled with a long mild spring and warm preceding week, resulted in many plants being past their prime. But participation was good, and entries were abundant.

Some growers are emphasizing the need for a uniform show schedule for national shows. They say the schedule must include all classes for which there are national trophies. There was no hybridizers class this year, for example, and the APS award could not be given.

Whoops!

Awarding of trophies needs monitoring also, they point out. For example, this year your editor won the Michaud trophy for the best named show auricula with an unnamed seedling. He also garnered the Chambers award for best seedling double auricula with Grey Pearl, a veteran campaigner and frequent winner.

The Tacoma show on Apr. 2-3, traditionally the largest of the Pacific Northwest shows, featured a grand display of good plants and large attendance. The Fred Clarkes again went home with the sweepstakes silver tray. One of their exhibits was a cowichan polyanthus which was shaded like an alpine auricula. Their apricot cowichans with a bit of red at the center get better each year.
Beginner's Luck

—with Tony

I had a good time at the shows this year. I worked hard at the Tacoma show, and I also attended the excellent national show.

I have been wondering what I need to do to get my new seedlings ready for the show next year. I also have several plants in pots that need to be done about.

What do the plants need in the summer to keep them healthy and alive?

Tony Tenjette

Dear Tony:

I was looking at your seedlings the other day. They are well spaced in their flat and a little small for planting out. Let's keep them shaded and well watered with the addition of a weak fertilizer every other week.

By the end of August they should be ready to plant out. Then we usually get a bit of cool damp weather which is ideal for transplanting. Furthermore, we will have built-in control over slugs and spider mites.

Divide to conquer

Your older plants should be divided—pulled apart where they break apart easily—and cleaned. Take off all the old and damaged leaves and trim the roots. By trimming, I mean cutting off most of the fine roots. They seldom survive transplanting anyhow.

If something delays planting, the plants will benefit from standing in water for a few hours. We have some Vitamin B material to reduce the shock of transplanting. Better use some.

Good pony product

Our garden soil is poor sandy stuff. About the only good thing about it is the drainage. The pony produces just the thing to bring our soil to life. Mixed about half and half with soil will give your plants something to sink their roots into.

The soil will be warmer too next spring. Your plants should develop some good early growth and be ready for the shows.

Attack the bugs

If your plants show signs of weevils chewing their leaves or aphids and spider mites sucking the life out of the leaves turning them yellow and then brown, get out the Orthene. Spray the upper and lower side of all the leaves several times at two-week intervals.

And don't forget the slug bait. But above all, don't let them get too dry. Good luck.

Tony Tenjette

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Summer lodging . . .

Anyone who has a tall wooden fence or an accessible garage wall can build suitable summer quarters for primulas.

Mary Speers of Steilacoom, Wash., is a gardener who uses every available inch of space. When she decided she needed fresh-air space for her plants, she spotted an unused area along the back fence.

Her husband, Robert, a retired Illinois farmer, did the basic carpentry. He made sturdy shelf brackets using 2 by 4s as a brace. The shelf hung onto the fence, but it needed a sheltering roof to filter sunlight and divert rain.

Next step was to build a lighter but longer set of brackets. Speers used 1 by 2s for those brackets. He cut the top sections long enough to hold a sheet of white corrugated fiberglass.

The simple set up works well. The plants benefit from the moist summer air, and they enjoy the cooling breezes.

The Speers have solved the primula problem. But Mrs. Speers is planning to thin her crop of African violets. She decided not to try building the rustic shelving system in the house.

. . . then let it snow

The Sun Dome isn't a greenhouse. It's a large, walk-in cold frame.

All it does is cover an ordinary garden spot and extend the growing season—for a total of 9½ months in Wisconsin. That's something like four months longer than usual.

Sun Dome has a supporting heavy gauge aluminum tubing as framework. The cover is a polyvinyl chloride (PVC) material designed to last for many years. The entire thing is placed on a foundation of lumber, masonry or other suitable material.

Doorway and windows open and shut with heavy, weather resistant zippers. Windows have fiberglass screen cloth inserts to keep out flying insects.

Sun heats the soil inside the dome. Stored heat in the soil is given off slowly at night. Night-time heat that radiates from the soil is held in by the cover. Tests showed an average gain of 12 degrees in soil temperature—a steady gain, not an erratic one.

The dome comes in a variety of sizes. It can be set up on either level or sloping ground. For information write to Fabrico Mfg. Corp., 1300 W. Exchange Ave., Chicago, Ill., 60609.
Potatoes would sell better on this island in the Irish Sea. But the Dadds set up a nursery instead.

Primroses on the Isle of Man

Potatoes would sell better on the Isle of Man, but Ballalheannagh Gardens is promoting primroses.

Cliff and Maureen Dadd have set up a nursery in an idyllic setting. Their listing of primulas is expanding as the stock increases.

Natural glen

"Our land runs from 400 feet to 850 feet on either side of a beautiful natural glen with rock, cascades, ferns and mosses," Dadd reports. "It is a marvelous foil for our stock plants and personal collection. Visitors can see their requirements growing at their best."

The Dadds have been on the Isle of Man four years. It has taken most of that time to get the nursery set up.

Red tape

"Building, planning permission, etc., take up to two years or more, so we are still disorganized," Dadd related.

The plant scientists report that local primroses are "very normal," but they have spotted one pink form in the wild. Cowslips and oxlips are found only in the Dadd's nursery frames. Maureen runs the frames and office while Cliff looks after production.

"I am spending my spare time clearing—by hand—brambles, scrub saxil and bracken which cover the whole area and planting and paving as I go," he said. "It is very healthy work and very rewarding!"

'Soft' weather

The Dadds report that the climate on the island is fine for their plants. Weather is windy but "very soft and temperate with few extremes."

A temporary list for Ballalheannagh Gardens, Glen Roy, Lonan, Isle of Man, includes old-fashioned double primroses and auriculas; cowichan, gold-laced, hose-in-hose, jack-in-the-green, julianas, silver dollar and victorian polyanthus; and P. alpicola, anisodora, aurantiaca, capitata, chionantha, clusiana, dariaica, denticulata, florindae hybrids, frondosa, helodoxa, ioessa, polyneura, pulverulenta, rosea, secundiflora, sieboldii, sinopurea, veris and warshenewskiana.

Check those seeds

Seed time is here, and Ross and Helen Willingham are watching the mails. The Willingshams, who serve as seed exchange chairmen, are ready to start fresh with clean new primula seed. They have worked since 1972 to improve their efficiency in this vital operation.

"Each year we learn from our mistakes," Mrs. Willingham reported. "One of the reasons our work has become easier is that donated seeds have been received beautifully cleaned and packaged. We have been fortunate in receiving species and hybrid seeds which are available nowhere else."

Promptness is essential

Promptness is an essential ingredient for seed exchange participation. Seed needs to be sent as soon as it is ready.

"We have to catalog the donated seed and decide what has to be purchased from commercial sources," the Willingshams said. "The orders to commercial sources have to be mailed at the proper time to avoid getting old seed—and in time to get new seed. Sometimes that takes some doing!"

Next step in the process is to package the right amount of the donated seed before commercial seed orders start coming in. Every single commercial seed has to be counted so the Willingshams know how many they can put in 10-cent packages.

'Pot luck' leftovers

The idea is to come out even. It doesn't always happen that way.

"We had some seeds left over. There are times we can combine and use small amounts of the same variety," the chairman said. "This year we put the donations we couldn't use in a bowl, mixed them and packaged them as 'pot luck.' Many people said they were intriguing."

Last year Willingham tested all leftover seed for germination. This year testing was eliminated because all leftovers were sent to the eastern members in care of Ethel Balla.

"We thank all who sent and bought seed," the Willingshams said. "Your words of appreciation make the work worthwhile."

Ross and Helen were presented a "special service award" at the annual banquet in April.
I am only a second year member. I have one and a half acres on a terminal moraine (a glacier lake across the road) and swamp woodland in back. My cold plant room and light set up have necessarily guided me to miniature primulas, and Mrs. Baylor's article was perfect indeed.

I can't believe the strength of character of the English. Mr. Sinclair's values are priceless, and expressing them so eloquently was a rare treat. Does he give me inspiration!

Roberta Berg - Wenham, Mass.

Our Eastern Chapter meeting was glorious. Gardens were in perfect form—rhododendrons, irises and primulas especially good.

Alice Baylor

Most of the auriculas and other primulas I received from you have lived through our worst winter in many years, and some are blooming now, to my great delight. Now to keep them going...

Ethel Balla

Congratulations on the spring issue of the Quarterly, which came this morning. You've certainly got some excellent contributions and some outstanding photographs. I enjoyed Alice Hills Baylor's article—especially as I've just obtained a plant of Primula "Peter Klein."

Can we have an article on native American species? I grow P. suffrutescens (from AGS seed, but it's never flowered), P. ellisi (P. rusbyi, P. parryi (never flowers), P. mistassinica and speculica (now lost), P. decipiens is flowering for me today—seed from the Falklands. Can any of your members write authoritatively on P. angustifolia, nevadensis, etc.?

One small complaint! I never got a copy of your seed exchange list. Could you please tell your seed exchange manager that I'd be glad to contribute from this year's expected harvest.

Dr. David Winstanley
Woodlands, Toot Hill Rd.
Greensted, ONGAR, Essex
England CMS 9LH
May was the warmest one on record here. No rain. Close to 90 degrees day after day. The vernal primroses came into bloom together and went out of bloom in a few short days. Their flowers were small and burned up with the hot dry air.

The auriculas budded up and never came into bloom. The buds just stood still. Heat seemed to damage the pollen or the vernal primroses seed plant. Few "takes" were obtained. The candelabras set seed, but the blooms were small and short lived. All species were in bloom and out in seven to 10 days.

Bless the woodland primroses

One section saved the year. The cortusoides, or woodland primroses, seemed to love the weather and thrive on it. Blooms were largest and plants stayed in bloom longest of any year in the last 10.

Without heavy rain to beat down their blossoms the seiboldiis were a beautiful sight for more than three weeks. They are heavy with seed now in June.

The polyneura, cortusoides, saxitalis, geranifolia, kisoana and jesoana also loved the hot dry air. The flowers did change to a lighter color, nearly a true pink rather than the purple pink which is normal in a cool spring. These plants also stayed in bloom a long time, and they are setting seed well.

Moral of the story

There is a lesson in this. One should plant as many sections as will grow in the area.

For two years we have had a hot April and early May. The vernales in general have not been at their best. Last year it cooled in May and I had the best candelabras ever—but rains spoiled the woodland primroses. This year they were beautiful and the candelabras were not.

Don't give up if there are failures this year. Stay with your plants for another spring, and certainly things will be better.

The last spring I remember like this was in 1938. That year I had plants grown from English seed—my first vernal primroses. I was very disappointed.

I took care of them through a hot dry spring and summer. The next spring they were beautiful—as they have been most springs since.

Hot weather transplanting tips

Here are some suggestions.

If plants are doing well, leave them where they are and mulch well with a fertile organic mulch, leaf mold, well rotted manure, rotten sawdust and a weak fertilizer.

If they must be moved, I get new place ready. I do not divide. I leave all the dirt on the plants, place them in the new bed and water well.

They will grow roots into the new soil and be benefited by it. If the weather becomes cool in early fall, the plants can be divided then. If it stays hot, wait until a normal spring.

Dividing that choice plant

If you have a single choice plant you want to divide, you could try my method. With a sharp knife I cut down through the plant (between the two or more parts) into the ground about six or eight inches. I leave the plant alone for a period of time, watering and caring for it.

Later, after a month or more, I move one part I have cut through and leave the other part where it was. This lessens the chance of losing both parts if weather conditions are not favorable.

Dr. Ralph Benedict, a veterinarian at Hilldale, Mich., is an APS director. He confides that hot weather has forced him to hold a hose nozzle so many hours this spring that his hand has "taken on a definite claw-like design." We'll all hope for rain!
They're worth it

Challenging Petiolares

by Reuben Hatch

It's the challenge!

In collecting and cultivating plants for the garden, often it seems the most desirable of a type are those least available or most troublesome to grow. This would certainly be the case with the primula species grouped in section petiolaris.

The petiolaris section includes about 60 species. Of this large group only 15 or so are reported to be in cultivation.

Compact plants

While the species do vary, they typically are compact in stature, the leaves toothed and crinkled, glossy green to farinose. Some species are richly covered with farina, particularly at time of bloom; that enhances their beauty.

The inflorescences of the species varies from multiple stems to an umbel at the head of a scape carrying many flowers. Typically, the flowers bloom close to the plant, much like a julie hybrid.

Large flowers

The flowers are large in relation to the plant; the petals usually are deeply toothed. Flower color ranges from lavender to purple to pink, occasionally white or yellow.

Flowers often are annuated—that is a thin white band outside the throat separates the main color from the color in the throat. Consequently, some species have a bi-color effect: pink, white band, orange eye; lavender, white band, yellow eye.

These plants are perennial. Most retain some foliage over winter. They bloom early. Some species start in early winter, and most finish by early May.

Capsule crumbles

In all petiolares species the wall of the seed capsule crumbles away upon maturity,
Two hurdles
during their winter rest period. The first problem is to protect the plants from excessive wetness.

There are several ways protection can be provided, such as planting under eaves of the house, planting in a vertical position in a wall, covering the plant with a pane of glass or placing the plant in a cool greenhouse or frame. The latter method may be preferred, as the plant can be enjoyed in bloom during our usual rainy season.

Need cool mist

The other problem is to protect the plants from hot dry atmosphere. Petiolaris primulas come from the Himalayas and mountains of China, where they spend their growing season in cool misty weather.

It is natural for them to resent temperatures that climb to 85 to 90 degrees F. and humidity that falls to the 20 to 30 per cent range—a common event in the Northwest.

Plants must, therefore, be planted or placed in a cool shady location, preferably with some baffling between them and the wind. A nearby water source, such as a small tub, keeps the humidity at a tolerable range.

Water regularly

Watering the plants regularly during the growing season is necessary to keep them in good health. But no amount of watering will save a plant that is in a severe heat-stress situation.

Other problems reported in cultivation are that the plants do not seem hardy to excessive low temperatures (0 degrees F.) or prolonged ground freeze. They tend to be susceptible to red spider mite attack.

Like most primulas, the petiolaris prefer a rich, fast draining soil. They grow well in pots and respond favorably to liquid fertilizer.

Now you know

If after all that “trouble” you want to pursue the subject further, here is a brief description of some species of the petiolaris section that you may be able to obtain:

P. edgeworthii.

This species is usually the first to bloom, starting as early as December in some seasons. Both the lavender flowered form and the lovely alba form are available commercially in the Northwest. A clear blue form has been reported.

The foliage during blooming has a rich covering of farina if it is protected from the weather. The alba form tends to open a squinty grey-white, initially a disappointment. However, after a few days it expands into large clear white flowers of great beauty.

Perhaps this species is the best “doer” of the section. Propagation is easy by means of freshly sown seed and division. This species is the one to try first.

P. whitei

Some consider this species, also known as P. bhutanica, as the gem of the section. Certainly it is beautiful in flower when it blooms out in February with its clear blue annuated flowers tinged green in the throat.

The broad, deep toothed foliage becomes a lustrous green during the growing season.

P. petiolaris

This very compact species covers itself in an umbel of freshly sown seed and division. This species is the one to try first.

P. aureata

Perhaps this species is the most outstanding of the group. The flowers, which are quite large, are cream with a flush of bright orange in the center. Flowers nestle on top of a foliage quite silver with farina.

It is reported that this species is relatively easy to grow. At the Royal Botanic Garden, Edinburgh, this must be the case. There this species is grown outside by the dozen along with many other species of this section.

P. griffithii

This species differs from the previous ones in that the flowers bloom in an umbel and the plant is entirely herbaceous. P. griffithii at its best is an intense blue, white band with an orange eye offset by calyx and scape plash with farina. This species hybridizes with its close relatives so that various color forms can be expected.

Other species close to P. griffithii are P. calderiana, a bright purple-magenta; P. strumosa, a clear bright yellow; and P. tsariense, royal maroon.

Since this group completely disappears under ground in the winter, they are easier to protect, but it is a good idea to mark their place so you won’t accidentally dig them up.

There has been a lot written about petiolaris primulas over the years in the bulletins of the Scottish Rock Garden Club and the Alpine Garden Society. "Asiatic Primulas" by Roy Green, a book recently released through AGS, provides an excellent reference for this section.

American Primula Society describes many of the petiolaris in the "Pictorial Dictionary of the Cultivated Species of the Genus Primula." And articles may be found in the Quarterly in the following issues: summer 1972, pg. 81-86; spring 1968, pg. 40-41; winter 1964, pg. 14-26.

Reuben Hatch, 2212 NW 69th St., Vancouver, Wash. 98665, is owner of Fruit Valley Nursery, a specialty rhododendron nursery. Primroses are his hobby, and he has traveled to many parts of the world to find them. His garden features dozens of rare plants.
I have a question!

Answers by Alice Hills Baylor

Q. I have learned that in Tennessee only transplants made in February survive. Transplants made in fall for wintering in the greenhouse also will survive. When is the best time to transplant newly germinated seedlings to insure the greatest survival?

A. Transplant from germinating pan or flat to "growing on" flat when the seedlings are in second leaf, allowing space to grow. They should have a mild fertilizer (liquid) at that time and every two weeks following.

If started in February, transplanted in March and held under lights until the weather is settled, they may be placed in screened frame in cool place out of doors. Plant into the garden in September (in Tennessee) or wait until the weather is cooler.

The best method is to transplant from seedling pan into peat pots that are sunk into good soil in a flat. In that way the roots are not disturbed. Water well and mulch. If you are working with auriculas, mulch with small limestone chips.

Q. When making cuttings from P. auriculas so many rot after they are transplanted. How deep should these divisions be planted?

A. When you remove a division from a mature P. auricula, you should rub the scar with a piece of charcoal or powdered sulphur. If you are planting next to the parent plant, make a hole 2-3 inches deep and fill with clean sand and water well. If parent carrot is scarred, treat as above also. The depth a division is planted depends upon length or roots, if any. If the stem is no more than half an inch deep, anchor with small stones.

Q. What should I do with the seed pans after removing those in second leaf?

A. Keep all seed pans or flats. Place out in a frame, in shade, which has a screen cover. Summer rains usually will bring on more germination.

Q. For the first time after many attempts, I have succeeded in getting P. polyneura to germinate; and in September the plants dropped all leaves. Does this species die down in winter the way P. sieboldii does?

A. P. polyneura demands a long resting period. It is very hardy.

Q. I have a primula growing at the edge of an Ilex bush. It thrives without attention. How far do the plants in the section petiolares go back?

A. The old Quarterlies may be bought from the treasurer. The earliest ones go back to 1944. Only a few copies of some issues are available, and there are plenty of others.

None are available for April, July or October, 1944; January, 1946; January and April, 1949; April and October, 1954. Write to the treasurer for cost of the others.

Q. What is the function of the round robins? What do they do?

A. The round robins consist of a group of members in widely separated areas of the country. A letter is sent by the leader to the first one on the list, and he or she in turn writes a letter discussing primroses—or asking a question. That letter goes with the first one and is sent to the next person on the list. Thus it makes the rounds and is returned last to the leader. It is very worthwhile to belong. Any member may join a group by writing to the round robin chairman, Mrs. Ruth Bartlett Huston, P.O. Box 42, Gig Harbor, Wash., 98168.

More about petiolares . . .

Dr. Denis Hardy of Scotland is organizing a "do-it-ourselves" seed exchange for plants in the section petiolares.

"It is almost certainly useless to offer such seed to the seed exchange as its viability is notoriously short," he wrote in the Journal of the Scottish Rock Garden Club. If those who want to participate will write to Dr. Hardy at 3 Carnegie Crescent, Aberdeen, Scotland, he will arrange a rapid exchange of seed immediately after harvesting. Best results occur when seeds are sown "green."

The April 1977 edition of the journal includes other comments on the exchange. It also features on page 177 "An Account of Primula Section Petiolares in Cultivation" by A.J. Richards, which was presented as a memorial lecture at Edinburgh in November 1976.
The style of our gardens and the plants we grow are very much a reflection of social history.

The war years, 1939-1945, affected our gardens as they affected so many aspects of life the world over. To look back now to the 1930’s is to recall walled-in gardens, an acre or more in extent, associated with country houses, often situated a little distance away from the home.

Garden vista

A decorative iron gateway let into the grey limestone wall revealed a vista of gravelled walks, box edged, between herbaceous borders backed by carefully trained fruit trees. Behind these again were the rows of vegetables.

In those days an elderly gardener, long-time friend of the family, managed the fruit and vegetables, helped by a gardener’s boy. This left the mistress of the household free to tend the treasurers in the borders, with the old man and boy at call to help with the heavier work.

Serene setting

Such was the setting in which the old primroses grew. Plenty of farmyard manure was available, and dappled shade from the fruit trees shielded the plants from summer heat. The writer can recall one such garden where beds of double white and double lilac primroses flourished in quantity.

Even in those days it was rare to see the old double red Madame de Pompadour, yet there was one garden full of it. Other kinds to be seen were Red Paddy, Marie Crousse, Our Pat and Rose du Barry, names that how have a folk lore ring about them.

Antiques and ‘freaks’

As well as these neat old doubles, even then regarded as antiques of the plant world, we had such freaks as Jack-in-Green, in several colours. These had a ruff of...
green leaves around each flower, as if the calyx had gone mad, producing a ring of miniature leaves. There were also the hose-in-hose types, generally yellow, with one flower seeming to spring from the centre of another.

All these flourished under the conditions described, it being recognized practice to divide up the plants every second year or so. So well did these primroses multiply that there were even advertisements in the daily press offering plants for sale.

**Shadowy figures**

And today? The old ladies and their gardens have gone. Miss Wynne, Miss Hume and their friends are shadowy figures to us now, like lesser Gertrude Jackylls or Ellen Wilmotts of English garden history. (There is even a plant, a feathery Thalictrum, known as 'Miss Wilmotts Ghost').

The old walled in gardens are a problem to maintain nowadays, and few survive. While some of the old primroses still live, many, alas, are indeed ghosts still heard of, but unseen.

Undoubtedly they were plants of a more leisured age. Today the few enthusiasts who keep them going find they need care and attention.

**'The grub'**

Why are they so scarce? Miss Hume used to speak darkly of "the grub." With hindsight this may have been vine weevil, today a serious pest of many garden plants, particularly petiolarid primulas. One friend writes of an abundance of Rose du Barry primroses one year, none the next. Farmyard manure is almost unobtainable by the private gardener of today, who has no farm as part of his inheritance. Could virus, too, be a factor?

Yet there are hopeful signs. After some years of doldrums ornamental gardening is reviving. There are more, though smaller gardens, associated more with a suburban style of living. Vine weevil can be controlled with modern insecticides.

**Modern helps**

We cannot grow our primroses in soils mellowed by past dressings of farmyard manure, but there is a substitute. Many of our tomato growers are using fertilized peat to grow their crops. This peat comes in plastic bags which are not emptied, but laid on the glasshouse floor. The tomatoes are grown directly in the bags.

Afterward the discarded bags have garden value, containing ameliorated peat with some fertilizer residue. Discreetly used, well mixed with the loam of the garden, results so far suggest that this peat suits primroses well.

**Friendly exchange**

Such as remain of the old kinds are kept going, growers keen to maintain them by interchange with friends. This is an insurance against loss, as grateful recipients are glad to give plants back.

One sees the double white most frequently, then the lilac. Scarce and usually in small numbers are Red Paddy, Marie Crousse, Our Pat, Bon Accord Cerise, the Jacks-in-Green and Hose-in-Hose.

These are the old kinds, and an exciting new development has been the arrival of the Barnhaven strain from England. Seed of this can be purchased, and if every seedling is raised you may be lucky in getting several doubles.

In Ireland a fine red has been grown — recalling the long lost Madame de Pompadour — and a good blue. So this has taken the immediate pressure off the old doubles, but should we not keep them going?

Dr. J.G.D. Lamb writes from the Agricultural Institute, Kinsealy Research Centre, Mulahide Rd., Dublin 5, Ireland.
Announcing . . .

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Vol. 1 — 34, No. 2
1943 — 1976
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Additional copies of Index — $2 each.

Sources of Primula seeds and plants seem to be hard to find. Your editor took a few minutes to go through the catalogs on file at the Seattle Public Library. Here are the interesting ones:

J. L. Hudson, Seedsman, P.O. Box 1058, Redwood City, Calif., 94064, a selection of Primula seeds. Clyde Robins, P.O. Box 2091, Castro Valley, Calif., 94546, P. suffrutescens seed. Siskiyou Rare Plant Nursery, 522 Franquette St., Medford, Ore., interesting species Primula. Lamb Nurseries, E 101 Sharp Ave, Spokane, Wash., 99202, half a dozen juliae hybrids. Laura's Collectors' Garden, 5136 S. Raymond St., Seattle, Wash., 98118, several species. Mellingers, 2310 West S. Range Rd. North Lima, Ohio, 44452, vast list of horticultural supplies.

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American Primrose Society

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Elected directors
Al Rapp, Tacoma, Wash. 1975
Dorothy Springer, Tacoma, Wash. 1975
Fred Clarke, Tacoma, Wash. 1976
Helen Clarke, Tacoma, Wash. 1976
Lois Benedict, Auburn, Wash. 1976

Membership
Dues of $7 a year were payable Nov. 15. Membership includes four issues annually of the Quarterly, cultural chart and seed exchange privileges. Three years for '20. Life membership, '100; garden club affiliated societies, $10 a year; library and horticultural societies, $7 a year; second member in family, $1 a year. Overseas members, $7 a year; please send by international money order. Send dues to the treasurer.

Publications
Back issues of the Quarterly are available. Order from the treasurer. Pictorial dictionaries can be ordered from the treasurer for $3 each, postage included.

Manuscripts for publication in the Quarterly are solicited from members and other gardening experts, although there is no payment. Please send articles and photographs to the editor's office, 11617 Gravelly Lake Dr., S.W., Tacoma, Wash. 98499

Named primulas
Beth Tait of Primrose Acres, Bothell, Wash., has submitted two good auriculas for registering.

Tangerine, a Bolero x Brown Bess gold center alpine seedling, first bloomed in 1972. It joins the family of Fred Hill's mahogany to orange alpines which have been regular winners at the British shows for a number of years. Though Fred is gone, his plants and their offspring carry on in this country as well as in Britain. Beth reports she has 100 offsets.

American Beauty, a true red self, has performed well since it first bloomed in 1970. It is the result of crossing W. Glenn Dobie with Hardley. It should move in with youthful vigor to replace its good red parents that are beginning to show their age.

The Alpine Garden Society (of England) is to be congratulated on this new addition to primula literature.

Succeeding volumes are promised. These will cover other groups until all primulas have been dealt with.

Excellent drawings

Particularly appealing are the excellent drawings by Dr. Lionel J. Bacon. Three 8-page groups of black and white photographs also are included.

A key to the sections will assist growers to identify plants of doubtful parentage. The more complicated sections are further broken down with keys to the subsection or species.

Cultivation and propagation are stated in simple terms, generally at the beginning of the text and in detail for the more difficult species.

Beginner or advanced

This is an excellent book for the primula enthusiast—beginner or advanced. It will prove of lasting value and will be enhanced by the series that soon will be joined it.

The author states flatly that "this is a book for gardeners." He writes, "It is assumed that the reader will wish to learn as much as possible about the cultivation of primulas he possesses, and to be assisted in their identification, and also to learn something about primulas whose names he may come across in seed lists and catalogues."

The following is an example of the author's succinct approach:

"P. melanops tends to be rather short-lived but the species sets viable seed, from which plants may be raised. These should be potted and plunged in the alpine house or frame during the first winter, for planting in open ground the following spring, or planted directly in the open ground in a shady position."

Clear, simple descriptive paragraphs help the reader identify the plant.

'Sheer pleasure'

Mr. Green is a civil engineer. In his earlier years he roamed the hills "for the exercise and the sheer pleasure of height." He acquired an interest in the wild plants. For 20 years he has tended a small garden high on the slopes of the valley of the River Aire. A natural choice for his garden was Asiatic primulas.

"The knowledge that they grow on the great mountains of central and south-central Asia, the lonely places, would certainly induce a sense of nostalgia," he writes. "Many species are very garden-worthy plants of unsurpassed beauty, graceful in habit, with flowers of delicate form and restrained colour."

Middle course

In his 163-page volume Mr. Green endeavors to "steer a middle course between being too botanical for the gardener reader and so over-simplifying as to mislead."

He has kept botanical terms to a minimum. Those he used are defined and illustrated in a glossary.

"The real purpose of this publication is to interest people in primulas," he writes in an introduction, "The intention is to persuade more people to grow more primulas, to acquire the rarer species and to cultivate, propagate and swap them."

That's certainly a worthy cause. Mr. Green's fine volume deserves, as a British reviewer stated, "bumper sales."
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Diary of a Primroser
by Cy Happy

 Didn't get around to see as many gardens as I had hoped, but I did get to the Lee Campbells, Rt. 2, Buckley, Wash., 98321. Their front yard was full of large polys, their own hardy strain.

The streams and ponds were lined with P. rosea, P. clarkii, a nice selection of P. denticulata, P. chionantha and many candelabras. The greenhouse was loaded with species and seedlings in all stages. Lee's sempervivums—all sizes and shapes, greens and reds—were especially nice. Campbells never intended to operate a nursery, but unsolicited customers are forcing them into it.

Spice for daffodil show

The Campbells and I put in a primrose floor display at the Puyallup Valley daffodil show. Thought our society and the local clubs needed the publicity.

Gave my local history talk to the Anderson Island Historical Society and spent the afternoon looking at the gardens of the primrose growers. Gold-laced polyanthus are popular there. Quaker Bonnets never looked better. Barnhaven doubles were luxuriant.

Generous gold-laced grower

Agnes Johnson, our prize island grower, was still in the hospital, but she is home now. Sent me a choice gold-laced poly.

Didn't see old "Tiny," but many of the plants bear a strong resemblance.

Seven minutes on Ed Hume's Sunday morning TV gardening program seemed like two. Couldn't seem to get everything said. Hope to be invited back again.

Had a call from Mrs. Haas in South Tacoma offering free gold-laced polyanthus for the show sales table. The quality was very good. From Barnhaven seed several years ago—a marvelous blue double primrose and several others from Barnhaven seed.

Take a look at list

Speaking of Barnhaven, the ad we have run for Far North Gardens never has done justice to their seed list. For example, 25 varieties of candelabra primulas among the 130 species listed at $1 a packet, plus several pages of acaulis and polyanthus at $1.25 a packet. Doubles are $2.50.

Bob's wife, Dorothy, died July 1976 and is greatly missed. But Bob is still in business. Their girl Friday, Karen Krusinski, will return soon from horticultural school and have things humming again. Address: 15621 Auburndale Ave., Livonia, Mich. 48154.

Good grower gets good plants

Ralph and Evelyn Balcom have given up their double auricula collection. It now is in the capable hands of Ross Willingham, the seed exchange chairman. Prime consideration was to have the collection in the hands of a good grower, which has been done.

I have my own selection, 60 varieties, of Ralph's doubles. Some were shown this year. All that would set seed have been pollinated with the best of the pollen producers. Filling pods indicate quite a surplus of seed.

Look out, world!

Most exciting to me was D 306, which Ralph described merely as veined mauve.

To me it was a rose and white stripe, nicely doubled and of classic form. Crossed with my striped semi-double (descended from Mrs. Dargan), it has developed huge seed pods. Look out, world, striped doubles may be back after an absence of 150 years.

Betty Bronow of Poulsbo asked me to speak at the first meeting of a new primrose club. Took us to dinner first and then to the Yarn Barn for the meeting. Betty warned me of a small turnout. However, 30 enthusiasts showed up, and the club was off to a flying start. Betty has a mail order nursery specializing in succulents.

Island primrose symposium?

Louis Gittner, owner of the Outlook Inn on Orcas Island, stopped me at the national show to discuss a symposium weekend next February or March at his inn. Perhaps it could be held jointly with one of the British Columbia groups.

Tacoma Primrose Society is now paying the dues for two APS members in Czecho-
slovakia and one in Hungary. Kitty Schwarz had paid them for many years. Other clubs could follow suit.

**Rare seed source**

Two sources of rare primula seed should be known to the species specialists: G. Ghose & Co., Townend, Darjeeling, India, and P. Kohli & Son, Park Road, Srinagar, Kashmir, India. Ghose, whom I have ordered from, has access to wild species in the central Himalayas. Kohli works in the western Himalayas.

Thompson & Morgan, P.O. Box 24, Somerdale, N.J., offered double polyanthus seed at $2.30 a packet.

A picnic at Herb and Dorothy Dickson’s Chehalis Rare Plant Nursery was also a feast to the eyes. Many species in bloom. P. viali in excellent form. Herb said he used Truban for damp-off and stem rot. Uses it at seeding time and as a drench. It is made by Mallinckrodt, Inc., St. Louis, Mo., 63147. It may not be available to the amateur. You may have to beg some from your friendly nurseryman.

**Check your slides**

Anyone wanting to get in on the slide competition this September run by the National Auricula and Primula Society (southern section) should write Lawrence E. Wigley, 67 Warnham Ct. Rd., Carshalton Beeches, Surrey, England.

A beautifully illustrated, high-quality magazine has appeared on the horticultural scene. It is Pacific Horticulture. Address is Hall of Flowers, P.O. Box 22609, San Francisco, Calif., 94122. Editor George Waters includes breathtaking color photography. The magazine mentioned our seed exchange several issues ago.

**Fund-raising idea**

Schultz Co., makers of Schultz Instant Plant Food, offers a “club rate,” half price for club fund raising. I use this product on auriculas, especially at first growth time in late winter. Their address is Public Relations Dept. G.C., 11730 Northline St., St. Louis, Mo., 63043. Please tell the suppliers where you read it. We need more paying ads.

A growth chamber with controlled heat and light really looks good for basement gardening. It is made by Famco, Inc., 300 Lake Road, Medina, Ohio, 44256.

Came home with a plant of P. warshenewskiana from Bob Putnam’s. Seems to be a moisture lover like its close relatives, P. clarkii and P. rosea. Bob has many rare native alpines plus a nice section of primulas and a few exhibition-type auriculas. He can be found at 11811 NE 73rd, Kirkland, Wash. 98033.

**Marie loves Howard**

You should see Howard Larkin’s beds of the double Marie Crousse in full bloom. Howard divides plants until he has 5,000 before he sells. This is all he grows, and they get no special treatment except yearly dividing and resetting.

After trying Orthene on a few primulas with no ill effects, I now use it on all whenever an insect problem appears.

The Styrofoam boxes in which McDonald’s hamburgers-to-go are sold are just right for seed starting. The bottom is easily perforated for drainage. The self-locking top provides a moist atmosphere for germinating and for protection from the elements if the seeds are being “weathered.”

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