



THE BULB GARDEN

What's Inside:

Potting Soils for Growing Flower Bulbs
Zantedeschia Odorata
Notes from a Newcomer
Cooperation between the Pacific Bulb Society PBS and Mediterranean Gardening France MGF
A Message from the President

KEEPING A BULB COLLECTION

This is the first in a planned series in which growers of large and varied collections of geophytes maintain and curate them.



THE MEDITERRANEAN HOUSE

Jane McGary

When I began to grow a large variety of bulbs (including corms, tubers, and rhizomes in that term), I kept them in five ranges of purpose-built cold frames in a field. Years of opening, closing, protecting, and repairing the frames convinced me to make a different place for them when I moved from the country to a suburb. I was inspired by a bulb house in the Goteborg (Gothenburg) Botanical Garden, consisting of a solid roof and open sides.

All my geophytes can tolerate a few degrees below freezing, so they rarely need extra protection in the climate of Portland, Oregon, where winter temperatures seldom drop below 20° F (-6° C). Growing plants as "hard" as they readily tolerate keeps them in character, unlike the conditions of a heated greenhouse where overly rapid growth can become etiolated ("stretched"). During the cold snaps that occur here every few winters, I lay a type of thick, nonwoven row cover directly over the plants, securing it with groundcloth staples.

The 40-by-20-foot bulb house is situated in full sun on very slightly sloping ground. It consists of a commercial gable-style steel greenhouse framework, roofed with clear, double-panel polycarbonate sheets and sided with hardware cloth, a metal product with a fairly small mesh. I had to have all the structural metal painted, because the county office that grants the permits insisted that any outbuilding of more than 500 square feet must be "constructed of the same materials as the dwelling." Since a brick greenhouse was not acceptable to me, I convinced them to let me paint it the same color as the house. This building is over-engineered, and was expensive, but I'll never be out there trying to put it back together in a howling rainstorm.

Along each long side of the house are raised beds 8 feet in width, raised to the height of two cinder blocks

(concrete building blocks, total height of the walls about 18 inches). I lined the beds with commercial woven groundcloth to exclude moles and other burrowing animals. After raising the level with a few inches of waste soil from the garden landscaping, I filled them to near the top with coarse sand. (It's important to use coarse, sharp sand where soil drainage is necessary; the fine, silty sand mined on seashores and low on rivers is not suitable.)

When I moved to the new house, I brought along dormant bulbs and decided to plant them directly in the sandy medium, envisioning a garden-like scene. This was a mistake. Some of the species increased too rapidly and outcompeted others; labels got lost. After three or four years, I realized I had to curate the collection more intensively to avoid losing, or losing track of, special treasures. I had brought along the terracotta and plastic mesh pots used to plunge the plants in the old cold frames (which were also filled with sand), so I began to lift, separate, and identify the plants, and gradually moved most of the collection into plunged pots. (Plunging pots in sand or some similar medium almost to the rim moderates soil temperature far better than leaving the pots exposed to ambient air temperature, and using clay or mesh pots allows moisture transfer to and from the plunge material.)

Today one side of the bulb house contains plunged clay pots with small to medium-sized species, with a narrow path down the middle to allow maintenance. The other side has three or four rows of pots along the central, gravel-paved walkway, and the rest of the bed houses large, tall species such as *Iris*, *Calochortus*, *Brodiaea*, and the larger *Fritillaria* and *Colchicum* species, directly planted in the sand, which I've amended with organic material for fertility.

The 4-foot-wide, graveled central path can accommodate a wheelbarrow, a potting table, or groups of visitors.

All the species in this Mediterranean house are dormant in summer (summer-growing hardy species are in the open garden). I sprinkle the surface very lightly a few times over our warm, dry summer months to maintain humidity but not trigger premature root growth, or worse yet, rot. As with bulbs in nature, the plunged pots and the deep substrate keep the dormant bulbs from getting too hot and dry. (The assertion that bulbs have to “bake” during summer in order to flower does not reflect the actual conditions under which most bulbs have evolved.) The first deep irrigation happens in early October, about when the rainy season starts here; some colchicums will have flowered already then, but this doesn't harm them. Once root growth has started, I give one feeding with soluble, low-nitrogen fertilizer in fall; two more feedings occur in late winter and spring. Lately I've started applying a slow-release fertilizer made for use in cool conditions to the directly planted area.

My current schedule calls for repotting one-third of the potted plants each summer. I used to do one-half each summer, but mixing the soil is a big job for old bones. The potting soil consists of coarse sand, organic-heavy topsoil, and ground pumice. (Apologies to readers who don't live around volcanoes and can't buy pumice by the cubic yard.) It's fascinating to see how the underground structures of different plants develop, and how they can be propagated vegetatively.

More than 800 species of geophytes now grow in the bulb house. I grew more than 90 percent of them from seed, preferring wild-collected seed, in the hope of having multiple clones for variation and reproduction. Some fail, some flourish enough to send the repotting surplus to our BX. Peak flowering occurs in February through April, with *Calochortus* following in May and into June. The beds are bare in July and August (repotting starts in late July), and the first *Colchicums* and fall *Crocuses* appear in mid-September.

Other than repotting, irrigation, and fertilizing, maintenance is mostly weeding; the wire mesh lets in plenty of wind-blown seeds, which in this area germinate in fall and winter. Insects have not been much of a problem. One year there were whiteflies, eliminated by putting up yellow sticky cards. Cutworms are the worst pest, but years of visiting the bulb house after 10 pm with a headlamp and picking them off their preferred prey seems to have conquered them. For a few years I saw narcissus fly occasionally, but they haven't

appeared recently; I suspect they prey mostly on the cheap *Daffodils* in the open garden, but there can't be many around, since the snowdrops aren't suffering. Few pollinators get into the bulb house – bees could crawl through the mesh, but don't even try – so I have to hand-pollinate the real treasures. Birds, usually juncos, apparently walk in under the door and can't figure out how to get back out, and I have to keep the door closed to bar the neighbor's free-ranging cats, which can make any dry, loose soil into a disgusting situation. A squirrel got in just once, and unfortunately triggered some adult language in front of a visiting stranger.

Limiting my collection to frost-tolerant species means that I can't branch out into the fascinating flora of South Africa, as so many PBS members do. Nevertheless, the Mediterranean, Central Asia, western North America and western South America offer a vast selection to explore. Gardening in this way is a constant journey of delights and losses, but there is always more to teach and delight the gardener. ♡



POTTING SOILS FOR GROWING FLOWER BULBS: Balancing Drainage, Fertility, and Salinity in Modern Media Mark Akimoff

Container culture has become an essential method for maintaining diverse bulb collections, especially for growers working with species from varied regions such as the western United States, South Africa, the Central Asian steppe, or the Mediterranean. At my Salem, Oregon, based nursery, Illahe Rare Plants, the underlying soils are stiff clays that often bake dry in the summer; while very fertile, they lack the drainage necessary to grow a diverse selection of bulbs. Choosing the right potting medium is one of the most important decisions a grower makes, and, like many PBS members, I've spent years refining mixes that balance drainage, aeration, fertility, and biological stability. I learned to incorporate leafmold from my bulb-growing mentor Jane McGary. This dark, crumbly, biologically active, and nutrient-rich material she sourced from an alder woodland on her former property. My nursery location doesn't have such a great source, and for years I have searched for a suitable replacement for leafmold. Recently my experiments have included greater use of cow biodigestate as an organic nutrient source—an amendment rich in slow-release fertility, but also one that presents unique challenges with salt accumulation. This article summarizes the components I rely on, the salinity issues I've encountered, and how humic and fulvic acids have helped mitigate those problems and made what I believe is a suitable replacement for leafmold in bulb-potting mixes.

Core Components of the Mix

Over time I have settled on a simple, mineral-forward, biologically active potting mix that has performed consistently across many genera of bulbs. The proportions are straightforward:

Recommended General Mix

- 1 part pumice
- 1 part cow biodigestate
- ½ part sandy loam topsoil
- ½ part coarse sand

Additive package: Biochar (very small quantity per volume), and Azomite (a hydrated volcanic ash that contains dozens of trace elements such as iron, manganese, zinc, copper, boron, and molybdenum). These additives provide buffering and slow-release trace minerals.

This general mix provides both the structure and fertility bulbs require in containers, while maintaining rapid drainage and minimizing compaction over long growing periods and sometimes multiple years between repotting. As soil science has advanced and

clarified the complex interactions among bacteria, fungi, and plant roots, the importance of each in potting mixes has become increasingly evident.

As I own a nursery business, I source my materials by the cubic yard from bulk suppliers in the Willamette Valley of Oregon. Highway Fuel, Terra Gardens, and Pro-Gro are several such sources. For amendments such as biochar, humic and fulvic acids and azomite, Concentrates Inc. in the Portland area offers an excellent selection. Growers needing smaller amounts than a cubic yard may find many of these materials by the bag at a local garden center or even online. Composted cow manure is often a more common soil amendment available in areas that do not harvest the biogas from the dairy waste and instead compost it aerobically. While this material often contains less salts than biodigestate, I would recommend testing it and potentially treating with humic and fulvic acids to mitigate any salts present

Why These Components Work Together

Ground pumice forms the backbone of the mix, creating long-term porosity and ensuring that bulbs—especially Mediterranean and South African species—receive constant oxygenation at the root zone. The grade ranging from about 1/8 to 1/4 inch blends well with the other ingredients without creating too much stratification. Pumice keeps its aeration properties intact through many years of growing cycles, unlike some softer rock-based materials that degrade over time, such as perlite.

Coarse sand adds weight, stability, and additional drainage capacity. Angular crushed sand is preferable to rounded river sand because it holds its structure better and improves root anchoring. It can be tough to find the right grade of sand; many bulk suppliers here in Oregon offering river sand, which is far too fine to be suitable for bulb soils. I look for sand that has relatively large fine particles and also a percentage of what most would call small gravel and rock.

Sandy loam topsoil contributes real mineral fines, clay colloids, and microbial diversity—features that purely inert media can't offer. Even in small amounts, topsoil increases cation exchange capacity and moderates nutrient swings. This is one soil component that for me is often hard to keep consistent. Many bulk suppliers source this material from developments such as new subdivisions, and depending on the source material and area it comes from, it can vary widely from year to year.

Cow biodigestate is a byproduct of the many dairy farms along the coast here in western Oregon. Biodigestate is produced by placing cattle manure

into an anaerobic digester, where microbes break it down without oxygen to generate biogas, leaving behind a nutrient-rich organic residue. This adds slow-release fertility and organic matter, improving the mix's biological activity without making it heavy or prone to collapsing like traditional compost. Its crumb structure integrates easily with mineral materials, creating a stable matrix for active roots. I have found biodigestate to be a close substitute for leafmold in its nutrient profile, and especially in its ability to hold some moisture through the dormant season without becoming hydrophobic as peat does. I also inoculate my pots with mycorrhizae, which act to make macro and micro nutrients further available to the bulbs I grow.

Additives such as Biochar and Azomite add micronutrients while helping to keep important nutrients from leaching out, allowing beneficial bacteria and mycorrhizae to better utilize the nutrients and share them for bulb growth and development

The Challenge: Salt Accumulation from Biodigestate

While biodigestate brings valuable fertility, it also introduces soluble salts that can accumulate in the closed environment of containers. The high electrical conductivity (EC) is linked to the digester process itself, where nutrients remain in a soluble form. Cow biodigestate has high EC because the anaerobic digestion process breaks down organic matter into soluble mineral ions—especially ammonium, potassium, sodium, and various soluble salts—which remain concentrated in the liquid and solid residue rather than being leached away as they would be in soil or outdoor composting.

How Salts Present in Containers

Symptoms of salinity stress I have observed include:

- White crust forming on the soil surface
- Leaf tip burn, especially in salt-sensitive winter growers
- Reduced root vigor
- Stunted growth or smaller than normal flowering
- Poor performance the following season, or smaller than normal bulbs

Some bulbs, such as *Ferraria*, *Moraea*, *Freesia*, and many Cape species, show these signs quickly. Others tolerate it for a time but decline with repeated growth cycles. Because I wanted to keep biodigestate in the mix for its excellent nutrient profile, I needed a reliable way to moderate the salt load.

Mitigating Salinity with Humic and Fulvic Acids

My approach ultimately centered on humic and fulvic acids, naturally occurring components of decomposed organic matter that improve soil chemistry by binding excess salts and moderating ion activity in potting soils. Humic and fulvic acids are derived from

the long-term decomposition of plant and microbial matter, typically collected from materials such as lignite (brown coal), leonardite, peat, compost, or well-decomposed organic soils, where natural biochemical processes break complex organic molecules into these smaller, highly active carbon fractions. Humic acids and fulvic acids work in several beneficial ways:

- Ion binding: They chelate sodium, potassium, and other soluble ions, reducing their osmotic stress on roots.
- Increased cation exchange: They give the mix greater buffering capacity, stabilizing nutrients in a non-saline form.
- Improved soil structure: They help bind fine particles without clogging pores, supporting the integrity of the pumice-sand matrix.
- Enhanced nutrient uptake: Fulvic acids, being more mobile, improve micronutrient availability even when salts are present.

Application Techniques That Worked Well

1. Pre-leaching biodigestate: watering the soil the soil mix until leaching takes place, or alternatively allowing the mix to sit through the rainy season uncovered. This single step significantly lowers EC, but it also leaches out some of the valuable nutrients for bulb growth. Storing potting soil exposed to the weather also leaves it exposed to weed seeds, which can be problematic in the long term.

2. Using humic/fulvic acid drenches: light applications every 2 to 3 weeks during active growth noticeably reduced visible salt impacts, particularly on sensitive species. Also, pretreating the soil mix in bulk form prior to repotting bulbs was shown in soil testing to significantly reduce the sodium content.

3. Adding granular humic acid to the mix: incorporating 1–2% by volume at mixing helps the media buffer salts from day one.

Humic substances didn't erase the inherent salinity of biodigestate, but they moderated it enough to make the mix perform consistently well. I have found that the bulbs seem much happier with this mix, and I can keep the fertility within acceptable ranges for longer periods of time due to the chelating nature of the humic and fulvic acids.

Figures 1 and 2 display the results of two soil test results taken about three weeks apart, before and after the treatments with humic and fulvic acid.

Conclusion

Working with a potting medium that supports both drainage and fertility is crucial for successful container cultivation of bulbs. The combination of pumice, biodigestate, sandy loam, and coarse sand has proven to be a dependable, adaptable mix for a

wide range of species. While biodigestate introduces challenges through soluble salts, humic and fulvic acids, applied both in the mix and as periodic drenches, have allowed me to harness its benefits while keeping salinity at manageable levels.

I hope these observations encourage other PBS members to experiment with sustainable amendments and to share their own experiences. Bulb growers benefit enormously from the collective knowledge of the community, and the more we explore new materials and methods, the stronger our understanding becomes.

References

As a voracious consumer of literature pertaining to growing bulbs, plants in containers, and especially plant nutrition, I have used many resources through the years in developing the bulb growing mix in this article, including online research, conversations with local soil scientists, and bulk suppliers' knowledge as well as scientific articles. Below are a few sources.

Thank you to Julia Finley, Soil and Environmental Specialist for Highway Fuel, Salem Oregon for providing not only custom soil blending and information, and also humic and fulvic acids for salinity treatments.

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Do, T. C. V. & Scherer, H. W. (2012). Compost and biogas residues as basic materials for potting substrates. *Plant, Soil and Environment* 58(10), 459–464. DOI: 10.17221/445/2012-PSE.

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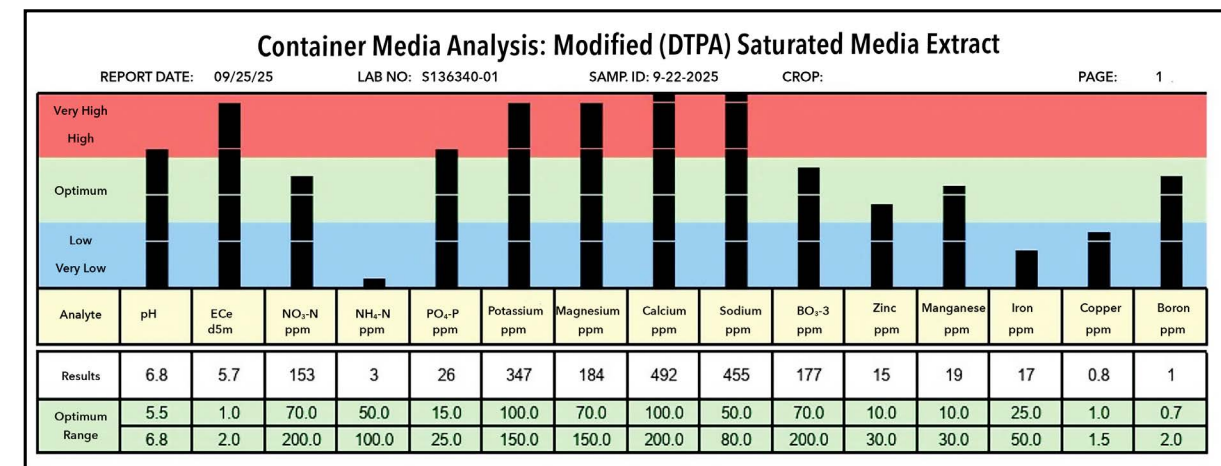
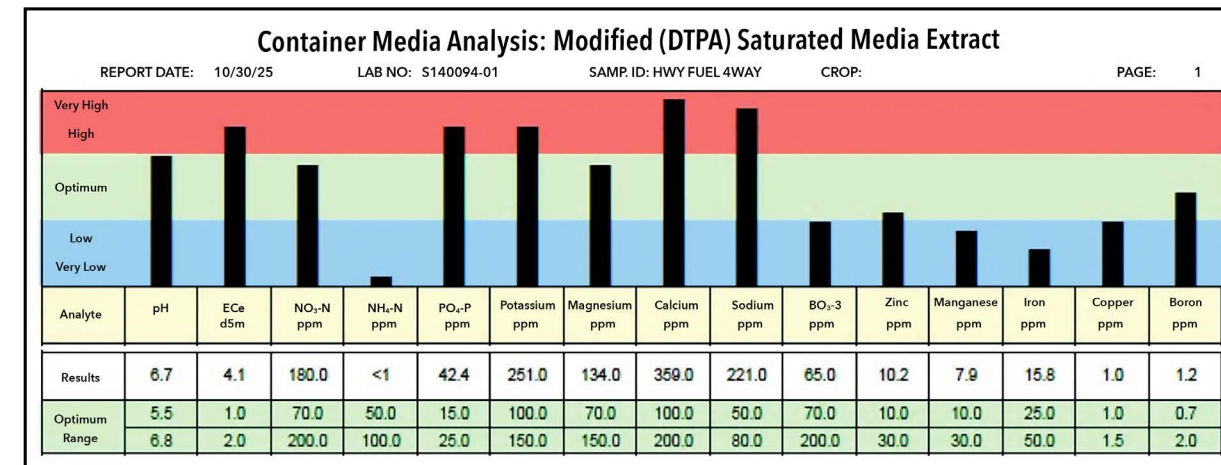
Raviv, M., Lieth, J. H., & Bar-Tal, A. (2019). *Soilless culture: Theory and practice*. 2nd ed. Elsevier.

There are too many good books to list that cover soils, especially as related to certain genera, but here a few that I have found useful:

Hanks, G. R. (ed.). (2002). *The genus Tulipa*. Taylor & Francis.

Goldblatt, P., & Manning, J. C. (2000). *Cape plants: A conspectus of the Cape flora of South Africa*. National Botanical Institute of South Africa.

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ZANTEDESCHIA ODORATA Johannes (Uli) Ulrich

Zantedeschia odorata has been described relatively recently at the end of the 1980s and is not widely known and rare in cultivation. Having a high ornamental value it should be more widely grown. It is an easy to grow plant for a waterwise garden in a Mediterranean type climate.

Let's look at this little gem in more detail:

It naturally grows in the dolerite outcrops of the Bokkeveld Plateau in the Nieuwoudtville area in South Africa, about 350km north of Cape Town in the Western Cape.

As the name implies, this is a flat plateau at about 1000m elevation. This is a very unique habitat. The outcrops form a low ridge across the flat plateau and are composed of gigantic boulders. Some are piled up, forming bizarre formations, others are scattered on the ground. The underlying soil is very fertile heavy reddish clay. This area is extremely rich in geophytes and is world famous for its dazzling spring flower displays hence Nieuwoudtville proudly calls itself "Bulb Capital of the World"



thrive and can literally stand in water during growth.

Not so *Zantedeschia odorata*. During the winter rains the soil is moist but not wet, there are no puddles, but the heavy clay should be water retentive. On top of that the rhizomes root in the shade of deep cracks where they are protected from extreme temperature fluctuations. As this habitat is part of a winter rain climate with warm dry summers, the *Zantedeschia odorata* goes completely dormant during the summer and will wake up again with the first autumn rains.

And here grows *Zantedeschia odorata*. During a trip in August/September 2025 I could see the species in flower in its type habitat. It exclusively grows in deep fissures or in between the boulders but never in the open field. Being literally wedged in between rocks may save it from predation by porcupines who are voracious bulb eaters. At first glance their digging and feeding on bulbs might sound devastating; however they have their place in the ecology of the bulbs and play an important role in stabilizing their dense population. In gardens porcupines are less welcome guests. South African friends told us that they particularly like dense stands of *Zantedeschia aethiopica* which they can entirely devour in a single night.

The specialized habitat in between the boulders is very different from the one of *Zantedeschia aethiopica* which prefers open wet, at least damp conditions to

How to grow *Zantedeschia odorata*?

From my own experience I can say that it is a very easy plant to grow. I was lucky to get two batches of seed, one through the EU seed exchanges in 2021. And the other came from the SABG in 2022. Thank you to both donors. Both germinated near 100% with an autumn sowing. The first batch had its first flowers last spring, the second batch has not flowered so far. At the end of last year's growing season I noticed that the thickening rhizomes of the older plants had split their large plastic pot. So they had to be repotted or planted out into the garden. As I have a considerable rodent problem, I decided to keep a small clump of rhizomes potted and planted the rest into a South African border with no irrigation. Beginning of February the first flowers opened and they do correspond with the description, although



the plants in the wild were much bigger. This might have to do with the fact that mine are young and not yet established.

On mild days there is a pleasant but not very strong *Freesia*-like scent. The soil is moist but not wet and well drained on a light slope. During their potted development regular low nitrogen, high potash and high phosphorous fertilizer was applied, but not in the open garden because there are *Proteas* nearby which do not tolerate phosphates.

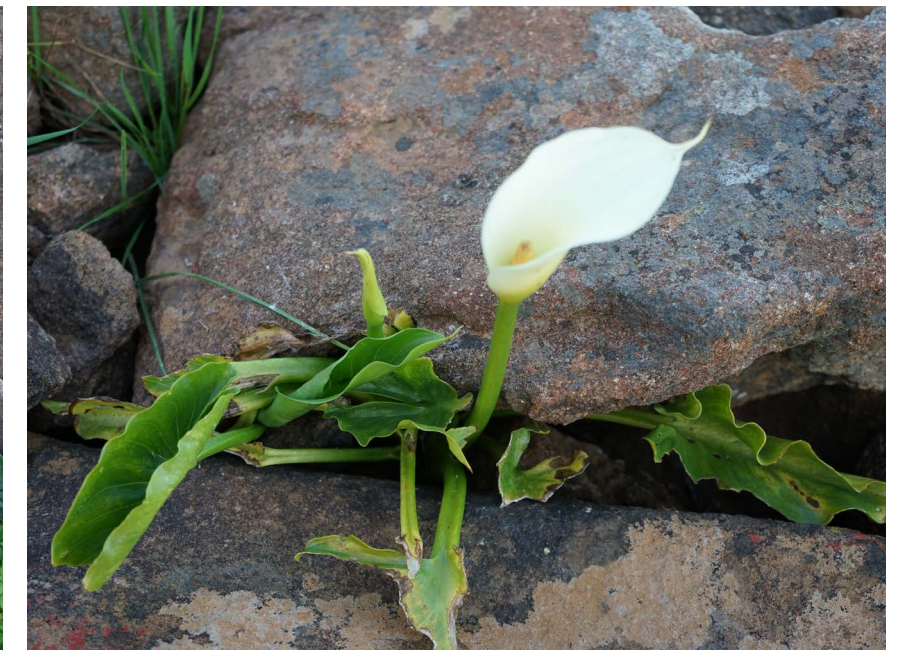
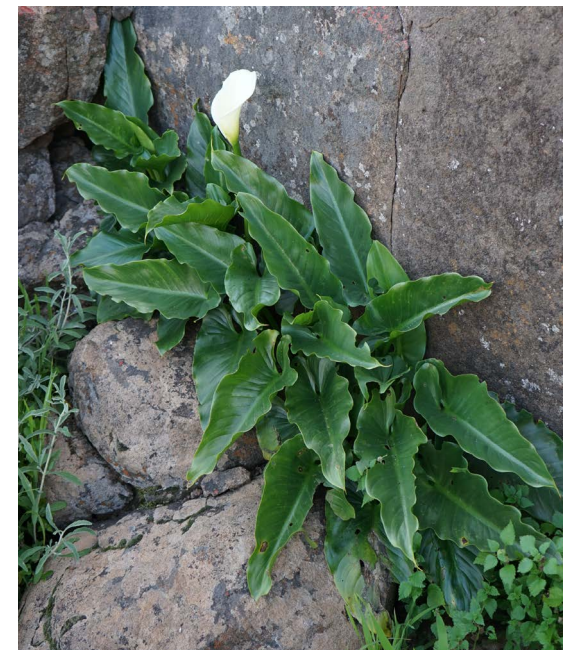
The fragrant *Zantedeschia* grows very well in pots and would be a charming subject for a frost free but cold conservatory with the added bonus of its scent.

Left: A cut flower and leaf of regular *Zantedeschia aethiopica* (in my hand) next to the three *Zantedeschia odorata* for comparison.

The Spathe of *Zantedeschia aethiopica* is bright white whereas *Zantedeschia odorata* is slightly off-white but still appears white.

A distinguishing feature is the much shorter spadix in *Zantedeschia odorata*. The overall size of the fragrant species is much smaller and shorter than *Zantedeschia aethiopica*.

Below and on next page: Pictures of the flowering plants in the open garden from February 2026.





Pictures of the flowering plants in their natural habitat and a huge split boulder.

Below: Picture shows the ripening fruit typically bending down. This is a typical feature of *Zantedeschia odorata*. *Zantedeschia aethiopica* has upright fruits. ♡



NOTES FROM A NEWCOMER *Christine Doud*

From *Allium* to *Zephyranthes*, I'm enjoying my newbie experience with bulbs, and I'm filling up every pot, planter, and rock crevice with my new acquisitions. Being new is a lot of fun, but also a lot of work if I want to do it right.

My bulb journey began in northern California, where there are four seasons, and temperatures anywhere between 25° and 116° Fahrenheit. I discovered irises in 2015, and jumped in with my usual enthusiasm. Bearded irises thrive in our area when given just a little water and fertilizer. I investigated and read and learned the lingo, and bought hundreds of registered varieties to use in hybridizing.

Fast forward to 2020, when I moved to California's Central Coast, the region between San Francisco and Santa Barbara. Yes, I brought several hundred plants with me. Then I discovered the world of bulbs, in dizzying colors and families. I would later learn their requirements, especially after I stumbled upon the PBS wiki with its boundless information on an equally boundless array of subtropical bulbous plants that I could now grow. As is my custom, I jumped in and bought anything I thought was attractive, intent on filling my yard with color and shape and interest: shrubs, trees, perennials, succulents, and bulbs. My yard quickly went from bare sand to a mishmash of anything with the label "subtropical." I hardly need to say that it became a landscaping nightmare in a short time. *Eucomis* and *Freesia* were tucked under a gangly Australian hibiscus; a dwarf Haas avocado drooped its rubbery branches over short strawflowers fighting two aggressive groundcovers species for climbing rights on the avocado. Nothing helps one learn faster than making many mistakes and having to dig up, find a more suitable location, and replant dozens of plants. And with bulbs, one quickly learns that there are seasons to move them, and seasons where one can't find the dormant bulb because it has two kinds of roots -- and the "contractile" kind newbie me didn't know about, which can pull a bulb down several feet.

I like to know what I need to know generally about plants, and also specifically about species and families. Thankfully, my brother, another plant lover, took pity on me and gave me a book written by a man who was living in Santa Barbara, just an hour south from me, with a slight difference in temperatures. *Cape Bulbs* by Richard L. Doud is full of information about a large

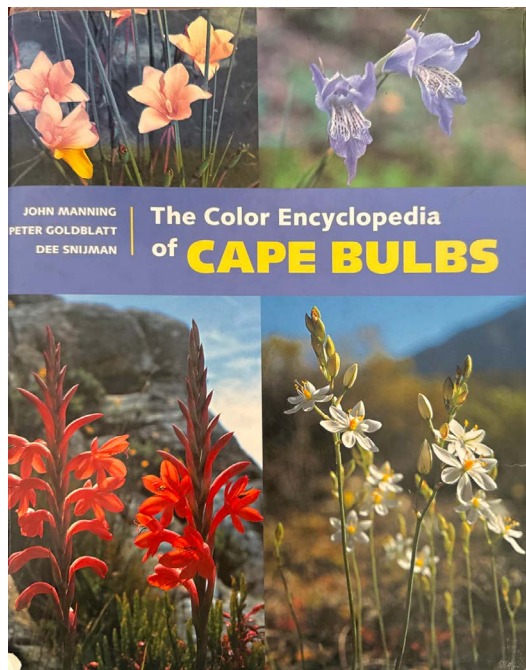
number of bulbs he grew just an hour south of my new coastal home. What a great book for someone with limited knowledge and experience! It became my bulb bible the moment I opened it, and its pristine pages began to take shape as I looked up quick references to care tips for certain bulbs, with dog-eared corners, yellow highlighting, and black ink underlining.

For someone new to bulbs, this book provided just enough information to figure out that I could have all of these wonderful flowers blooming in my yard. And so I got bulbs and seeds galore, and prepared the growing areas according to this and other books. Many things grew very well, but I discovered that there were lots of variables to growing bulbs. By that time I was a member of PBS, and was scouring the information and forum pages for the tricks of the trade.

It seemed that deer and gophers were mentioned frequently. I had neither, but I did have a scrub jay who daily dug up my bulb beds and buried the dozens of the peanuts my neighbors put out for him, and brown towhees, who like to pull up freshly planted bulbs. One of the two -- probably the jay -- regularly took the liberty of moving my bulbs from one well labeled site to some random spot.

Trying to decipher which *Babiana* was tucked into my *Tritonia* pot necessitated more books. I needed books that showed what the bulbs for different species looked like so I could try to match the disturbed bulbs to their tags, and books that showed what bulbs of a family bloomed earlier or later, since their bulbs often look the same. Then I needed books that described what bulbs were summer- or winter-dormant, or even evergreen, and the conditions for each, and what tolerates some water as opposed to none.

So my library quickly grew. I still can't find everything I need to know to keep my plants happy, and keep the birds out, and meet the right requirements for blooming, growth, and dormancy.



Well, it's an adventure. So to those who know it all by now, and those who have treasured bulb bibles that fill in the blanks, I'd love to know what other books out there could help me out.

After living in northern California for thirty years, moving to coastal central California was like moving to heaven. With an average temp of 70° year-round, the door opened to subtropical plants, and eventually I discovered bulbs and the PBS. I'm sure everyone knows what happens when there are seed and bulb exchanges: we indulge. In my case, overindulge. But what the heck. I'm retired and I love gardening. I was worried I'd be bored in retirement. Far from it. One side effect of that kind of overindulgence is soon becoming aware of what a gardener doesn't know yet. ♡

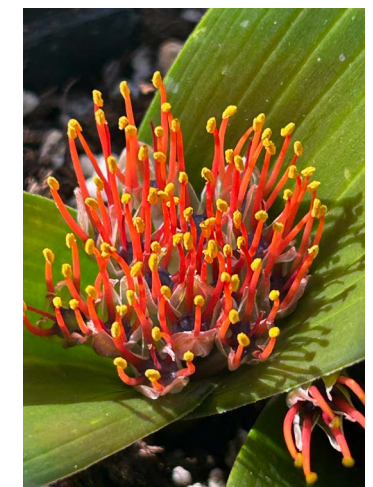
Photos below: © Arnold Trachtenberg



Crocus sativa



Crocus cartwrightianus



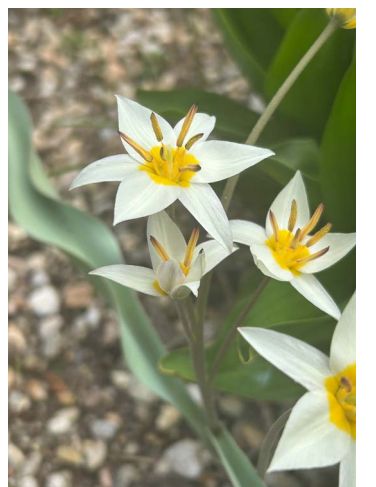
Daubenya zeyheri



Ferraria densepunctulata



Ferraria ferrariola



Tulipa bifloriformis

New Cooperation between the Pacific Bulb Society PBS and Mediterranean Gardening France MGF *Johannes (Uli) Ulrich*

A new cooperation between the two societies is in the starting blocks. We are very grateful to Chantal Guiraud, the manager of the MGF seed fund in France who came across with this idea and Jan Willem Vos, the owner of the Botanical Garden at Château Pérouse who is generously supporting the initiative.

Here are the advantages for PBS members:

All activities of MGF, like garden visits, workshops and presentations are open to all paid PBS members provided that there is space left after all MGF members have been accommodated for the respective event. Please check the bilingual website for infos <https://mediterraneangardening.fr>

The MGF seed fund will be open to orders from PBS members living in the EU

The seed fund of Château Pérouse will be open to orders from PBS members in the EU and the USA.

Unfortunately PBS members living in the UK cannot order seed from either entity.

In return, the MGF will receive the surplus seed from the PBS EU seed exchange

Please be aware that this is an announcement, ordering has not yet been opened as some details need clarifying. The PBS board will keep the membership updated in more detail.

This is an experiment which will be monitored for one year after the start. If it proves successful it will continue, if not it will be ceased. ♡



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**A treatise based on twelve years of research
and field studies**

from

Pacific Bulb Society, Inc.
a 501(c)3 corporation

**The Genus *Hippeastrum*
(Amaryllidaceae)
in Bolivia**



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A Message from the President

The Pacific Bulb Society is unique among non-profit organizations.

We do not hold monthly meetings or annual conferences; however, we pursue our mission to educate, promote and share knowledge of geophytes and their cultivation through our website, which is open to all, free of charge.

The PBS maintains a massive online geophyte encyclopedia with an absolute wealth of images and information.

Paid members have the additional benefit of participating in bulb and seed exchanges at a reasonable cost, a great way of acquiring and sharing rare and otherwise hard to find species.

It was through the PBS that I started on my journey of cultivating southern hemisphere and Mediterranean geophytes. Along the way, I have made so many PBS friends!

In my Niagara garden, bulbs are grown in deep gravelly soil in full sun. Our winters can be very cold and summers very hot and lately quite unpredictable. I protect beds of tender plants from the winter weather - but eventually excess bulbs are moved to unprotected beds to test hardiness.

We are so fortunate to have a great group of devoted volunteers running our organization and offering help and advice through our website. I am proud to be part of this team.

Respectfully,

Your new president, Laura Grant

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The Bulb Garden is the newsletter of the Pacific Bulb Society (PBS). It is published, if enough articles are submitted, around the third week of each quarter and is available to PBS members. This newsletter provides gardening or bulb related articles, news of interest to members, and announcements of the PBS organization.

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