

This Year:
CWGS at 25
Our Silver Anniversary

Apr. 9: Get Wet - Water Gardening Fun in 2008
6:30 to 9:00, Gates Hall
Program and Garden Center Exhibitors' "mini-expo."

May 18: Plant Swap
1:30 to 3:30, Gates Hall

June 8: Annual Plant Sale
9:00 to 3:00, Morrison Ctr.

June 22: Waterside Program
2:00, Site to be determined

July 12: Pond Tour/Picnic
11:00 to 4:00 Picnic at 5:00

July 26 and 27: Water Blossom Festival and 25th Anniversary Festivities, DBG.

Aug. 17: Waterside Program
2:00, Site to be determined

Sep. 14: Annual Mtg. And Board Elections
1:30 to 3:30, Gates Hall

Dec. 7: Holiday Banquet
6:00 – 9:00 Morrison Ctr.



Volume 25 Number 2

25th Anniversary Year

April 2008

Green Water Gardening
Happily, NOT what you might guess...

By Jim Arneill

How can you learn about "green" water gardening, best plants suited for our Colorado climate, and major water gardening happenings in 2008? Attend "**Get Wet – Water Gardening Fun in 2008!**" in Gates Hall at Denver Botanic Gardens on Wednesday, April 9. Mixed in with lots of practical information will be humor, hands-on demonstrations, and even door prizes!

From 6:30 - 7:00 pm in the foyer outside Gates Hall, representatives from major garden centers in the metropolitan area will set up displays about water gardening resources they can offer to you.

The program, which takes place from 7:00 - 8:30 in Gates Hall, begins with a presentation by KEZW "Garden Wise Guy" Keith Funk on "green" (environmentally friendly) pond products.

Next, long-time water gardener and past CWGS President Cyndie Thomas shares her expertise on aquatic plants that grow successfully in our climate. Then, Denver Botanic Gardens Water Curator Joe Tomocik will provide an update on water gardening in and around the Gardens - one of the most renowned water gardening sites in the United States.

Afterwards, from 8:30 - 9:00, you can take part in demonstrations on topics that range from digital photography of water features to planting and

dividing of water plants. If you have specific questions, you can "Ask the Experts" who will remain at a special table to chat with you about your particular water gardening interests, quandaries, successes and failures. Or, use the time to complete your investigation of the exhibitors' displays in the foyer.

**Program Wednesday April 9
at 6:30 pm - Gates Hall, DBG**

**Get Wet – Water Gardening
Fun in 2008**

Door Prizes!

Participating Exhibitors:

*Arapahoe Acres
Falls by Fox
Highlands Garden Center
Jared's Nursery and Garden Center
Tagawa's
True Pump and Equipment
Wilmore Garden Center*

Admission to Denver Botanic Gardens for the program is free, as is the program itself! When you arrive, walk past the main entrance gate on York Street, turn right to enter the building, and walk straight back to the north end to Gates Hall.


The evening promises to be fun and informative. And...don't forget those door prizes! We hope you'll mark your calendars and join us for this special evening!

Visit us online at www.colowatergardensociety.org

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100 Glencoe St.
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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 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 _____ Water Plants booth, DBG May Sale _____

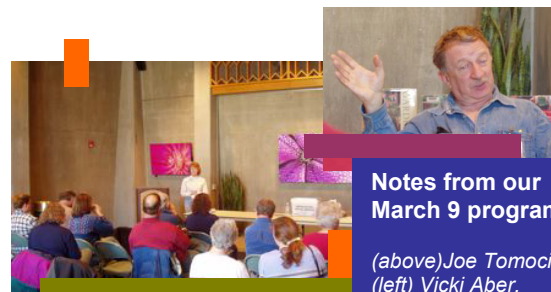
Hudson Gardens _____ Newsletter _____ CWGS Plant Sale (June) _____ Pond Tour (July) _____

Water Blossom / Anniversary Festival (July) _____ Holiday Party (Dec.) _____

Or...Did you know?

You can now pay your dues online at www.colowatergardensociety.org
using **PayPal**

*"Ever see how Small a fish you can catch?" ***



Notes from our March 9 program

(above) Joe Tomocik
(left) Vicki Aber,
CWGS President,
addressing group

**** Quote from Joe Tomocik**

He didn't mean it literally. DBG Water Garden Curator Joe Tomocik is too practical a fisherman to go after small fry when larger fish are to be had and supper awaits. Joe made his comment to challenge the conventional thinking that we all slip into when planting containers. You know the sort of advice. It includes the rubric: "Put one big plant in the middle and two small ones flanking to create an arrangement of three."

At the Society's March 9 general meeting, Joe invited the collected group of about 20 water gardeners to exploit conventional design strategies, but also to stand advice on its head when your desires run to the contrary. Joe encouraged the group to try the unexpected as well as the recommended, but always to "create a story" using shape, color, texture, and contrasts.

Here are a few of Joe's tips for success:

- When considering the size, color, and effect of a planted container, look at it both from afar and close up.
- Earth tone pottery generally creates a more harmonious look by deferring to the plants; however dramatic contrast, such as a cobalt blue glaze against lime green vegetation, offers a different appeal.

- Plant your containers full for a lush effect from the beginning.
- Non-submerged plants (i.e. marginals) can be planted in "light" soil-less mixtures whereas submerged plants like waterlilies require heavy soil. Light soils will float away under water, but work well in pots that are not submerged.
- Container water gardens do not necessarily have to be planted in watertight pots. Marginals will grow perfectly well in draining pots as long as they are kept damp. But if you need a pot that does hold water and all you have is one with a hole in it, try plugging the hole with a common cork.

Recommended Reading on Container Gardening - From Helen Fowler Library at DBG:

- "Container Water Gardens" by Philip Swindells
- "Planters Containers, and Raised Beds" by Chuck and Barbara Crandall
- "Water Gardening in Containers" by Helen Nash and Greg Speichert.

CWGS Educates at Echter's



Board Members Bill and Janet Bathurst in the CWGS display at Echter's March 8

Photo by Ken Lange

March 7-9 the Board staffed a CWGS information booth at Echter's, the nursery and garden center in Arvada, where we answered questions and distributed information regarding a range of water gardening topics and the benefits of membership in the Society.

2008 Operating Budget
Approved

Ken Lange, Treasurer

Following a successful financial year in 2007 in which CWGS posted a net income of \$1,610.23 after expenses, we face the special challenges of celebrating the Society's 25th Anniversary season.

The Board has decided that CWGS will continue to move forward and that, with the help of the membership, the club will support an ambitious, but balanced, budget in 2008. This year we hope to produce an even better plant sale as well as an expanded Water Blossom Festival in celebration of our Silver Anniversary.

At the February 10, 2008 CWGS Board meeting I presented the following 2008 Budget proposal, which was approved by unanimous vote:

Projected 2008 Income

Membership	\$1,600.00
Newsletter Advertising	\$ 420.00
Plant Sale	\$5,650.00
Water Blossom Festival (fees and silent auction)	<u>\$1,900.00</u>

Total Projected Income \$9,570.00.

Projected 2008 Expenses

Fixed	\$ 861.40
General Office	\$ 48.60
Plant Sale	\$ 3,160.00
Programs	
(events, grants, activities)	\$ 3,850.00
Newsletter	<u>\$ 1,650.00</u>

Total Projected Expenses \$9,570.00.

***Editor's Note:** The budget information shown at the bottom of the left column is in a condensed and simplified form because of the limited space available in The Water Garden.*

If you have specific questions or would like to see the detailed 2008 budget or accounting from 2007, please contact Ken Lange or any of the Directors on the Board. All financial information is open for review.

Treasurer's Report

CWGS Balance
As of March 9
\$ 17,642.97

Board Business Meetings in 2008:

April 6: 2:00 PM - Waring House, DBG
May 18: 12:00 PM - Gates Hall, DBG
July 20: 2:00 PM - Waring House, DBG
Sept. 14: 12:00 PM - Gates Hall, DBG
Oct. 5: 2:30 PM - Waring House, DBG

All members are welcome. Please join us!

New and Renewing Members

Albert Zimmer *(new)*
Birdsboro, PA

Larry Brown
Brighton, CO

Jim Carlson
Denver, CO

Ben Coleman
Longmont, CO

Mike Fulenwider *(new)*
Wheatridge, CO

Mark Galipeau *(new)*
Rohnert Park, CA

Welcome new members!

Elaine Menter
Greenwood Village, CO

Tozz Pegues *(new)*
Centennial, CO

Chuck and Mary Purdy
Lafayette, CO

Gary and Judy Reid
Boulder, CO

John and Mary Scheltema
Denver, CO

Rosayn Warwick
Arvada, CO

YOU CHOOSE 2008
Plant Primary

In keeping with the election year we thought we'd hold an election of favorite plants. To nominate your favorite plants in the following categories, just tear out this form and mail it to:

Vicki Aber
8046 Parfet Way
Arvada, CO 80005

If you really can't decide, you may nominate more than one per category. We'll have an 'election' later this year once we have the nominees in.

Favorite Hardy Lily _____

Favorite Tropical Lily _____

Favorite Hardy Marginal plant _____

Favorite Tropical Marginal plant _____

Favorite plant that you would like to have, but don't _____

Nominate now; don't leave your favorite plant high and dry. Let's see what a versatile group of plants we can assemble for the election. (Who knows, if you reveal a plant you'd really like, but don't yet have, maybe another Member will share a piece with you?)

So What's in YOUR Pond... (continued from page 5)

The Desert Research Institute in Las Vegas is now testing alternative treatment employing bacteria – a treatment not unlike the principle on which the typical home garden pond's natural cycle of filtration is based. So... while it may be cold comfort to you personally, even if your pond has been affected by pharmaceuticals originating from your well or the municipal water supply, your fish may already be better protected than you are when you drink from the kitchen faucet.

References:

1. "Drugs in water causing troubling problems to fish, wildlife" www.cnn.com/2008/HEALTH/03/11/pharma.water.fish.ap/index.html
2. <http://Toxics.usgs.gov> Toxic substances Hydrology Program
3. "Pharmaceuticals In Our Water Supplies" <http://ag.arizona.edu/AZWATER>

Mark your calendars ... for our first Waterside Program June 22

Nancy and Werner Neupert have offered the perfect location for CWGS' first Waterside Program.

For those of you who missed the Neupert's extraordinary naturalized pond when it was on the Tour two years ago (and I'm one), this will be a rare treat: a chance to view an exceptional pond, lush with hardy marginals, lilies, and lotus while you enjoy a pond-side program tailored to the particular attractions of this Boulder oasis.

We'll also use the occasion to explore interest in holding additional regional, informal get-togethers. Werner floated the idea in the March newsletter. We think it's a good idea. Come and share your thoughts.

Look for details in the May and June issues of the Water Garden.

CWGS HELPS WITH DBG's

URBAN NATURE

PLANT SALE

MAY 9 & 10, 2008

VOLUNTEERS
NEEDED

This year's May plant sale at Denver Botanic Gardens will focus on the theme of Urban Nature, and once again CWGS members will be helping to coordinate and staff the Water Plants Division.

The public event will operate from 8:30 a.m. to 6:00 p.m. on Friday, May 9 and from 8:30 to 4:00 pm Saturday, May 10. The Water Plants Division is recruiting volunteers to help with set-up beginning at 10:00 am Thursday, May 8, to work the Patron's pre-sale event that evening, and to staff the Division booth on Friday and Saturday from 8:00 a.m. until closing. Shifts are generally around 3-1/2 hours long, but we can be flexible.

Volunteering for the May sale is fun, easy, and helps the Gardens while promoting the Society's mission. Experienced and novice water gardeners are welcome. Unsure? There's no better way to learn! Every shift will include an old hand, and the club will have extensive printed information available to address both general water gardening inquiries and specific questions about the species marketed at the sale.

The next issue of the newsletter will offer additional detail about the sale itself, but for more information now about volunteering or to sign up, contact Bill Powell at 303.355.8098. Email: wbpow@comcast.net

Volunteer Sundays Return to DBG

Our sessions begin on March 30. Experienced and novice alike are welcomed.

For more details, or to sign up, call Bill Powell (303) 355-8098

So... What's In YOUR Pond?

It may be the same pharmaceuticals that are in you.

By Bill Powell

A five-month Associated Press investigation recently assembled studies pointing to the presence of trace amounts of pharmaceuticals in the water of 24 areas across the United States. The studies were done in diverse geographic and demographic regions extending from southern California to northern New Jersey. The Front Range is one of the areas touched upon by the report.

A laundry list of "anti" drugs includes many of the detected pharmaceuticals. Antibiotics, antidepressants, antihistamines, anti-hypertension and anti-seizure drugs are among the more than 100 manmade compounds found. Analgesics, caffeine, personal care products from fragrances, sunscreen agents, and even steroids were also detected.

Both natural aquifers and post-treatment potable water supplies show measurable levels of these manmade chemical compounds.

According to Erik Orsak, an environmental contaminants specialist with the U.S. Fish and Wildlife Service who reported to CNN on a Lake Mead Nevada study, "We have no reason to think that this is a unique situation. We find pretty much anywhere we look [that] these compounds are ubiquitous." On March 10 the Denver Post reported that unspecified antibiotics had been found in the Denver Water Supply.

The detected levels are low, often measured in parts per billion, or even trillion. Until recently the Environmental Protection Agency has assumed that dilute traces of such compounds were insignificant to health concerns. However, European studies have been following the issue for a decade, and researchers are now beginning to piece together disturbing effects that powerful manmade compounds may have upon the pyramid of life that begins with microscopic organisms in the aquifer.

Growth rates of Zooplankton and hydras (a tiny polyp) have both been diminished when exposed to trace pharmaceuticals. Even Algae growth is inhibited. Farther up the food chain, fish and birds that feed primarily on fish are exhibiting reproductive and kidney problems that are suspected to be attributable to pharmaceuticals ingested at a lower level on the species pyramid.

Careless disposal of unused drugs no doubt contributes to pharmaceutical pollution in the aquifer, but significant pollution is thought to result from excretion by humans and animals. Current wastewater treatment does not remove potent pharmaceuticals from effluent.

Veterinary prophylactic treatment of animals with antibiotics and steroids is also thought to contribute. One German study shows that up to up to 10% of the powerful anabolic steroid trenbolone is passed through cattle unabsorbed. Unused steroids collect in manure and eventually leach into the soil.

Although amounts in parts per trillion may seem slight, the underlying dilemma is that manmade pharmaceuticals are powerful and persistent, which suggests the effect on the environment may be accumulative over time. The impact may also be increased by a synergistic interaction with chlorine, a common water treatment.

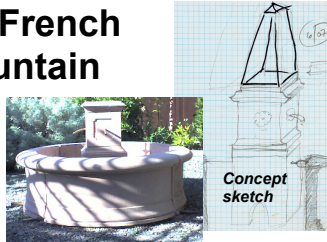
Some studies believe the arid West may be especially vulnerable because of the high reuse of effluent and limited water sources. But even mountain communities that are relatively elevated, and therefore less likely to be downstream of another community's wastewater treatment plant, now show measurable pollution from manmade pharmaceutical compounds.

Of current technologies, only reverse osmosis works to remove pharmaceutical pollution. The process is slow and leaves pollutants to be disposed. (Denver Botanic Gardens has a small R.O. system that it reserves for particularly sensitive species of orchids, bromeliads, and carnivorous plants.) A system large enough to filter water for an entire city is not feasible with current technology.

(continued on page 8)

Casting A French Village Fountain

By Mark Galipeau



With a little background in casting plaster and cement molds, this backyard feature has come to life. Modeled on a composite of several fountains (dating from a hundred and fifty years ago) that still serve as the central hub of many French rural communities, my version celebrates these beautifully maintained remnants of Provincial village life.

Using a radius arm, I passed a sheet metal template over a form that supported wet plaster. The template "screeded" the wet plaster as the arm passed, creating the desired contours along a quarter-segment section of fountain wall. (Photos 1&2) Liberally coated with mold releasing agents, this model was then used to cast the "negative" impression of the basin's outside face. (Photo 3) Coupled with a plywood inner radius closure, a negative form was created from which four identical finished cement quarter-segments were cast. (Photos 4&5).

A mixture of white cement, crystal silica sand, cement color and polypropylene fibers were hand mixed and put into the recumbent mold to form the finished quarters. Sheet-welded wire reinforcing was also added for greater strength.

The fountain's cast foundation/bottom was reinforced with welded wire mesh, and bolts were placed around the perimeter. The four quarters fit over these bolts to provide a connection between the sides and bottom of the fountain and to resist lateral forces resulting from the water once the fountain was filled. The quarters were attached to the foundation with a two-part epoxy and sealed with a commercial silicone caulking.

I also cast bolts into the walls of the basin to allow the quarters to be attached to each other with a plate and

two nuts at the top and bottom of each joint; however, so far there has been no leaking and no sign these mechanical fasteners are really needed. The epoxy in the joints seems sufficient to resist the volume of water in the basin. As a further precaution, I developed a design to incorporate backer rods at the joints, but this detail, too, has proved unnecessary. For aesthetic reasons, the exterior joint faces were grouted with the same sand and cement mixture used to cast the pieces.

With the help of CWGS member Bill Powell, an ingenious system of dual pvc pipes was fashioned to allow the electrical service for lights and pump to be secreted away in the 4-inch thick walls of one of the four segments. A cast cap of cement camouflages the top of the pipes.

Electrical conduit runs from a dedicated circuit breaker at the house to a sealed electrical box outside and below ground behind the fountain. There is a short section of exposed wire as it makes the transition from the electrical box to the pvc pipe in the wall of the basin.

The base of the central pylon is hollow, allowing for the pump to be hidden. Just above, the middle pylon section has copper plumbing cast in a solid block of cement, again colored and made with the same mixture of materials as the basin. The copper piping was soldered and tested for flow before being cast into the block, although minor flow and balance issues remain to be addressed. Cast bronze or cast cement rosette/spigots will be added to the four sides of the middle block once the feature is complete. (Photo 6)

I cast a mid-point cornice in the same fashion using a waste mold made of plywood, masonite, and cast plaster forms. The central pylon will eventually be topped with a four to five foot obelisk. (See concept sketch, top left this page.)

The fountain made its debut on September 1, 2007 with a backyard fiesta. A trio played and sang California music of the 1830's, and guests feasted on tamales and traditional regional cuisine, sangria, and local pear cider.

La Fontaine Retrouve About Mark and his inspiration...

Mark Galipeau was a professional plasterer for fifteen years before earning his BA and teaching credentials. He's taught primary grades for the past twelve years, but obviously he's not forgot the skills he learned as a journeyman plasterer in the San Francisco bay area. Among other projects, Mark worked on the restoration of the historic City of Paris Neiman Marcus restoration and the California State Capitol.

Mark drew inspiration for his fountain from photographs found in "La Sainte-Baume au fil des eaux" by Jean-Michel Thibaux. Two other books helped with the technical challenges: "Practical Plastering, Cement Finishing and Related Subjects." (out of print) and "Plastering, A Craftsman's Encyclopedia" by Stagg and Pegg.

Village fountains are found in the centers of many older French towns throughout the southern Cotes-du-Rhone and Provence. The fountains were, and often still are, spring fed. While their original purpose was largely practical, these graceful basins still offer a sense of place to the squares they inhabit. Many are freestanding and accessible from all sides, again for reasons of practicality in the day when they were the sole source of public water in the village.

Mark's evocation of Provence is now operational. Why, it even holds water! As any experienced water gardener knows, that alone is no small achievement. The fountain remains a work in progress, but no need to await finishing touches. Already this homage to the traditional village fountains of southern France demands admiration among the espaliered fruit trees, rows of raspberries, and two beehives in its Mediterranean-inspired bay area landscape.

Mark hopes to complete his project later this summer with the addition of an obelisk and decorative water spouts – all of which he will fashion, of course, with his own hands.

If you have questions about casting fountains, Mark is happy to answer them. His email address is red72impala@yahoo.com



1. Metal template on radius arm, atop work table



2. Back side of screeded plaster model of quarter segment (right)

The Process

Photos by Mark Galipeau



3. (Above) Finished face of plaster model ready to receive slurry of mold-forming material to create "negative" mold.



4. (Above) Rear view of negative mold that is used to form outside face of finished quarter segment. Note wood armature.



5. (Above) Same mold with armature turned flat. Ready to receive curved plywood inside radius closure and final "positive" cement pour.



6. (Left) Fountain assembled. Note base of pylon with spigots