

# Growing Sobralias

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*Greenhouse and garden can be home to these spectacular orchids that are rapidly gaining popularity due to their showy flowers. Here, a California grower shares his secrets for flowering these New World orchids*

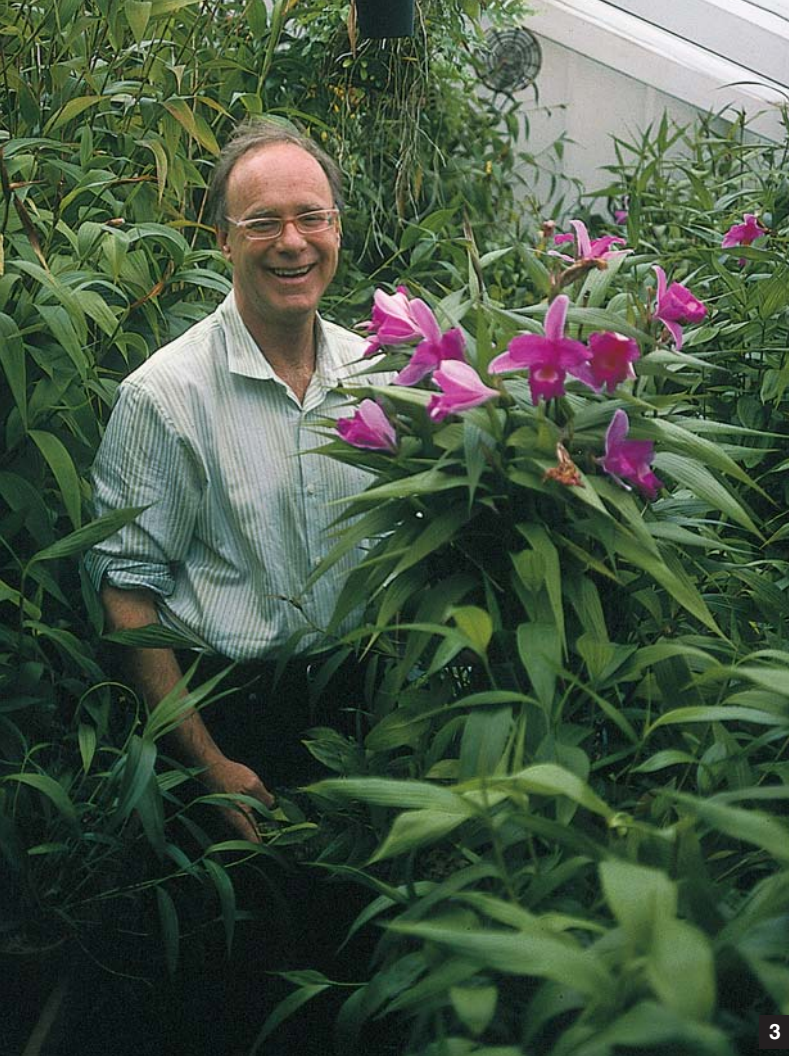
I WAS IN MY EARLY 20S AND LIVING in Berkeley, California. My Russian grandmother, to keep me off the streets (and being aware of my love of plants), arranged for me to work with her friends, the Amens. I began helping in their garden, which included a greenhouse (beautiful vintage at that time, Lord and Burnham, with a brick base) and a yard overflowing with plants and trees. I had been reading and started showing off by naming a few of her plants, at which point Mrs. Amen led me to a potted plant and asked if I knew what it was. The plant had stiff-leaved bamboolike foliage with amazing dense spikes of lovely smaller white flowers. I was totally baffled. I had never experienced a plant like that. I made a silly guess of a type of flowering bamboo. She turned to me, and in a tone of voice I knew she reserved for children, informed me I was not even close. She told me it was a *Sobralia multiflora* and it was pollinated by hummingbirds. Although my first *Sobralia* encounter (the plant has since been moved to *Elleanthus*, although I have never seen one since) undoubtedly left me scarred, it was a meaningful experience. Later in life, I was captivated by a little hand-drawn illustration in the lovely little Golden Guide nature book series, which showed a *Sobralia* plant dwarfing a man and illustrating the *Cattleya*-like flower. I have been chasing sobralias ever since.

Sobralias are breaking out of the greenhouse and into the gardens and patios of the world. I find them to be stunning and exciting plants with beautiful growth and unforgettable flowers. The foliage and growth of sobralias has to be among the most handsome of all orchids, and their wide range of climate adaptability makes them ideal as greenhouse, garden and patio plants. Astonishing new species are still being discovered frequently and new hybrids being developed.

I am fortunate with my sobralia business that between myself in San Francisco, and my partner, Terry Root,

- [1] *Sobralia* Mirabilis (*macrantha* × Veitchii). Field group. Grower: Bruce Rogers.
- [2] *Sobralia turkeliae* 'Janet', CBR/AOS. Field group. Grower: Bruce Rogers.
- [3] Bruce Rogers in his sobralia breeding house.
- [4] *Sobralia* sp.(Venezuela). Grower: H. Phillips.
- [5] *Sobralia measuresiana*. Ephemeral group. Grower: Marni Turkel.
- [6] *Sobralia* Mirabilis 'Pinky' (*macrantha* × Veitchii). Field group. Grower: Bruce Rogers.





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in Prunedale, California, we have seven distinct climate zones that we exploit fully. On the cold side, we have an outside cool-growing area that has experienced 24 F (-4 C) for five consecutive days, to greenhouses that never drop below 62 F (16 C) and reach 100 plus F (38 C).

My greenhouse that best suits the largest selection of species and hybrids is in San Francisco. I do not heat this house and the general temperature is from the low 50s to the high 90s F. In the winter, the temperature gets down to the 30s and 40s F. In the case of our severely cold winter last year, it was down to the low 30s. This greenhouse has a below-the-bench fogging system on a timer, plus manual main vents and automatic side vents. The plants are on raised benches, except for the tall plants, which sit on the gravel floor. The greenhouse has full sun exposure and is shaded with commercial whitewash. The most exposed side of the house has a graded shade from light to dark, and this is coupled with 60-percent shade cloth covering certain areas. There are five fans, two mounted in the eaves, two mounted at bench level providing air circulation at this level, and one mounted 3 feet (1 m) above the benches with air flow perpendicular to other fans. Three of these run constantly, and the other two are activated by temperature, allowing one to modify for the weather. The benches are steel mesh grids that allow for water drainage and air circulation. The bench legs are either wood on a raised concrete base, or concrete. All the bench legs are wrapped in copper tape to guard against snails.

*Sobralia* is a large and complicated genus. It is impossible to generalize, but try we must. To better describe the plants and their culture, they are best divided into two groups: the ephemeral sobralias and the field sobralias.

#### THE EPHEMERAL GROUP

These are species whose flowers last a day or less. The ephemeral group contains such jewels as the miniature *Sobralia callosa*, and species with heavenly fragrance, such as *Sobralia fimbriata*. Species such as *Sobralia klotziana* will carry 20 or more flowers per cane.

This group contains half of my favorite sobralias. I was teased by my friends for even working with this group of one-day wonders. Their only fault is that they are underappreciated.

The diversity of size and flower, combined with the beauty of the foliage, places them high on my list. With orchids such as *Sob. fimbriata* and related species, you get luxurious flowers eclipsed by one of the best scents in the orchid world. Species such as *Sob. klotzscheana*, besides having superb elegant foliage and a pleasing scent, also carry an astonishing 20 flowers per cane. Many new hybrids and primary crosses on the market take advantage of the plants' ability to grow outside in tropical areas such as Hawaii, Florida and Asia. *Sobralia callosa* is an outstanding miniature orchid. The dark leaves and jewellike flowers create a perfect plant.

The bulk of the species does best in an intermediate to warm climate with varying amounts of shade. Gardens in Hawaii, Florida and Southern California have proven ideal. In greenhouses, the bulk of the species do well in intermediate houses, with a low of 50 F (10 C).

Of course, there are exceptions. I have quite a few ephemeral species that thrive in my cool house (with a low of 35 F [1.5 C]). I think this has to do with where the plants originated. For example, the Colombian form of *Sobralia powellii* does well, while the Ecuadorian *Sob. powellii* does well only in my warm house.

**THE FIELD GROUP** These are sobralias whose flowers last from two to 10 days. The field group contains such popular species as *Sobralia macrantha*, *Sobralia xantholeuca* and *Sobralia caloglossa*. Primary hybrids, such as *Sobralia Mirabilis* (*macrantha* × *Veitchii*) and *Sobralia Veitchii* (*macrantha* × *xantholeuca*) and their cultivars, are included.

These sobralias generally can be grown outside all year long in Mediterranean climates such as California and similar climate zones. *Sobralia macrantha* was the species that charged its way into orchid history and folklore. When crossed with other species such as *Sobralia xantholeuca*, strong hybrids have resulted that grow beautifully on patios and decks, as well as in gardens. This is the group where you find the majority of field type species and hybrids. Species such as *Sob. macrantha*, *Sob. caloglossa* and *Sob. xantholeuca* do wonderfully here outside.

**SOBRALIA CARE** After locating the proper growing area, your primary goal when growing sobralias is to



- [7] *Sobralia powellii*. Ephemeral group.  
Grower: Bruce Rogers.
- [8] When repotting sobralias, take care not to disturb the rootball.
- [9] *Sobralia fimbriata*. Ephemeral group.  
Grower: Bruce Rogers.
- [10] *Sobralia gentryi*. Ephemeral group.  
Grower: Dan Newman.
- [11] *Sobralia macrantha* f. *alba*. Field group.  
Grower: Lil Severin.
- [12] *Sobralia macrantha* (Mexico).  
Field group. Grower: Bruce Rogers
- [13] *Sobralia klotzcheana*. Ephemeral group.  
Grower: Dan Newman.



establish and maintain a good root system. This is an orchid where it is all about the roots. To enjoy any success with the foliage or the flowers, you must first have a good root system. I have heard it said that a sobralias must be potbound to bloom and, to a point, this is true, as being potbound indicates a full rootball and, henceforth, success.

**HEAT AND CLIMATE** In indoor and greenhouse growing situations, if you have both a warm and cool greenhouse with a tall roof, you can grow virtually all sobralias.

One can generally say that the field types are cooler growing than the ephemeral types, but exceptions are the rule. I was pleasantly surprised this year to discover that both *Sobralia caloglossa* and *Sobralia cattleya*, expensive and rare species, survived five days of temperatures in the 20s F outside in Prunedale, California, without a scratch. These species are





usually regarded as intermediate growing plants.

**SOBRALIAS OUTSIDE** With greater involvement with sobralias, I am constantly shocked by how successfully they acclimate to different climates. In California, the same plants that will grow outside in northern California will also grow outside in the southern part of the state. The only difference is when the blooming season occurs. I have talked with sobralia growers from around the world who share the same high esteem for these adaptable plants. In warm tropical climates, such as Hawaii and Florida, more species and hybrids are being added to the success list.

**Light** Some sobralias can take full sun and some do better in a shadier location. Your goal should be a light level where it is shady enough for the leaves to retain a healthy color tone, but bright enough to keep the canes erect. These are adaptable plants when it comes to light. Although some species can take full sun and a great many tolerate morning and afternoon sun, I prefer to grow them in shadier conditions. Here in California I have

found that many of the field types, although they can grow in full sun, show stress and do not bloom or grow as well as when they are grown shaded. A good example I have is *Sob. mirabilis* 'Graduate', a beautiful large-flowered clone from Santa Barbara. I have divisions of the same plant growing outside in both bright light, where it receives direct morning sun and in shade, where it is covered by a 60-percent shade. The clone in full sun carries three to four flowers about 3 inches (7.5 cm) or more across, where the same clone grown in a shadier location provided by either shade cloth or natural canopy will be taller, greener and generally better looking, and carry four to five flowers that are always an inch or so larger.

**Water** The water quality in San Francisco is splendid. The water comes right from the Sierras and you see it in the growth of the plants. As with all plants, the cleaner and purer the water the better the plant growth. I have found that sobralias, however, are tolerant of low-quality water. I have seen them growing and blooming while

being watered with well water that smelled like death and actually felt oily. These are tough plants. The water just has to be wet.

**Greenhouse and Indoor Watering** Scheduled watering, of course, depends on your environment and variants such as the size of the pot, the season of year and similar factors. Certainly weekly watering is recommended. If the plants are grown in a media such as moss, where they should never dry out, they will need more attention.

It is almost impossible to overwater a sobralia, but the plants need to have perfect drainage. Do not be shy when watering or wetting down the plants. I always water the foliage as well and this will result in a much more manageable pest problem.

**Drainage** Perfect drainage is essential for good culture when grown outside in beds or in pots. I have never rotted out a sobralia that had good drainage. Rot generally occurs when the drainage has been blocked by the rootball.

**Air Circulation** Sobralias love air. The better the quality of air and air circulation, the healthier the plants. When grown in a greenhouse, it is of prime importance to provide ideal air circulation and one should not be shy about the fans. I would say that if a sobralia is being knocked down by a fan, you can back off a little and that should be just about right. Outside this is not a problem, as the leaves grow a little thicker.

**Nutrients** Sobralias do well with any organic fertilizer that contains trace elements. Any orchid mix will do, but try to stay organic. Let me stress the importance of trace elements: they seem to promote better growth overall. In my greenhouse, I apply fertilizer weekly at two thirds of the recommended strength. I try to fertilize in the late afternoon after watering the day before. I believe that it requires less fertilizer and wasted runoff is avoided.

When grown outside in beds, the plants seem to assimilate adequate nutrients naturally and require fertilizer twice a month. When grown in pots, fertilize weekly.

**PESTS AND PROBLEMS** I have found that if one is diligent with culture maintenance, pests pose little danger to well-grown healthy sobralias. The most commonly found pests in the greenhouse are mites, mealybugs, slugs and snails.

## Temperatures for Sobralias

### Cool Growers

*Sob. caloglossa*  
*Sob. leucoxantha*  
*Sob. macrantha*  
*Sob. mirabilis*  
*Sob. powellii* (Colombian form)  
*Sob. Veitchii*  
*Sob. xantholeuca*

### Warm Growers

*Sob. bicolor*  
*Sob. callosa*  
*Sob. elegans*  
*Sob. fimbriata*  
*Sob. fragrans*  
*Sob. powellii* (Ecuador form)  
*Sob. rosea*

**Mites** Increasing airflow and spraying with water three times a day for a few days usually wipes out even the most stubborn infestation without having to spray any chemicals. If the mite problem is stubborn, I will spray with rubbing alcohol. I also use integrated pest management. In my San Francisco greenhouse, I have a little colony of red predatory mites that I purchased 10 years ago while at a different location. Despite changing greenhouse locations, I still can see the predator mites on my oldest plants as well as their new neighbors. I certainly give them credit for the absence of spider mites.

**Mealybugs** I use a spray of either a 70 percent rubbing alcohol, which I will sometimes dilute with a little water when treating seedlings or flowering plants, along with a little organic dish soap, which does well as a spreader. There are also new organic sprays that use primarily oil of rosemary and other natural herbs, and, while ridiculously expensive either on a wholesale or retail level, really seem to do the job.

**Snails and Slugs** These can be a problem both inside and out. There must be something in the scent of sobralias that drives snails and slugs to travel, dropping ninja-style through open vents and doors just to consume the heavenly flowers. When grown outside, the manageability of pests is much simpler. Problems with mites disappear, mealybugs are eaten by predators, but snails and slugs remain.

Besides regular organic garden snail treatments during blooming season, I have been known to take a little garden copper tape and wrap it around the stems of the plant to block access to the flowers.

**Plant Rot** For the most part when I see plant rot, it has been caused by dividing the plant when in active growth. It also appears when drainage holes have been blocked. It should be taken care of immediately by removing the plant from its pot, trimming any rotting plant material down to the rhizome, and cutting off all canes that are discolored. Allow the plant to air dry for a while then spray the whole thing with rubbing alcohol, washing the plant off with water after a few minutes. Repot in a container of a size appropriate to the density of the remaining root system.

**WHEN TO REPOT SOBRALIAS** I am opinionated in my thoughts on repotting and dividing sobralias. I



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think no matter where you are in the world, you must repot and divide plants only when they are showing new stem growth and new roots simultaneously with new tips breaking around the cane. And even then you must take care not to disturb the rootball. Remember, with sobralias, it's all about the roots.

**Potting Mixes** I have found that sobralias do well in almost every type of medium, as long as the drainage is perfect and the mix echoes the culture the plant receives. For example, a plant grown in a high percentage of bark receives more water than a mix with a higher percentage of dirt, which would retain more water. In San Francisco, in general, I use a mix of fine redwood bark and large-grade perlite, occasionally adding fine charcoal pieces or shredded coconut fiber, lava rock, dirt or whatever

[14] *Sobralia crocea*. Ephemeral group.  
Grower: Marni Turkel.

[15] *Sobralia valida*. Ephemeral group.  
Grower: Dan Newman.

[16] *Sobralia caloglossa*. Field group.  
Grower: Dan Newman.



else is around. Plants and seedlings that I believe are important are planted in the finest-quality New Zealand sphagnum moss.

**How to Repot** If the plant has filled its pot, I try to remove the plant as carefully as possible. Sobralia roots attach themselves firmly to a clay pot, and if you wish to preserve the pot, take a sterilized thin sharp knife and insert it between the pot and the rootball and slowly cut around the pot, freeing the roots. Wash the rootball off, cleaning it but leaving it intact. If the rootball is healthy, repot the plant into a container that is at least twice the volume of the rootball.

**DIVIDING** Even dividing sobralias at the appropriate time can be a dangerous task both to the plant and to yourself. A sobralia grown in a 20-inch (50-cm) tub is twice as difficult to repot as your toughest overgrown cymbidium, primarily because you can't be so rough with the rhizomes and the roots.

After removing the plant from its pot (which in itself can be a Herculean task), examine the base of the plant thoroughly, noting where the new growths are and where the best dividing points are. Over time, with most species, the growing points will have formed their own plants and those are what you should focus on. When

sobralias become really overgrown and everything is tangling, then it becomes more of a free-for-all and you must ignore the canes and foliage and focus on the rhizomes and roots. A piece of rhizome with good roots will produce more growth than a cane with no roots.

I use a long thick screwdriver and, starting from the closest access point, gently insert the screwdriver at a 45-degree angle through the rootball, pulling and working the tool outward to separate the plant as gently as possible. Try not to rush during this process, and stop to examine your progress, changing your course as the direction of the roots changes. After opening up the rootball you can use your hands and bend the plant to find its weakest point. If the rhizome is too large or tough, cut with clean sterile shears, being careful to cut the rhizome and not the roots. The pieces of plant can then be potted as previously described.

**MOUNTING SOBRIALIAS** I have found cork or tree fern to be the best hosts for sobralias. Just as in repotting, I wait for new roots and growth, thoroughly water the plant, remove it from its medium and rinse and remove all debris. I then make a little nest out of wet sphagnum moss. I try to select a piece of cork that has an indentation or crevice that I can mold the nested plant into. You can cut a ledge into cork or tree fern easily with a serrated knife. I then tie the whole thing down with wire, being liberal with the wire so the moss stays compacted.

In conclusion, sobralias, once established, are among the toughest and most adaptable of all orchids. Good luck with growing these giants of the orchid world.

*Bruce Rogers began his professional career with orchids in the late 1970s when he was hired by the City of Atlanta Parks Department to work with its orchids in greenhouses in Piedmont Park. Returning to San Francisco after this endeavor, he was hired by the Rod McLellen Co. as the head grower for the boarding department and to hybridize vandas. In the early 1980s, he left to start Bruce Rogers Orchids, an orchid consulting and management company, and a few years later, Rogers-Fujikawa Orchids, and Rogers-Fishman Boarding, an orchid-boarding company. 225 Velasco Avenue, San Francisco, California 94134 (e-mail ozgardens@pacbell.net).*



- [17] *Sobralia doremaliae*. Ephemeral group. Very fragrant.  
Grower: Bruce Rogers.
- [18] *Sobralia xanthaleuca*. Field group.  
Grower: Dan Newman.
- [19] *Sobralia* sp., possibly *Sobralia decora*. Ephemeral group.  
Grower: Jay Moxley.

- [20] *Sobralia* sp. Grower: Dan Newman.
- [21] *Sobralia elegans*. Ephemeral group.  
Grower: Bruce Rogers.
- [22] *Sobralia* (Veitchii × *mirabilis*).  
Field group. Grower: Bruce Rogers.
- [23] *Sobralia virginialis*. Ephemeral group.  
Grower: Bruce Rogers.