

# the Bulb Garden

VOL. I NO. 1

NEWSLETTER OF THE PACIFIC BULB SOCIETY

SPRING 2002

## News from the Bulb Garden

### Member Benefits

The projected benefits for members of "The Pacific Bulb Society" are: quarterly newsletter, annual color publication, website, Bulb Exchange (BX), Seed Exchange (SX), an email robin, and local meetings. These benefits will become available as members volunteer to set up the mechanics for them and monitor their progress.

### Initial Formation

The first board meeting held was held online in April. The first member meeting will be on April 26 in San Clemente, Ca. PBS will meet to visit gardens both public and private, exchange information about bulbs which grow in our gardens, cold-frames and greenhouses and their companion plants.

### Treasurer's Report:

For the quarter ending April 1, 2002, our treasury started with a balance of \$0.00

### Interim Officers:

President: Cathy Craig  
batlette@cox.net  
Vice President: Marguerite English  
meenglis@cts.com  
Treasurer: Lee Poulsen  
wlp@ampersand.jpl.nasa.gov  
List-Serve Manager: Open  
Membership: Open  
Advertising: Open  
BX/SX director: Open

### Editors:

Newsletter: Marguerite English  
Layout/graphics: Ken Kehl  
ellipsis@concentric.net  
Magazine: Cathy Craig

### Contact:

Web Page: <http://www.pacificbulbsociety.org>  
Email: [info@pacificbulbsociety.org](mailto:info@pacificbulbsociety.org)

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### Calendar

FRIDAY, APRIL 26, 2002

PBS Dinner/meeting at Cathy Craig's. Special guests: Bill Dijk from NZ, Mary Sue Ittner and her husband from Northern California, and Paul Chapman from the UK. Mary Sue will present a slide program on the Winter Blooming Bulbs of the Cape of South Africa. Contact Cathy for details.

SATURDAY, JULY 13, 2002 - 10:00 A.M.

Jim Duggan Flower Nursery  
1452 Santa Fe Drive  
Encinitas, CA 92024

Jim will give a tour of his mail order bulb operation along with a short presentation on his annual growing cycle. Contact Marguerite or Cathy for details.

SATURDAY, AUGUST 10, 2002 - 10:00 A.M.

Jane McGary will host the fall meeting of the Pacific Bulb Society in Portland, Oregon.

Contact Jane McGary for details.

Phone: 503-630-3399

Email: [janemcgary@earthlink.net](mailto:janemcgary@earthlink.net)

## The Useful Bulb Frame

by Jane McGary

*Jane McGary is the editor of "Bulbs of North America" recently published by Timber Press. She gardens at 1600 feet elevation in the foothills of the Cascade Mountains, southeast of Portland, Oregon. Her land experiences about 45 inches of rain per year between October and June and winter minima ranging from 0° to 20° F. Minimum temperatures may occur anytime from early December to late March; during cold snaps, snow cover may or may not be present. Jane distributes her excess bulbs via a fall sales list.—Ed.*

I began to collect bulbs in a focused way around 1990 when I learned that it was not difficult to grow many unusual species from seed. Soon I acquired many plants from cold desert or warm temperate regions that could not flourish in western Oregon's cold, wet winters. My British reference books advised growing many bulbous species in a bulb frame, but I had only a vague, intuitive notion of what that was. The concept was clarified by the introduction to Martyn Rix's *Random House Book of Bulbs*, which includes a detailed description, with helpful photo, of how to construct a bulb frame: essentially, it is a raised bed with a cold frame over it. In 1992, I had an area just outside the garden graded level and put up two 4-by-40-foot frames. Since then I've added three more of similar size and various designs.

The primary purpose of a bulb frame is to control the moisture regime. Many bulbs are likely to decline and die if grown in excessively

wet soil, especially during their dormant season. Even Mediterranean-climate bulbs may not survive the amount of rain that falls here, especially when the rain season extends through June. Species that have evolved in regions with cold, dry winters, such as alpine regions, are mostly willing to grow if not too wet.

A secondary aim of the frames here is to protect against winter cold. A maximum-minimum thermometer with a remote sensor placed in the frame will tell you how much cold protection the frame gives. Here, the frame is only 3°-5° F warmer than the outdoors, but this is usually enough to help out marginal species. Adding some kind of heating to a frame is possible in more severe climates, but I haven't considered doing so because the frames are so far from electric power. When I expect outdoor temperatures to drop below about 23° F, I cover the more vulnerable plants (which are grouped together) with sheets of microfoam nursery insulation. Laying a few sheets of newspaper loosely over the plants is also effective, but the newspaper gets soggy if the temperature goes above freezing. Pots with especially tender plants can be pulled and brought into a heated area at such times.

Why grow bulbs in a frame rather than in a greenhouse? First, frames are much cheaper and easier to build and maintain; they're unlikely to fly away in a windstorm. Less obtrusive visually, they fit in better with the garden landscape and may avoid disputes if you live in a development with covenants. Insects are not as troublesome in frames as in

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greenhouses because natural predators have more access to the frames. Humidity is likely to remain lower in a frame, too. The drier, slightly warmer conditions are conducive to fertilization and seed set, especially on early-flowering species that would not set seed in the open. The only regard in which frames are worse than greenhouses is that they are a lot less comfortable for the grower: you have to admire your plants in the cold rain, and work on them bent over at a backbreaking angle.

### Frame designs

Four of the five frames here have a base made of railroad ties, and the other was built of pressure-treated lumber. The lumber frame has warped and needs to be replaced, so this summer I'll try to find a builder who can duplicate the newest railroad-tie model, which I like best of all the designs tried. Railroad ties are fairly easy to place—even one person can handle them with a tool that looks like a huge pair of ice tongs—and contrary to some people's belief, the preservatives used in them are not harmful to plants. Good bases can also be made of mortared concrete block or poured concrete, though these are harder to remove later and offer less insulation.

Before the base is laid, put down a barrier against invasion by moles and rodents. I used hardware cloth (fine-mesh wire) for the earliest frames, but this is no barrier to stoloniferous weeds; moreover, invasive bulbs can get down below it and be very difficult to eradicate. Now I use woven nursery groundcloth, a heavy-duty plastic material that lasts about ten years if exposed to sunlight and indefinitely where covered. Available in widths up to 12 feet from commercial greenhouse suppliers, it deters both weeds and burrowers.

Some of my frames have a drainage layer of 1½-inch round rock, but I don't think this is really necessary. The frames are filled about 16 inches deep with plain coarse sand, a local product that contains a lot of large rock particles. This is known as the "plunge material."

Initially, I filled the first frames with different soil mixtures to grow different types of bulbs, but the collection soon became so large that I could not keep the species properly separated and identified when they were planted directly in the soil. Now I grow all plants in clay pots or plastic mesh containers of the type sold for aquatic

plants. Both permit the movement of moisture from the plunge sand into the planting soil, so that it is not necessary to water the frames manually during much of the growing season. In most years, enough moisture rises from below by capillary action. Another advantage is that the pots are easy to pull and take to plant shows and talks.

If you use clay pots, be sure to buy Italian-made ones, which are much more durable than Mexican terracotta. Having a nursery license allows me to buy the pots wholesale from the importer. I use sizes from 4-inch (for a few seedlings or one or two crocuses) up to 10-inch (for the largest iris, narcissus, and fritillaria that can be accommodated in the frame). When

**Books written  
in England often  
mention that bulbs  
need "a good baking" in  
summer. This is not good  
advice for us on the  
Pacific coast...**

selecting mesh pots, get those with mesh bottoms as well as sides. Some have solid bottoms and do not drain adequately, though you could bore holes in them. Although the mesh pots are UV-stabilized plastic, the exposed edges become rather brittle after several years, so handle them carefully when repotting. I mostly use mesh bins about 12 inches square, but smaller ones come in handy, too. Both kinds of pots are plunged (sunk) almost to the rim in the sand, which is easiest to do when the sand is moist.

The superstructure of the frame is usually a shed or A-frame design. I prefer the double-sided A-frame style because it allows access to a wider area. Having the frame's "footprint" as big as possible means that it will hold heat better. Also, this style permits cross-ventilation even in very wet weather if you raise both sides slightly. My newest frame is an A-frame with permanently open 4-inch vents at the bottom on both sides.

Three of my frames have permanently attached lights (as the covers are

called) and two have removable lights. I grow less sensitive plants in the latter and leave the lights on only from mid-November until mid-March. The oldest frames have flat acrylic glazing, which is very expensive and hard to work; it can shatter if something falls or blows into it. The removable lights are fiberglass, which doesn't have good transparency. The newest frame has corrugated polycarbonate (Lexan) lights, and I think this offers the best combination of light weight, ease of construction, and transparency. It is as expensive as acrylic/plexiglas but can be cut with shears or a box knife and is practically unbreakable. Any type of greenhouse glazing can be used.

You can buy ready-made frame covers with aluminum supports, but these cost about \$150 for a narrow 4-foot section and they do not offer much height. "Access" frames, made in England and imported, are higher, but I'm told they don't stand up well to high winds and snow loads.

My old frames have a clever support system that works with pressure screws set in custom-made metal brackets. The newest one just has support poles of galvanized metal conduit. It is simple and foolproof, and it will never drop on anybody's head. Various kinds of props (such as boards cut in a saw-tooth pattern) have been devised to support lights at a series of different heights.

### Annual cycle

The bulb collection is arranged according to the water and temperature requirements of the species. Frame 1 holds those that need a dry summer and maximal warmth; frame 2, moderate summer water and maximal warmth; 3 and 4, somewhat moisture-tolerant plants needing little cold protection; and 5 is devoted mostly to large batches of immature seedlings at this time. The frames run in an east-west direction lengthwise, so plants that appreciate some shade can be placed against the south side, where the rise of the base shades them for a few inches. Frame 5 can have its entire north side shaded by hanging shade cloth from the center ridge inside; this should be good for Lily, Erythronium, and Peony seedlings.

The peaks of flowering in the bulb frames are February to May and September to November, but there is something in bloom every day of the year. I think of the frame's annual maintenance cycle in terms of seasonality. This is known as the "rain year" in regional climatology, beginning in

garden compost (or leafmold) in an approximate 2:1:1 ratio, with bone-meal or bulb food sprinkled in. If I want to add lime, I use the "prilled" slow-release lime sold for use on lawns. I use this mixture for almost everything I grow, except for a few extreme desert species which receive no compost.

There is quite a debate among alpine growers on whether to crock pots, and my tendency is not to do this.

However, I put a few pieces of lava rock in the bottom of my clay pots because bulbs that "pull" themselves deeply into the soil can pull themselves right into the drain hole. They plug the hole, resulting in death at worst, and at best a smashed pot when you have to extract them. *Calochortus* species are especially likely to do this. They also tend to need support, so repotting is also a good time to insert a twiggy dry branch in the pot.

Visitors sometimes chastise me for growing "perfectly hardy" plants in the bulb frame, but I have many reasons for doing so. Rainy-season flowers are more enjoyable when not flattened

and soggy. Our variable, open winters often coax bulbs into bloom and then whack them with unpredictably timed cold snaps, a particular problem for crocuses. Finally, many bulbs and seeds are so expensive that it seems foolish to expose the few one can afford to the predation and climate hazards of the open garden. I buy many wild-collected seeds, and I feel an obligation to the collectors to grow and preserve the fruits of their arduous endeavors.

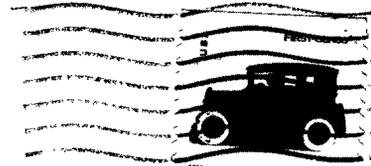
For many plants, though, the bulb frame is only a temporary home or a "backup." Here young seedlings can build up strength for a few years in optimal conditions, clearly identified and isolated. Newly acquired bulbs enjoy a recovery period before facing the garden, and diseased stock can be identified and treated or destroyed. When I repot the bulbs in summer, I remove the surplus for my sale list. Those that don't get sold at that time go into the garden, and I'm hoping to learn more about their limits of tolerance. If they don't survive, I'll have a reserve of the species in the frames. ♣

### Bulb questions?

Please send your inquiries to Marguerite, [meenglis@cts.com](mailto:meenglis@cts.com). The staff will find an experienced bulb grower to answer them.

### Narcissus Poll:

Tell us which narcissus you love the most because of its fragrance. Do try to describe the scent! Send your response to the editor. Results will be published in a subsequent newsletter, in time for members to order some of those that sound interesting this fall. Please include information about your growing conditions.



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