

The Bulb Garden



~ Gardening with Bulbs ~

Board of Directors

Cathy Craig, President
CathyCraigEA@hotmail.com

Paul Machado, Vice President
Farmerquys@clearwire.net

Jennifer Hildebrand, Secretary
theotherien8@yahoo.com

Arnold Trachtenberg, Treasurer
Arnold@nj.rr

Pat Colville, Membership
Pat.Colville@JHResearchusa.com

Dell Sherk, BX Director
DellS@voicenet.com

Volunteers

PBS list: Mary Sue Ittner, Arnold Trachtenberg, Diane Whitehead

PBS wiki: Mary Sue Ittner, Linda Foulis, Jay Yourch, Nhu Nguyen

The Bulb Garden: Marguerite English, editor; Jennifer Hildebrand, layout

The PBS Directory: Pat Colville, editor

Publications Distribution: Arnold Trachtenberg

What's Inside...

- > Alstromeria Morphology and Culture (Hybrids and Species), by Roy Sachs, p. 2
- > Cyclamen, A Genus for Gardener and Botanist Alike, by Brian Mathew, p. 5
- > Reflections on Weeding, by Robin Hansen, p. 5

President's Message

Hello wonderful members!

There have been many changes in PBS procedures the last few months. Most have been directed at building groups or committees so that the board has more people to help with all the work. Running even a small group like PBS takes many people lots of hours a month – and we are all volunteers who, for the most part, still have full time jobs. The committees will be able to help us publish more newsletters each year, as well as complete other jobs that are important to you.

Last year I worked 365 days at my office anticipating retirement in 2008 so that I could devote my full time and attention to running PBS. Due to unforeseen business problems, that isn't happening...at least not in the foreseeable future. Additionally, as many of you already know, I am moving from Southern CA to Prescott, AZ this summer. We are moving three households, not just mine.

I have been president of PBS since the inception of our wonderful organization...many years now. I love PBS and each one of you, but the

problems I mentioned above are going to take all of my time at least through the end of 2008.

In fairness to you all, I am resigning my position as president of PBS. We have enthusiastic board members, including a new VP, and lots of additional help now. I am certain that PBS will continue to run fine without my leadership.

For those of you accustomed to the "bulb dinners", I am committed to continuing that tradition – albeit in Prescott – and will keep you all informed. We should be all settled in AZ by fall of 2008.

Please know that I will remain available to you. You need only email or call me if you have any questions, concerns, or suggestions.

Thank you for letting me serve as your president this past many years. It has been an honor and a pleasure I will never forget!

Sincerely,
 Cathy Craig
 President - PBS

Alstroemeria Morphology & Culture (Hybrids and Species)

By Roy Sachs

Editor's note: Roy is Professor Emeritus, retired, Department of Environmental Horticulture, University of California, Davis. He taught applied plant physiology and did research on control of flowering, drought, salt and freeze tolerance, and short rotation forestry for biomass accumulation. In 1990, he began a nursery that specializes in the production of Alstroemeria and a few other geophytes. Website: <http://www.buy-alstroemeria.com>; e-mail roysachs@yahoo.com

Alstroemeria ranks first with me because of its long vase-life as a cut flower, and because I'm attracted to the wide range of colors and flower form available in the species. This has contributed to a similar range among the hybrids that I grow. My fascination has developed over the past twenty years. It has more to do with finding the best ways to grow the ones that I have than with trying to hybridize and select new types. Vigor seems to be an inherent trait that I can evaluate, but creating the appropriate light exposure, soil, and irrigation conditions to bring out that vigor depends on the gardener (me). It makes for a good and interesting life providing I keep ahead of the weeds.

"Alstroemeria ranks first with me because of its long vase-life as a cut flower, and because I'm attracted to the wide range of colors and flower form available in the species."

varieties and am attempting to increase their stock.

Alstroemeria culture

Soil: A light, well-aerated mix is essential. I prefer starting with rhizomes or clumps of rhizomes because they show better survival rates. Clumps grow slowly if at all and are susceptible to fungal rot if they sit in heavy soggy soil. I think that poor drainage and excess moisture are the major reason for loss of Alstroemeria under heavy mulch in cold climates, not freezing.

I'm working on new alstroemeria colors, produced by vigorous plants that propagate easily. Currently I am increasing two new yellows and a blue selection. The yellows should replace *A. aurea* which grows with greater difficulty in warm regions. I have a whitish selection that requires more testing to be sure of its vigor (or lack thereof). Also, I've been selecting more striking pink and lavender blush

Keep the soil moist until sprouts appear. That should be about 2 weeks after planting, depending on the temperature of the soil. Ideally soil temperature should be above 50° F (10° C).



A. magnifica 'Alba' - photo by R. Sachs

In Davis I use a 70% organic: 30% perlite soil mix on top of a mostly clay base with no intentional mixing of the two layers. The root systems of most alstroemeria penetrate several inches into the clay layer (which is moist year-round). The rhizomes in a 3 yr-old clump are usually found no more than 2" deep in the clay. There is never any problem with 'weediness', namely excessive growth or invasive behavior, under these conditions.

Planting Depth/Spacing/Clump maintenance and subdivision: Clumps should be planted no deeper than 1-2 inches (2 to 5 cm) below the soil surface and spaced about 3' (1 meter) apart. At this spacing you have provided enough room for about 3 years of clump establishment. After three years, the clump may be sub-divided into at least 4 sections for transplanting elsewhere.

Establishment phases: Roots are usually well-formed about a month after leaf expansion (new roots
(continued next page)

Alstroemeria Morphology & Culture (cont'd)

(continued from previous page)

rely on current photosynthesis) and continue to grow into the parent soil for a year. As the rhizomes

grow and branch, the original pieces die. Don't remove them... they add organic matter to soil the same as dead roots.



A. paupercula - photo by R. Sachs

Irrigation:

Water the plants as frequently as you would an aster, chrysanthemum or tomato. They benefit from watering to replace water lost. The soil must be well-drained and porous which is ideal for all plants.

Sun: Full sun or filtered sun, as under a birch tree, is satisfactory. Morning-sun-only works, too. Mid-day and afternoon shade during July and August encourages prolonged flowering and deeper pigmentation. Protect clumps from afternoon sun in warm climates. I use 30% shade cloth in Davis and have been told by those who really know that I could get by with 50% shade cloth.

Fertilization: This is not critical for success. Alstroemeria is not a heavy feeder although one can find recommendations for nitrogen that would exceed 200 lbs N/acre per year.

Culture in cold climates: In Zone 6 and below, make sure that you provide winter protection to keep the ground from freezing. Alstroemeria in large containers must be put indoors before the first sub-28 F (-2 C) freeze. Keep them dry for the winter. I have dug rhizome clumps and stored them relatively dry in sphagnum for 4 months at 40° F (4° C) and had quite good success upon replanting them 4 months later. But I don't do this as a rule either in Davis or along the Russian River. Lows at both locations drop into the 18° F (-7 to -8° C)

range for a few hours at most; however, day temperatures in December 1990 stayed below or near freezing for several days and night temps descended to near historic lows. I lost quite a few alstroemeria that I had in one gallon (4 liter) containers; that ended my interest in container culture.

Culture in warm/hot climates: Alstroemeria are grown in the low tropics where daytime temps are in the 90s F (over 30° C) for many months and the relative humidity is also clocked in the 90s. I've been growing them in Davis for about 20 years and our daytime temperatures range above 100° F (40° C) beginning in June and go triple digit often, right through Labor Day. The key to summer bloom in hot climates seems to require keeping soil temps below 80° F (26° C). I was able to do one experiment with an

alstroemeria hybrid and one species (*A. pelegrina*) that convinced me that the rhizomes tend toward dormancy (cease initiating new shoots) above 80° F.

In Davis, afternoon shade (or the 30% shade shelter) is essential for bloom to continue into August. The Russian River location is 9 miles in from the Pacific; it is one of the places I think of as alstroemeria heaven. With its more moderate summer tem-

peratures, bloom continues into October. But even in heaven, alstroemeria bloom quality, hue intensity, is better with partial shade.

Vigor: I have been able to grow 3 alstroemeria species with little diffi-



A. caryophyllae - photo by R. Sachs

culty in Davis (I'm excluding greenhouse culture); namely, *A. aurea*, *A. pulchella* (aka psittacina), and *A. ligtu*. I had about 2 years success with *A. pelegrina* seedlings but it did not persist. Currently I'm increasing *A. caryophyllae* at a plot along the Russian River, but it's too early to say whether they will grow in well in Davis or how much success that I'll have growing them commercially at either location.

(continued next page)

Alstroemeria Morphology & Culture (cont'd)

(continued from previous page)

None of the other species (I have tried over 15) persisted in outdoor gardens, whereas the hybrids grown from seed and some clones (probably 'escapes' from old English and Dutch breeding programs) have increased for over a decade.

I have no explanation for relative differences in vigor, but I thought that it might be a trait to select for among one hundred hybrid seedlings. After two years I gave up on the quest because so much of the initial difference in seedling vigor was due to the rate of emergence and first leaf expansion, all of which disappeared in the second year of culture.

Alstroemeria morphology

All of the alstroemeria that I've seen are rhizomatous. They initiate new shoots from an underground stem that also develops branches (more or less frequently depending on the species or hybrid). The

root system is quite complex and confusing to the casual observer. It consists of fibrous roots (the common kind), fleshy roots, and contractile roots. Many gardeners think that the fleshy roots are propagules but no one has ever had any success trying to force them. Ditto for the above ground shoots. Contractile roots attach the fleshy

roots to the rhizomes and these are important for pulling the rhizomes down to a depth where they can survive adverse environments.

The rhizomes are the only underground structures with a supply of stored assimilates required for shoot development through emergence and leaf expansion. Analyses have shown that the fleshy roots are mainly water and the contractile roots are also nearly devoid of mobile assimilates.

The rhizome tips are often buried about 3 to 4 inches (ca 8 cm) below the soil surface and enmeshed in the root system. In

a well-established, say 3 year-old, clump you might not see the rhizome tips when dividing the clump until you wash away the adhering soil and untangle some of the root mass (not advised unless you do so for educational purposes or are shipping the plant out of the US). The rhizomes themselves become ensnarled and wrap around one another; this is not a problem that has to be reckoned with, especially if you subdivide the clumps every few years.

A. ligtu and *A. aurea* rhizomes are pulled much more deeply into clay soils than any other species or hybrids that I've grown. I'd say that they go at least one foot below the soil surface, which is 2 to 3 times as deep as most other species and hybrids.

This adaptation is likely for winter survival (cold avoidance) in high altitude Andean environments.

The inflorescence axis

I've seen no difference between 'vegetative' and flowering shoots in the alstroemeria species and hybrids that I've grown. Some species flower in the first year from seed on the first upright shoot formed; in some species, at least in some seedlings, a single shoot or a

cluster of shoots forms the first year and inflorescence shoots form in the second year of culture. Most hybrids do not form inflorescences in

the first year from seed but they do by the second year, and continue blooming every year thereafter. By the third year they have assumed the characteristic growth habit of the well-established plant.

An important variation among species as well as hybrids is the number of 'vegetative' shoots formed each year before the first inflorescence shoots are seen. As a result of having dissected many shoots using a binocular microscope with 40x magnification, I've come to the conclusion that many 'vegetative' shoots have aborted the inflorescence primordia at a very early stage of shoot elongation (these are called 'blind' shoots by horticulturists).



Reflections on Weeding

Robin gardens in North Bend, Oregon just east of the Pacific Ocean on a property sheltered by dunes and conifers (slightly colder and hotter than USDA zone 9). She grows and sells cyclamen and a few other Oregon native plants. Send an e-mail to hansennursery@coosnet.com for her plant list. — Ed

Ah, weeding - is there anyone who isn't provoked by the merest mention of this seemingly negative word? Dare I confess to the quiet pleasure this commonly abhorred chore brings me?

It's time, I think, to consider the positive side of weeding. When I wander from the garden to the greenhouse and back, unable to decide what needs to be done next, weeding is the place to begin.

That most mundane of jobs is often where I solve nagging little everyday problems, find just the right words to begin a conversation I've put off too long, or resolve the stress of a long day. My thoughts



slow down, my mind wanders here and there, and the answer I need for putting my bossy baby sister in her place pops up all on its own.

And it's a good thing I like this particular chore – weeds love

the loose, well-watered mix in my many nursery pots, my sandy, moist soil and my lack of gardening discipline. The sixty or more inches of rain we receive here on the southern coast of Oregon combined with mild temperatures year-round strongly encourage the little oxalis with yellow flowers, the annual mustard whose seedpods flick the tiniest seeds everywhere, and Luther Burbank's Himalayan blackberries.

Oh, I contribute my share to the Department of Weed Complaints, but invariably, it's the chore I choose first. Put it off if you must, but let me assure you — it's the best therapy around, and it's free!

* * * * *

Cyclamen: A Genus for Gardener and Botanist Alike

By Brian Mathew

Brian Mathew has a long list of honors and publications to his name. For more information, see the introduction to part one of this article in the previous issue. This section concludes his article on growing cyclamen.

Taxonomic considerations

Botanically speaking the genus cyclamen is just remarkable. The variations described in part one are just as interesting to the botanist as to the gardening enthusiast, albeit for slightly different reasons. The taxonomist has to decide where the breaks are in all this variation in order to define the species and their infraspecific taxa and produce a convincing classification. Most species that have been described are clearly distinguishable and uncontroversial (although nomenclature is another matter). There are problem areas



C. Graecum - photo by M.S. Ittner

and the work on these continues using the newer tools of the trade, notably DNA. Hopefully the product of molecular studies, combined with existing morphological information, will produce a clearer understanding of the species and their relationships.

It is worth taking a brief look at just a few of the interesting botanical facts about cyclamen.

As a genus, it is instantly recognizable and has no obviously near relatives. Leaving aside DNA, for that is a subject about which we shall hear in greater detail in the near future, the chromosomes themselves are of interest -- even just the number of them in each species. The available counts to date are:



C. graecum ssp. *Candicum* ex. *RRW* - photo by John Lonsdale

(continued next page)

Cyclamen: A Genus for Gardeners and Botanists Alike (cont'd)

(continued from previous page)

2n = 20: *balearicum*, *creticum* (also 22), *repandum*, *rhodium*.

2n = 30: *alpinum*, *cilicium*, *coum*, *cyprum*, *intaminatum*, *libanoticum*, *mirabile*, *parviflorum*, *pseudibericum*.

2n = 34: *africanum* (also 68), *hederifolium* (also 68), *purpurascens*.

2n = 48: *persicum* (also 72,96,136 recorded).

2n = 84: *graecum* (also 85,86,87).

2n = 96: *rohlfianum*.

Among the morphological characteristics, one of the most interesting is the way in which the pedicels of the flowers commence to coil after fertilisation. In most species they coil from the top downwards but in *C. graecum* they start coiling in the lower part and pull the developing capsule down. In *C. persicum* and allegedly also *C. somalense* (I have not seen this) they do not coil but bend over to bring the capsule in contact with the soil. All this is concerned with ant distribution. The capsule is pulled down among the

“There is something for everybody, whether it is to grow them for pure pleasure or to stretch the mind by puzzling over their botanical details!”

cluster of leaves where it is protected from the elements and perhaps also from grazing animals, then, when ripe, splits open to reveal the sticky seeds that are attractive to ants. It is not obvious exactly why ant colonies are not full of cyclamen. Maybe they remove the sugary coating and then transport the seed away from the vicinity: after all, they are very tidy creatures!

World-wide distribution

It is the natural distribution of cyclamen species that is of great interest to some botanists, particularly the implications as to how speciation might have occurred generally in the Mediterranean region. One can say that cyclamen as a genus has almost certainly evolved in response to the Mediterranean-type climate, with its alternating

wet and dry periods. The tuber is a perfect adaptation to overcome prolonged drought and the various species flower either at the onset of rains in the autumn or wait until spring. Either way, they are making good use of available moisture before the next dry period.



C. hederifolium - photo by John Lonsdale

Nearly all the species follow the hills and mountains of the Mediterranean coast from Spain eastwards to Turkey, Syria, Lebanon and Israel; and southwards into northern Africa. There are exceptions: *C. purpurascens* occurs in mountain woodlands in southern and central Europe, *C. coum* has a wide distribution around the Black Sea (which is known for relic Mediterranean elements) and *C. parviflorum* has taken to an alpine habitat in north-eastern Turkey. *C. elegans* inhabits the woods along the west and south of the Caspian Sea but this too has ancient floristic connections with the Mediterranean climate. The most recent discovery, *C. somalense*, resulted in great excitement when Mats Thulin first reported finding cyclamen in the coastal mountains of Somalia, some 1700 miles from the nearest known sites for cyclamen (in Israel). Extraordinary as this seems it emphasises the great extent of the Mediterranean-type climate in the past. There are other plant species in the same area that are also more closely associated with the Mediterranean than with subtropical Africa. This area is a relic enclave in the vast desert or semi-desert belt of northern Africa. The enclave is presumably preserved by virtue of moisture drifting in from the sea. Maybe other populations of cyclamen cling on in refugia such as the huge mountain massif

(continued on p. 11)

Summer Bulbs at Wave Hill

By Judy Glattstein

Judy is an instructor at the New York Botanical Garden, teaches at the Office of Continuing Professional Education of Cook College/Rutgers University, and a garden writer of some note. Her many books and magazine articles often focus on bulbs. She lectures to garden clubs and horticultural organizations across the United States and abroad. Her New Jersey garden is in USDA zone 6, just a couple of miles east of the Delaware River. Visit her garden at www.bellewood-gardens.com.

Gardens are created when plants are combined so they look better together than they do individually. A few special gardens go

beyond mere beauty. They enlighten us with stunning plant combinations. Wave Hill in the Bronx, New York, is just such a garden.

Some background, for those who have not yet had the pleasure of visiting Wave Hill. Located in New York City's Riverdale neighborhood, Wave Hill's gardens and woodlands overlook superb vistas of the Hudson River and the New Jersey Palisades, framed with a classic pergola. Their horticulture program maintains an extraordinarily diverse collection of hardy and greenhouse plants, including 1,200 genera and 3,250 species. There is a country style flower garden in front of the Marco Polo Stufano Conservatory, which houses displays of tender plants in the palm, tropical, and succulent houses. The Wild Garden is an exuberant melange of shrubs, perennials, self-sowing annuals, and bulbs. There is an aquatic

garden, and Monocot Border. The 28-acre public garden and cultural center maintains 4 historic buildings and 5 greenhouses. Its mission is to celebrate the artistry and legacy of its gardens and landscapes, to preserve its magnificent views, and to explore human connections to the natural world through programs in horticulture, education and the arts.



Photos by Judy Glattstein



Many public gardens offer displays of plants in rather static mass plantings, spectacular, colorful blobs offering little in the way of ideas to bring home to one's own garden. Wave Hill is different. One year there was a six week period

when I'd visit every Tuesday and Thursday, with always something new to see and enjoy. Alas, now that I live more than 75 miles away my visits are less frequent, perhaps for that very reason, even more intensely enjoyed.

The summer gardens, filled with a wonderful medley of perennials, vines, annuals, shrubs, and bulbs, are always a delight. I asked Scott Canning, Director of Horticulture, for some behind-the-scenes information on tender summer bulbs that are grown so well, and given such a prominent place on the garden stage.

My recollection was that dahlias are grown primarily in the front garden, and I wanted to know what they look for when choosing dahlias. Scott said that both form and color are considered. Since they are displayed in the flower garden and not as cut flowers he stays away from the dinner-plate and large formal decorative dahlias

which look out of place and/or out of scale in the garden setting. Rather, he looks for particular colors that work in the color-themed beds. In other words, will a given dahlia be harmonious or offer a

pleasing contrast within a particular bed? Favorite sources are Dan's Dahlias, Swan Island Dahlias, and, Scott notes, "We like to support Brent and Becky's too."

(continued next page)

Summer Bulbs at Wave Hill (cont'd)

(continued from previous page)

I asked about favorite plants to partner with their dahlias, and was most interested in Scott's answer. "We love to let larkspur seed themselves into the spaces later occupied by our dahlias; the timing works really well. We pull out the larkspur when they go to seed, and save the seed to sprinkle on the spot where we dig the dahlias in late fall."

Most all of the tubers are dug and saved from year to year, unless a new trial dahlia has earned their displeasure. In that case, if it hasn't already been

"Cannas are one of my favorite summer bulbs, not for their flowers, but rather as deer-resistant foliage plants."

composted they let it freeze in the ground.

Those they will keep have the tubers dug and shaken free of loose soil. Any that are muddy are allowed to dry in open boxes for a day or three.

They are then wrapped in newspaper, and the paper bundle labeled with indelible marker. They try to maintain polarity, keeping the tubers properly oriented so that sprouts that may initiate before planting are growing the right way up. The bundles are placed in open boxes, and covered with leaves to slow down desiccation. Scott finds that this technique gives them nearly 100% success.

Cannas are one of my favorite summer bulbs, not for their flowers, but rather as deer-resistant foliage plants. Scott's

answers validated my opinions. He said, "There aren't too many cannas we don't like! Strong ornamental foliage is somewhat more important than flowers, and we've been known to disbud some kinds so as not to introduce the flower color into a planting that works well without it."

There is a separate garden "room" with a formal water lily pool and a border devoted to monocot plants. It is here that cannas really show off, both in containers on the paved surface around the aquatic garden and in the Monocot Border, where they look terrific with other lush tropical monocots such as *Musa* and *Ensete* bananas, lilies, hedychium, grasses, and more.

Canna tubers are also saved from year to year. Some kinds are grown in pots as single-variety displays and, says Scott, that makes storage a snap. The soil is allowed to dry, the withered foliage cut off, and the by now completely dormant pot is put away in their root cellar (an underground, windowless room that holds though the winter at approximately 45° Fahrenheit.) Those cannas that were growing in the ground are dug and stored in dry leaves in black plastic nursery pots. If they need to dig varieties with very slender tubers, they'll be stored in boxes with slightly damp peat moss to prevent desiccation.

In general, the average member of the gardening public recognizes dahlias and cannas. Even non-gardeners are familiar with gladiolus, buckets of which grace every farm stand and market throughout the summer. Easy to grow, I find these typically large-

flowered sorts awkward anywhere except a cutting garden. At Wave Hill, it is mainly the smaller, more sparsely flowered heirloom varieties such as these three very graceful and delicate *primulinus*: soft, warm apricot colored 'Boone', 'Carolina Primrose', and 'Atom' with its silvery yellow flowers edged in light scarlet that are incorporated into the summer flower garden. For example, Scott thinks 'Boone' looks great with the apricot agastaches. Stored cool and dry, he finds the dormant corms are among the easiest bulbous plants to keep over the winter. Old House Gardens and Brent and Becky's Bulbs are two sources he recommends. Species gladiolus and rare summer flowering gladiolus are raised from seed. (Most of the winter-blooming South African bulbs that are part of the rotating display in the Conservatory's Palm House are also raised from seed. But that's for a different story.)

Another summer bulb we share a fondness for is eucomis, the pineapple lily. At Wave Hill some are grown in containers near the Monocot Border, but mostly the bulbs are planted directly in the ground. A favorite combination is *Eucomis* 'Sparkling Burgundy' with the *Coleus* 'Kiwi Fern'. In winter, the eucomis bulbs are stored much the same as cannas: if in pots they are dried off and stored in the root cellar, otherwise dug, cleaned, and packed away in dry leaves.

Scott mentioned that, "We would never be without hedychiums or crocosmia, and I think ornithogalums are underappreciated. We grow hedychiums in pergola beds and the Monocot Border, crocosmias in the Flower Garden and Wild
(continued next page)

Summer Bulbs at Wave Hill (cont'd)

(continued from previous page)

Garden, and we have ornithogalums bursting out of the yucca beds in the parking lot.”

This is a garden that welcomes visitors. There are Adirondack style chairs set out on the lawn, and visitors are welcome to move them around. Come and enjoy the diversity of summer bulbs incorporated into splendid gardens, then sit and contemplate the flowers in a grand and gracious garden by the river.

Wave Hill: Background and History

Wave Hill House was built in Greek Revival style as a country home in 1843 by jurist William Lewis Morris. From 1866-1903 the property was owned by William Henry Appleton, a publishing scion, who enlarged the house in 1866-69 and again in 1890. During these years, the house was visited by Thomas Henry Huxley, who helped Charles Darwin bring evolution to the public's attention. Theodore Roosevelt's family rented Wave Hill during the summers of 1870 and 1871, when the future president was a youth of 12 and 13. Mark Twain leased it from 1901-1903.

Seed and Bulb Exchange

Two great things are happening with the BX: 1) Members who got seeds or bulbs from the BX a while back are beginning to get seeds and offsets from those early acquisitions to give back, so that newer members can share in the wealth. This is conservation in action! 2) A new crop of international members are contributing to the BX. They realize the benefits of participation and often have unusual plants to donate, some of which

The house was purchased in 1903 by George Walbridge Perkins, a partner of J. P. Morgan, along with adjacent property. Perkins performed extensive landscaping on the site, adding greenhouses, a swimming pool, terraces and the recreational facility now called the Ecology Building. The land was graded and contoured; rare trees and shrubs were planted and gardens were created. Wave Hill House itself was leased to an eminent zoologist, Bashford Dean. His hobby was collecting medieval European armor, and he built Armor Hall to house his remarkable collection. A selection of 197 pieces was subsequently donated to the Metropolitan Museum of Art. The conductor Arturo Toscanini resided here from 1942 to 1945. In 1960, the Perkins-Freeman family deeded Wave Hill to the City of New York. Wave Hill, Inc. was formed in 1965 as a nonprofit corporation.

Visiting Wave Hill – Check web site for hours and parking details.

Wave Hill is located at 675 West 252nd Street, Bronx, NY 10471

www.wavehill.org

have been collected on trips in Europe, Africa, and South America.

So, I urge all members to donate whatever they can to the BX. Of course, we share a common interest in bulbs and other geophytes, but some of the most popular items on the BX have been plants that can be grown as companions to bulbs or are from families that are not usually considered geophytic. Happy growing!
Dell Sherk, BX Director

Income Statement First Quarter, 2008

Balance 12/31/07	\$26,150.65
Income	
U.S. Members	\$ 1960.00
Overseas Members	325.00
Contributions	25.00
BX Receipts	<u>2253.07</u>
Total Income	\$ 4563.07
Expenses	
BX/SX Expense	796.43
Publications	
Newsttetter Vol. 6 #1	
Postage	105.87
Printing supplies	632.89
Book review	50.00
Labor expense	<u>290.00</u>
Total	1078.76
Newsletters Vol. 7 #1	
Printing	680.00
Postage	115.90
Stipends	<u>80.00</u>
Total	875.90
Total Publications	1954.66
Total Expenses	2751.09
Investment results	<u>(1585.43)</u>
Total	4336.52
Adjustment	11.44
Balance 3/31/08	26,388.64

**Thanks to everyone who
donates to the SX/BX.
Keep those seeds
and bulbs coming!**

How Can You Help PBS? Nominate Yourself!

Dear PBS members,

The Pacific Bulb Society aims to educate, share experiences, and have fun with our favorite bulbous plants. Members of PBS enjoy meetings, newsletters, local events, and the PBS BX (bulb and seed exchange). Participants in the PBS email list group benefit from an on-line discussion forum (open to all bulb lovers) and the PBS Wiki, an invaluable online source of information and images.

These two arms of the PBS need to function smoothly for a mutually beneficial organization. They do so through the generosity of volunteers — and this means that we need you! Anyone can be a volunteer.

In November of this year, PBS is holding an election to choose the next group of PBS officers, including President, Vice-President, Treasurer and Secretary. Nominations are open to all. Interested volunteers must

be members of PBS to serve, and they need to have email access. If you feel you can make some contributions, changes, or improvements to any aspect of PBS, please email Dell Sherk. dells@voicenet.com. Include your full name, email and snail-mail addresses, and a short statement of willingness, ability, qualification, or interest.

The Nominating Committee wishes to present a final list of candidates to the PBS board members by August 31, 2008, so please decide how you can best help PBS and contact Dell soon!

If you feel motivated to help PBS in some other way, now's the time to step up! Email any of the PBS board members (email addresses located on p. 1) and let them know how you can help.

Thanks from the Nominating Committee:

Paul Machado, Jane McGary, Dell Sherk, James Waddick

Inside My Garden

By Marguerite English, Editor

We have several great articles for you this quarter! I hope you enjoyed the article by Roy Sachs on *Alstroemeria* as much as I did. In the past I only grew them in the greenhouse in containers, but I was experimenting with one in a raised bed, and it has returned two years now, so I have started moving more of mine out into the garden. Roy's website has some very tempting choices.

Robin Hanson has agreed to try a quarterly column, and her first contribution is in this issue. Do let her know that you like it! Weeding is definitely therapy in my garden. I find that fighting with some of those deep-rooted mustards that occasionally get away from me is a handy anger management tool! I am finally getting back into my routine after losing the lovely May weather to pneumonia. It wasn't a bad case, but left me tired, cranky and unable to do anything resembling work! My gardening plans definitely got put on hold. I have been doing a bit more each evening for a couple of weeks now, but some of the bigger projects aren't happening until next spring!



Roses and bearded Iris are blooming. One Iris has petals the color of purple satin. I notice it from clear across the garden. I have marked it so I can transplant it closer to the door when the Iris go dormant in August. I just visited a garden where the Iris were grouped by cultivar to make a big exclamation point of color. The groups were placed to complement each other in one long rainbow border. I have already started to copy this on a berm at the back of my expanding front garden.



Finally, please consider writing an article for 'The Bulb Garden.' In the past, we have had to skip issues when no articles were forthcoming. Members complained to the board, and they have worked to make the newsletter a priority.

Short articles are just as welcome as the longer and more formal ones. Write about any garden or society related topic that interests you — it will likely interest your fellow gardeners! I would love to publish descriptions of member gardens in various locations. Jennifer and I aren't mean editors, and we will assist you as much as you wish if you are insecure about your grammar or spelling. We look forward to hearing from you!

Cyclamen: A Genus for Gardeners and Botanists Alike (cont'd)

(continued from p. 6)

Tibesti (3415m) in Chad where some Mediterranean species or their relatives have been recorded.

The distribution of cyclamen species is undoubtedly

very interesting in terms of the evolution of the Mediterranean flora. This aspect of the genus is the subject of a study by Max Debussche and John Thompson in Montpellier, France. A few species are widely spread in the region: *C. hederifolium*, *C. graecum* (although its subspecies are geographically more limited), *C. repandum*, *C. purpurascens* and *C. coum*. Most species have more discrete distributions: *C. balearicum* (Balearic Is, Southern France); *C. creticum* (Crete and Karpathos); *C. cypricum* (Cyprus); *C. rohlfsianum* (Cyrenaica); *C. libanoticum* (Lebanon); *C. mirabile* (SW Turkey); *C. alpinum* (Southwestern Turkey); *C. cilicium* (Central and South-



C. repandum ssp. Peloponnesiacum - photo by John Lonsdale

ern Turkey); *C. intaminatum* (Western Turkey); *C. pseudibericum* (SE Turkey); *C. parviflorum* (NE Turkey); *C. elegans* (Western and Southern Caspian Sea region); *C. rhodium* (Rhodes, unless *C. peloponnesiacum* is merged with it); *C. colchicum* (Caucasus); *C. africanum* (Northern Algeria & Northwest Tunisia); *C. somalense* (Northeast Somalia).

Added to the intriguing distributions are the finer points of habitat. Although many grow on limestone formations — a common rock type in the Mediterranean — there are exceptions which may further account for speciation. *C. mirabile* for example usually occurs on mica-schist derived soils and *C. coum* is to be found most commonly on the acidic soils of the Black Sea region where rhododendrons abound.

So, what a genus this is! There is something for everybody: you can grow them for pure pleasure or to stretch the mind by puzzling over their botanical details!

Meet Your New Vice President!

Paul Machado joined the Board of the Pacific Bulb Society as Vice President in March of this year. A native Californian, Paul currently resides in the Central Valley town of Hilmar with his partner Michael Homick.

Paul has been involved with farming throughout his life. From a very young age he has been drawn to horticulture, especially bulbs. Hostas have particularly caught his attention, but he specializes in Liliium and Nerines. Like all of us, he has felt the common constraint of “too much to grow, not enough space!” But he and Michael have recently solved that problem: they purchased twenty acres so that they would have room to grow.

His devotion to various plants shows in

Paul’s numerous memberships: North American Lily Society, Lily Species Preservation Group, American Peony Society, American Daffodil Society, and the Aril Iris Society.

Since we all know that our love for bulbs rarely seems to pay all of our bills, Paul has a “real job,” too. He is a Quality Assurance Technician, currently employed with Safeway Inc. at their Merced production facility.

“I look forward to assisting the current PBS board in the capacity of Vice President,” said Paul. We hope that PBS members will make him feel welcome and let him know that his efforts are appreciated!

* * * * *

Gardening with Bulbs



www.pacificbulbsociety.com

Inside This Edition:

President's Message	1
<i>By Cathy Craig</i>	
Alstroemeria Morphology & Culture (Hybrids & Species)	2
<i>By Roy Sachs</i>	
Reflections on Weeding	5
<i>By Robin Hansen</i>	
Cyclamen: A Genus for Gardener & Botanist Alike	5
<i>By Brian Mathew</i>	
Summer Bulbs at Wave Hill	8
<i>By Judy Glattstein</i>	

Pat Colville – Memberships
1555 Washburn Road
Pasadena, CA., 91105

www.pacificbulbsociety.com