

## Still Coming in 2007...

### Sunday Sep. 9: Annual Mtg. & Board Elections 1:30 PM Gates Hall, DBG

*Interested in serving on the Board? CWGS needs you! Contact a Board member to discuss options.*

*Participate in the round table discussion of the recent Membership Survey. Help set goals and directions for next year's activities and events!*

### Sep. 30 or Oct. 7: Fall Volunteer Sundays Begin at DBG.

*Exact date TBD. For more information or to sign up, contact Bill Powell 303.355.8098*

**Oct. 7:  
Board Business Mtg.**  
*2:30 PM, Blubaugh residence  
3064 S. Holland Ct., Lakewood  
Members welcome!*

**Dec. 1:  
Holiday Banquet**  
*6:00 to 9:00 PM  
Morrison Ctr., DBG*



# The Water Garden

Volume 24 Number 7

September 2007

## Sunday Sep. 9: Annual Meeting & Board Elections

Gates Hall  
Denver Botanic Gardens  
1:30 to 3:30

Round Table  
discussion of  
Member Survey

### Join us September 9 and share your perspective

by Gary Blubaugh, Board President

The Annual Meeting will be held from 1:30 to 3:30 PM in Gates Hall on Sunday September 9, at which time we'll hold a round table discussion to discuss the results of the Member Survey conducted earlier. It's hoped that the discussion will help clarify what needs to be done to insure that the Society is meeting the needs of its current membership.

Following the round table discussion the Membership will vote to fill the following Board positions:

- President (2 year term)
- Treasurer (2 year term)
- Member-At-Large (5 positions/2 year terms)

If you are interested in serving in any of these positions, call Gary Blubaugh (303-989-464) or Jim Arneill (303-843-9619). Novice and experienced members, alike, are encouraged to participate on the Board. It's a great way to learn while you support the workings of the Society!

Jim or I will be happy to give you information about specific open positions, but in general the duties are as follows:

#### Board Member Responsibilities

- Attend all Board, committee meetings and functions, including special events.
- Be informed about the organization's mission, services, policies, and programs.
- Uphold and work to promote the organization's mission.
- Establish policy, set general guidelines, and coordinate scheduled activities of all Society events.
- Contribute to the development and maintenance of the Society and ensure its financial solvency
- Board members have a duty of loyalty to the organization and other Board members.
- Solicit input from members of the Society regarding programs and activities of the Society.
- Conduct projects to further the goals of the Society.
- Provide timely reports to the Board of Directors and/or publication in the newsletter.
- Act as an official representative of the Society and its membership only when so designated by the Board of Directors.
- Communicate all information to the Board of Directors pertinent to the functioning of the Society, or having an effect on the Society on an ongoing basis.
- As with committee assignments, additional duties may be "as assigned," usually meaning as determined by the Board of Directors.

## 2007 Board of Directors & Committee / Event Chairs

<b>President</b> Gary Blubaugh	303.989.4464	<b>Newsletter</b> Bill Powell	303.355.8098
<b>Vice President</b> Jim Arneill	303.843.9619	<b>Membership</b> Ken Lange	303.393.8410
<b>Secretary</b> Bill Bathurst	303.421.1144	Janet Bathurst	303.421.1144
<b>Treasurer</b> Ken Lange	303.393.8410	<b>Program</b> Bill Bathurst	303.421.1144
<b>Members-At-Large</b> Jonathan Hough	303.499.6578	<b>Publicity</b> Jim Arneill	303.843.9619
Joyce Blubaugh	303.989.4464	<b>Education</b> Cyndie Thomas	303.755.1885
April Hough	303.499.6578	<b>Get Wet Event</b> Jim Arneill	303.834.9619
Marge Oleson	303.989.4809	<b>CWGS June Plant Sale</b> Vicki Aber	303.423.9216
Vicki Aber	303.432.9216	April Hough	303.499.6578
Janet Bathurst	303.421.1144	Janet Bathurst	303.421.1144
Bill Powell	303.355.8098	<b>Pond Tour / Picnic</b> Gary Blubaugh	303.989.4464
		Jonathan Hough	303.499.6578
		<b>Water Blossom Festival</b> Duff Kerr	303.871.0336
		Gary Blubaugh	303.989.4464
		Joyce Blubaugh	303.989.4464
		<b>Holiday Banquet</b> Joyce Blubaugh	303.989.4464
		April Hough	303.499.6578
		<b>Publicity / Outreach</b> Jim Arneill	303.843.9619
		Marge Oleson	303.989.4809
		<b>WebPage / Archives</b> Cyndie Thomas	303.755.1885
		<b>DBG Plant Sale &amp; Volunteers</b> Bill Powell	303.355.8098
		Marge Oleson	303.989.4809

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### Feedback Needed:

Members, do you have thoughts regarding the Water Garden's MarketPlace section? Tell us how it's working for you. Contact Bill Powell at 303.355.8098.

## Express Membership Application

**Membership Fees: \$15.00 Individual; \$20.00 Family**

Join or Renew Today!

Make checks payable to Colorado Water Garden Society;  
DO NOT send cash; Check or Money Order only, please. Thank you.  
Return this form with your payment to:

**CWGS Membership**  
**100 Glencoe St.**  
**Denver, CO 80220**

(  
Please Print)  
Name(s) \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Home Phone (        ) \_\_\_\_\_  
E-Mail \* \_\_\_\_\_  
Signature \_\_\_\_\_  
Date \_\_\_\_\_  
Pond Experience (Beginner) \_\_\_\_\_ (Some Skill) \_\_\_\_\_ (Pro) \_\_\_\_\_

*\* Note: Providing your e-mail address authorizes and enables CWGS to send you  
notifications of interest from time to time. CWGS does not share e-mail addresses with  
other entities.*

Contact me concerning volunteer opportunities I have checked below:

**DBG Volunteer Sundays** \_\_\_\_\_ **Hudson Gardens** \_\_\_\_\_ **Newsletter** \_\_\_\_\_  
**Plant Exchange/Sale (June)** \_\_\_\_\_ **Pond Tour (July)** \_\_\_\_\_  
**Water Blossom Festival (Aug.)** \_\_\_\_\_ **Holiday Party (Dec.)** \_\_\_\_\_

Or...Did you know?

**You can now pay your dues online at [www.colowatergardensociety.org](http://www.colowatergardensociety.org)  
using **PayPal****

## Large Turnout Enjoys New Pond Ideas at “Get Wet!”

*Jim Arneill*

On the eve of this year’s most miss-  
predicted snowstorm, approximately sixty-  
five water gardening enthusiasts and  
experts assembled in Gates Hall for a fun  
and informative evening. After nearly two  
hours of humor and practical tips on  
enhancing water features, everyone  
seemed to leave with a feeling of  
enjoyment and new ideas to apply at home.  
Many also left with some outstanding door  
prizes provided by Keith Funk, and still  
others took home a brand new lotus to  
feature in their ponds!

As our keynote speaker, Keith highlighted  
many new products that would benefit our  
water features or would be just fun to add!  
He demonstrated many reasonably priced  
mechanical and biological filters to improve  
water clarity. ...And he showed several  
types of fountains and misters -- some with  
Las Vegas-style lighting that would  
definitely turn a pond into a show palace for  
those wanting a colorful, glitzy look.

Other information helped participants to  
understand indicators to look for and which  
actions to take in response to this past  
harsh winter. Special thanks to Cyndie  
Thomas for all her photographs of plants

and fish, as well as knowledge and research  
on this topic!

Joe Tomocik, Curator of Water Gardens at  
Denver Botanic Gardens, also provided  
helpful information. Special thanks to Stan  
Skinger who demonstrated how to plant and  
care for lotuses. Another “expert-on-hand”  
Bob Hoffman handled the questions at our  
Ask the Experts table and also assisted  
Stan’s demonstration.



*Get wet attendees crowd the  
lobby to Gates Hall (below)*

*Stan Skinger  
demonstrates lotus  
planting (above)*

Joe Mascarenas demonstrated how to take  
great pictures of water features. Joe’s  
handout sheet contained many helpful tips  
that were clearly manifest in his incredible  
photographs. What a great inspiration to  
encourage us all to get out there and  
photograph! Although Joe does process  
some of his photos at home, he uses Costco  
and other commercial resources for most of  
his production and even for his over size  
prints. His results are spectacular and still  
reasonably inexpensive to produce.

Vicki Aber brought pre-ordered lotuses for  
pick up. An additional 16 lotuses were

*(continued on page 4)*

## Features

(Continued from page 3)

answer the question “How do you tell the difference between a damselfly and a dragonfly?”

Professor Cranshaw explained that even after a year of careful observation his study remains a work in progress. Fieldwork will continue. Various options are possible for distribution of the data and conclusions. Eventually the results may be published, or a website may be developed.

After Whitney’s presentation, the 60-plus attendees had an opportunity to enjoy refreshments, order lotus plants, and visit with Whitney. (By the way, the lotus plants can be picked up at the upcoming Get Wet Event in Gates Hall - 7 to 9 PM April 11. Lotus plants are still available for purchase, too! See page 10 of this newsletter.)

While a few lucky individuals left with door prizes, everyone walked away with a better appreciation for the role aquatic insects play in a water garden ecosystem.

### How YOU can participate in Professor Cranshaw’s study:

Whitney’s study of aquatic insects and water garden ecosystems will continue. If you are interested in volunteering your pond, and perhaps your own involvement in insect collection, contact Cyndie Thomas at 303.755.1885 and via [splaash@comcast.net](mailto:splaash@comcast.net)



CONTACT GARY @  
303,989,4464 TO  
VOLUNTEER APRIL 11  
AT “GET WET”

...TO HELP WITH  
GET WET

## Welcome New and Returning Members:

**Vicki Aber**  
Arvada, CO

**Cara Ablin**  
Littleton, CO

**Bill & Janet Bathurst**  
Arvada, CO

**Gabriella & Mario**  
Bertelmann  
Denver, CO

**Deanna & Larry Davis**  
Hightlands Ranch, CO

**Gail Goldberg**  
Denver, CO

**Nancy Novinger**  
Hagerty  
Englewood, CO

**Melba & Jerry**  
Johnston  
Lakewood, CO

**Georgia Keller**  
Lakewood, CO

**Kiebler (BR&D  
Landscape, Inc.)**  
Franktown, CO

**Irmal L. Miller**  
Franktown, CO

**Rebecca Nash**  
Centennial, CO

**Bill Powell &  
Bruce Polkowsky**  
Denver, CO

**Chuck & Mary Purdy**  
Lafayette, CO

**Andrea Sahlen &  
Dan Fyles**  
Aurora, CO

**Joe Salvati**  
Castle Rock, CO

**Paul Swenby**  
Longmont, CO

**Karen Young**  
Englewood, CO

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(  
Please Print)  
Name(s) \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Home Phone ( ) \_\_\_\_\_  
E-Mail \* \_\_\_\_\_  
Signature \_\_\_\_\_  
Date \_\_\_\_\_  
Pond Experience (Beginner) \_\_\_\_\_ (Some Skill) \_\_\_\_\_ (Pro) \_\_\_\_\_

\* Note: Providing your e-mail address authorizes and enables CWGS to send you  
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other entities.

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Plant Exchange/Sale (June) \_\_\_\_\_ Pond Tour (July) \_\_\_\_\_  
Water Blossom Festival (Aug.) \_\_\_\_\_ Holiday Party (Dec.) \_\_\_\_\_

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using PayPal**



Photo from mongabay.com



Crystal Palace  
illustration from  
Wikipedia.com  
Note the resemblance  
of the top arch to the  
Victoria leaf, left

## Victoria regia

*The Lily that honored a queen also gave form to the world's first international Expo.*

By Bill Powell

We know the species today as *Victoria amazonica*. When it was first spotted in South America at the beginning of the 19<sup>th</sup> century, it was called – understandably – the “Giant Water Platter.” For years the species languished as a memory until it’s repeated rediscovery by both French and English naturalists. In 1837 John Lindley, the eminent English horticulturist, established the plant as a separate genus *Victoria* and named the species *regia* (or perhaps *regina*) in honor of his Queen. Later the species name was changed to *amazonica*, respecting precedent of an earlier moniker given to the species when it was thought to be the same genus as the smaller Asiatic *Euryale*.

Despite the confusion over scientific classification, Victorias were a big (literally big) hit in the burgeoning English gardening circles at just the time when Victorian interest in the exotic was matched by technological advances. Increased production of glass and innovations in metallurgy and space heating suddenly made growth of tropical plants possible in a cold climate, at least for the wealthy. It was an expensive undertaking, but what better way to demonstrate one’s erudition and disposable wealth simultaneously?

*Victoria* was brought to flower for the first time in captivity during the late fall of 1849. Earlier attempts at importing plants had failed; so, too, had propagation from seed. More seed was obtained and distributed

to the royal gardens at Kew and to the private estate of Chatsworth. After three years of congenial competition, Kew’s director William Hooker succeeded in germinating seedlings first. Hooker generously shared his plantlets with Joseph Paxton, the head gardener at Chatsworth.

Paxton, long respected for his horticultural success at the estate, had also become an innovative landscape designer and engineer. His construction, a decade earlier, of Chatsworth’s “Conservative Wall” followed by “The Great Stove” explored new twists on passive solar gardening principles and active space heating as well. The “Stove” incorporated cast iron columns, plate glass glazing, central heating, and sophisticated laminated wood rafter purlins that imparted a voluptuous beehive shape to the enormous hot house. When the prospect of raising seedling *Victoria* lilies was presented to him, Paxton wasted no time in developing a third glasshouse dedicated to, and inspired by, the vast *Victoria* waterlily.

As the seedlings grew in a special heated tank housed in The Great Stove of Chatsworth, work began on the dedicated lily house. “*Taking the form of a large glass box, the new house was just over sixty feet long and forty-seven feet wide, almost completely filled by a large circular tank. Only four very thin wrought-iron beams supported the roof, with eight slender, hollow cast-iron columns to brace the structure, doubling as drains for water. Ventilation was provided by openings in the stone basement and movable roof lights. Air and water temperature were maintained at between 80 and 90 [degrees] F by heating pipes that ran around the outside of the house and through the water in the tank itself. Four little wheels kept the water moving...*” \*

Paxton later wrote that the structure of the *Victoria* leaf inspired the nominally flat “ridge and furrow” design of his unique lily house roof. He had noticed the ribbing and cross-veining of the *Victoria* leaf gave great strength to its thin membrane. He incorporated a similar structural pattern, albeit in a simplified and orthogonal mode, in the lily house roof. The result was a flat three-dimensional, glass roofed, rudimentary truss of surprising delicacy.

*motion, to keep pouring and distributing the gel under and on the flower. If you notice a petal that has become flattened or distorted, you can tweak it gently with your finger. As you get to the top of the flower, especially if it has upright stamens, pour the silica gel vertically and directly between the stamens to maintain their position. Complete the process by pouring more silica gel under and on top of the upper petals so that they retain their shape and positions.*

6. *Cover the container with its lid and allow the silica gel to absorb the moisture from the flower blossom for about 4 or 5 days. The exact drying time will vary with the size and type of blossom. The instructions inside the silica gel container include a flower drying timetable that ranges from 2 to 7 days depending on the type of flower. If you leave the blossom in the silica gel too long, I have noticed that the flowers look more dried up and faded.*

7. *After a few days, remove the lid and carefully pour out the top portion of silica gel. As you see the dried flower, carefully continue pouring out the silica gel, and at some point, you can gently hold onto the blossom and then shake out most of the remaining silica gel. Some people place the dried blossoms in a rectangular shallow-edged cardboard box (like for cases of 6-packs) for a few more days. As it is gently shaken, the final remaining silica gel crystals are removed from the blossoms. Without the moisture in the petals, they are more brittle so some care is needed when handling them.*

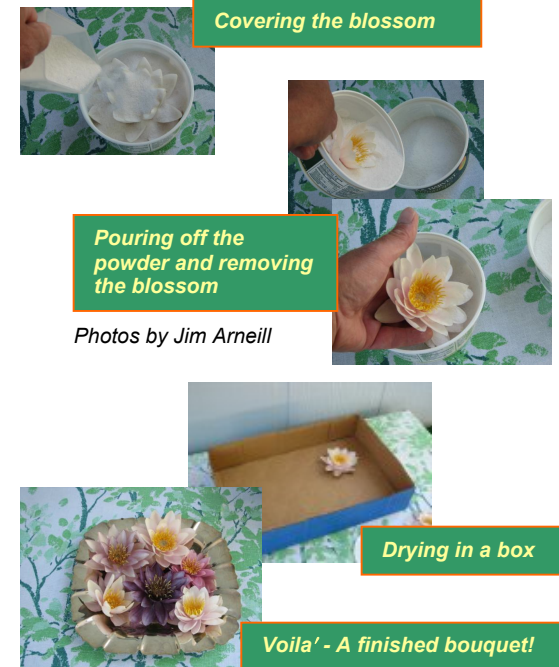
8. *Voila’ – a wonderful remembrance of the lily in your pond! Especially when clustered with other lilies, they add a beautiful touch to any home or patio. The colors may fade some over time, especially if exposed to direct sunlight, but they will still look very nice. I have left my dried flowers as they are, but I have also heard of some people adding a light layer of hairspray or a dried flower preservative.*

For those who would like to dry their water lilies using a quicker method, you may also microwave the container with the flower and silica gel. It’s recommended that you place a cup of water along side your sealed drying

container in your microwave and heat everything for about 3 minutes, although the “cooking” time will vary depending on the microwave and size of flower. You might want to keep a notebook and experiment with the length of time that works best for you.

Enjoy the final days of your beautiful water lilies in your pond and maybe afterwards in your home for many more!

**Safety Note:** Especially when pouring the silica gel, there is a very fine powder in the air. The powder may present a health hazard, so exercise care not to breathe this in. Alternatively, purchase a mask that prevents these particles from being inhaled.



Covering the blossom

Pouring off the powder and removing the blossom

Photos by Jim Arneill

Drying in a box

Voila' - A finished bouquet!



## Over-winter Your Tropical Waterlilies OUTSIDE!

*Bob Hoffman says it couldn't be easier.*

Those of us who don't have greenhouses (or any sunny spots left near our windows) face a dilemma every fall – how to over-winter our tropical water plants. Tropical waterlilies are particularly problematic to keep in a state of active growth. High light levels and lots of heated water are required. Maintaining such a volume of standing water inside your home can invite disaster -- and unappealing odors.

CWGS member Bob Hoffman has a simple strategy for over-wintering tropical waterlilies in a mostly dormant state. And...the approach has the advantage that it can be done completely outside using readily available products! Bob revealed his tricks during a demonstration at the recent CWGS-sponsored Water Blossom Festival. (Read the companion article in this issue for more on the Festival.)

Toward the end of warm weather and prior to the first freeze, Bob removes all but the smallest leaves from his tropical lilies. To reduce space requirements he often "down-pots" into the smallest plastic pot that will accommodate the plant's roots and some stiff garden soil. He then consolidates the various small pots into a larger plastic "half-barrel" of the sort sold as a liner for wood whiskey planters. Any larger container or tank will work. It need not be insulated, although insulation might be helpful.

Bob arranges his barrel on an exterior, covered

porch next to a south-facing wall in order to take the best advantage of passive solar heating from the winter sun while avoiding accumulations of snow. Bob fills the barrel with water, submerging the plants, and he covers the top with plastic window screen and a layer of cellophane. The screen and plastic film provide no insulation; they serve to retard evaporation of water.

The last step is to add a common stick-type submersible electric aquarium heater. Heaters are available in a number of sizes and wattages for prices beginning below \$10. Obviously the operating cost and effectiveness of the heater will vary, and the unit needs to be sized to the demands of the container, but Bob has found that a single heater set on its lowest temperature setting (usually around 65 to 70 degrees) suffices to keep the water in his half-barrel from freezing in even the coldest Colorado season. Be sure to operate the heater on a ground fault protected (GFI) circuit. GFI protected outlets are readily available at hardware stores and are no more complicated to install than a replacement outlet.

During our coldest weather the heater may run constantly, but the water temperature will probably remain in the low to mid 40's. The plant will not flourish, but it will survive and propagate additional plantlets through a natural survival mechanism triggered by reduced growing conditions.

Threatened by cooler water, the plant stores sustenance in one or more tubers that develop below the soil. Around the end of February or beginning of March as days begin to lengthen, Bob searches for viable tubers and plantlets developing from the original plant. He pots these into the smallest plastic pots he has,

reserving the original tuber by floating it in the tank. Sometimes as the water warms, the parent tuber generates additional plants still – a perfect spring gift for your water gardening friends! In June Bob up-pots the growing plants for use in his decorative container gardens and later display in his ponds.

Bob reports that some species respond more prolifically under his regimen than others. One unknown blue-flowering tropical lily in his collection (possibly *Blue Beauty*) routinely generates 15 to 35 plants each year. Not all species are as cooperative, but Bob finds that almost without fail he is able to regenerate at least one plant from each tropical waterlily that he over-winters with this simple, but effective, approach.

*Information for this article came from a conversation with Bob Hoffman. He can be reached at 303.978.0124. Additional information can be found online. Sean Stevens, among others, has descriptive instructions that can be retrieved by entering "tropical waterlily propagation" into a search engine.*

## Treasurer's Report

CWGS Balance  
As of Aug 26, 2007  
**\$ 20,172. 36**

## New and Renewing Members:

**Janice Barbee**  
Denver, CO

**John Bayard**  
Centennial, CO

**Joan Greelman**  
Arvada, CO

**Al and Glenda Kravits**  
Highlands Ranch, CO

**Steve and Maryann Miller**  
Boulder, CO

## Did you know?...

1. Tropical waterlily tubers can also be harvested in the fall and preserved in damp sand or peat in a cellar, or they can be refrigerated around 55 degrees over winter. (Wine coolers work better than standard refrigerators. Refrigerator temperatures are customarily set lower than is optimal for tuber storage.)
2. Some species of tropical water lilies are viviparous, meaning that they will produce plants from their leaves. During propagation a growing node will swell at the sinus indentation where the leaf joins the stem. Once growth shows, the node can be planted. Most viviparous tropical lilies are more tolerant of cooler water temperatures and less light than are non-viviparous species.
3. Under Curator Joe Tomocik's direction, Len and Doris Freestone (with the help of Carla Mascarenas and other CWGS members) propagate Denver Botanic Garden's tropical waterlily collection anew each year. A few select species are over-wintered as plants in the Gardens' greenhouses, but for the most part the collection is preserved by harvesting tubers, storing them in coolers, and replanting them in late winter.