

**This Year:**  
*CWGS at 25*  
**Our Silver Anniversary**

**Sep. 14: Program and our Annual Mtg. and Board Elections**

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

*(Interested in being on the Board? Contact any Board Member.)*

*Program topic: What to do with your tropical plants over winter...and basics for winterizing your pond*

**Oct. 5: Planning Meeting.**  
2:00 pm Waring House, DBG.

*Have input for the Board? Thoughts about 2008's activities and events, or recommendations for 2009? Help plan! All members welcome.*

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



Volume 25 Number 7

25<sup>th</sup> Anniversary Year

September 2008

**Fall is in the air.**

***But wait, I still have more summer I want to enjoy.***

*By Vicki Aber, President*

Does any one else feel the summer has just zipped by? We've had quite a busy summer with all the CWGS happenings. I hope everyone had a chance to sample a few of our events.

Our last Waterside meeting at Deidre Parker's home was fascinating. (Quirky is a good description, too.) I could have investigated for hours and still found interesting little areas that I hadn't noticed at first. What a treat; thank you Deidre!

Thanks also, Deidre, for setting up the tour of the Meditation Garden at MARPA. Strolling by the pond there was a very different experience and quite relaxing. (For those of you who missed the meeting, an article and photos follow on page 3.)

Our next get-together will be the last general meeting before the Christmas party in December. On Sunday, September 14, we will hold a panel discussion on the general topic of what to do with tropical water plants for the winter and on measures for closing the pond down for winter. If you've developed any tried-and-true (or devilishly clever, for that matter) methods of over-

wintering tropical plants, we'd love to have you share that. If you have questions on what to do now that winter will be here soon, bring those too. (I know I have trouble letting go of the beautiful tropical lilies, cannas, and taro in the fall.)

**SUNDAY, SEPT. 14**  
**1:30 – 3:30 pm**  
**Waring House, DBG**

**Program: "What to do with your tropical plants over winter?"**

**Annual Meeting and Elections:**  
**See page 9 for proposed slate of Directors**

September 14 is also our Annual Meeting during which the Club elects the Board of Directors for the coming 2009 season. Please come and participate in the election of CWGS leadership.

CWGS is structured to operate with a maximum of 13 Directors. All elected positions are for two-year terms. Terms are staggered so that only half of the positions will come open in any one year. Service for a particular office is limited to two

*(continued on page 9)*

Visit us online at [www.colowatergardensociety.org](http://www.colowatergardensociety.org)

## 2008 Board of Directors & Committee / Event Chairs

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

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Denver, CO 80220

(Please Print)

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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](http://www.colowatergardensociety.org) using 

## Repose and Scrap Sinks: Second waterside program offers contrasts

by Bill Powell

Abbot Martin Mosko and Alxe Noden speak to CWGS members about the purpose and design of the Hakubai Temple grounds.



Our recent tour of the Hakubai Temple grounds and CWGS Member Deidre Parker's wonderfully imaginative Boulder back yard drew a good deal of interest. More than 20 members enjoyed two very different water gardens and learned a bit about the circumstances that inspired them.

Martin Mosko, Abbot of the Boulder's Hakubai temple and also a noted landscape architect, and Alxe Noden welcomed CWGS with a brief presentation on the history of the temple property. Its first use was solely practical - a hospice for ailing and damaged plants. Rather than throw away plants that could not be used in his landscapes, Martin planted them. Eventually the ad-hoc plant hospital was transformed, appropriately, into a "place of repose," a park for "healing and wholeness" dedicated to Hojosama Keibun Otokawa Roshi, Mr. Mosko's mentor in the practice of Zen Buddhism.

The Temple garden is arranged around a large pool. Surprisingly, water was a late addition to

the garden composition. A willow, now 35 years old and mature, predates the pond.

Martin situated the water to wrap one side of the willow. Depth varies from a few inches to more than three feet. Although lined with a flexible membrane, over the years soil has collected in the basin. Deidre Parker, CWGS Member and volunteer in the Temple grounds, has used this sediment to advantage. Using specimens left over when she moved from a larger house (and pond) to her current home, Deidre has planted the Temple's pond extensively in a naturalized fashion, fixing the hardy lilies directly in the trapped sediment.



Photos by Bill Powell

Janet and Bill Bathurst admire the temple pond as Vicki Aber snaps a shot

An impressive stand of Yellow Snowflake (*Nymphoides germinata*) floats along the margins of the many hardy waterlilies. Close by, Deidre's latest experiment, a Victoria Longwood hybrid, persists despite waters much cooled by recent heavy rains. (Deidre was given the plant during July's Water Blossom Festival by club member and noted Victoria expert Nancy Styler.)

The Temple's pond also includes a handsome collection of Koi and many frogs. Deidre speculates that the pond's lining of sediment provides a particularly good environment for frogs even if, as Martin noted, the trade-off is less-sparkling water clarity.

(continued on page 4)

**Repose and Scrap Sinks...**  
(continued from page 3)

A stroll around the pond reveals the remainder of the meditation garden. Near the gated entrance to the garden is a traditional Yurt called the Hondo or Dharma Hall. The hall is used for gatherings. A smaller yurt, somewhat hidden behind a planted screen that borders the pond, is the Zendo, a place for meditation. Quiet paths link these structures and other ancillary buildings in a rambling loop that encompasses the focal pond.

From the Temple gardens, the Waterside Program moved to Deidre Parker's home located a few minutes away. Part of a development that offers a number of lovely naturalized community ponds (complete with snapping turtles that Deidre fears may migrate to the Temple garden Koi pond), Deidre's home brings surprise and delight.

An overgrown path sneaks through Deidre's side yard. Drawn by the sound of water, visitors are delivered to an intimate oasis where water drips, sprays, and is reflected in an astonishing collection of mirrors, basins, and cascades, most of which are not the least bit "naturalized." Whimsy and adaptive reuse abound.

Water gushes from a sink faucet, filling a bowl inset into a marble counter from which it overflows onto a fabricated washboard. Over Deidre's pond, a shower of water falls...from a showerhead! On the deck, a quiet basin is revealed upon careful inspection to be a repurposed farm stove used originally in rendering. These days the iron basin provides yet another place for water within Deidre's intricate urban mosaic. The sound of water is



Water trickles into a repurposed sink (left foreground) - one of Deidre's many water features.



(Right) Club members explore Deidre's innovations.

every where, reminding Deidre (even when she's inside upstairs) of what awaits her outside. ... A unique and effective small garden, and she fashioned it all from pieces she saved from the scrap pile!

Following refreshments provided by the club, President Vicki Aber presented Vice President Jim Arneill a card and a token gift of thanks for his efforts as the Chair of this year's very special Water Blossom Festival and 25<sup>th</sup> Anniversary celebration. Vicki used the occasion to ask members' opinions of the two waterside programs we offered this year. The group agreed that the waterside concept has been successful and should be repeated whether specific programs are linked to future site visits, or the occasions are enjoyed solely as a social gatherings at a member's garden.

**Fall is in the air** (continued from front page)

consecutive terms (4 years), although a person may return to an officer's position previously held following a hiatus of one term. Open slots may be filled at the discretion of the Board by appointment to complete the remainder of the unfilled position.

**The following Board positions are up for election on September 14, 2008:**

**Vice President** Open  
(currently Jim Arneill)

**Secretary** Open  
(currently Bill Bathurst)

**Member at large (2)** Open

**Member at large (4)**  
(Bill Powell, standing for re-election)

**Member at large (6)**  
(Marge Oleson, standing for re-election)

**Member at large (8)**  
(Janet Bathurst, standing for re-election)

Because of Gail Goldberg leaving the state, we also have an opening to complete the remaining one-year term for Member at large (1).

Please consider putting your name in the hat. If you are new to the club, that's great, we can always use new ideas! If you have been around for a while but not been very active in the club, then now is your chance. If you've been on the

Board and want to return, we welcome you. Nominations from the floor on September 14 for any of the available positions are encouraged! Please attend.

We will also be having a Board planning meeting October 5<sup>th</sup> at the Waring House at DBG. This will be an important meeting to put closure on events of this year and outline plans for next year. Members are always welcome to attend Board business meetings, but this would be a particularly good meeting to join us if you have input or thoughts about this year's activities or plans for 2009.

Remember, 2009 will likely bring changes to the club's activities, both in schedule and location because of the construction that will be underway at Denver Botanic Gardens.

<b>TREASURER'S REPORT</b>	
<i>Balance as of August 23</i>	
<b>\$19,402.74</b>	

<b>New and Returning Members</b>	
<b>Dennis Albrecht</b>	<i>Aurora CO</i>
<b>Janice Barbee &amp; Carolyn Norblom</b>	<i>Denver, CO</i>
<b>Mike &amp; Kelly Booth (new)</b>	<i>Centennial, CO</i>
<b>Al &amp; Glenda Kravitz</b>	<i>Highlands Ranch, CO</i>
<b>Werner &amp; Nancy Neupert</b>	<i>Boulder, CO</i>
<b>Efrim &amp; Renee Sotanovich (new)</b>	<i>Centennial, CO</i>

## Learn Free at DBG

OK, it's not entirely free. You do have to invest some sweat equity. But there's no better way to learn the ins-and-outs of water garden plant propagation and management.

Volunteering for the Fall Sunday sessions at Denver Botanic Gardens is easy, fun, and educational. Soon, beginning Sunday, September 28 we'll start our fall season. Co-sponsored by CWGS and DBG, and under the direction of DBG Water Garden Curator Joe Tomocik, the Sunday team will work four Sundays. We meet, weather dependent, at 8:30 am for three-hour sessions.

### What can you learn during those three hours?

1. **How to winterize your water feature.** How to store hardy waterlilies, lotus, and hardy marginals both in and out of the pond during winter.
2. **How to divide hardy marginals and hardy waterlilies.** Although we typically do more division during our spring sessions than in fall, we may divide a few, select plants for special treatment during dormancy.
3. **How to harvest tropical waterlily corms.** Unable to bring your new, valued tropical waterlily inside for the winter? Learn techniques for collecting and saving vital corms of tropicals for replanting in late winter for bloom next summer.

Why, you may even learn how to sweep a pond!

It's true our preparation for winter will include practical chores, like moving of plants, inventory, trimming, and cleaning of debris from ponds and storage areas, but you'd be surprised what useful propagation tips you can pick-up from the "old-hats" even while during mundane chores.

This season we may have a few surprises – for all of us. DBG is beginning the demolition of its greenhouses in anticipation of massive renovations. We're not entirely sure what twists may be introduced to our usual fall tasks, but we'll improvise. Join us for fun, friendship, and leaning as we help out DBG! Free donuts each Sunday.

**Experienced and absolute beginners are welcomed. For more information or to have your name entered on the list of available volunteers, contact Bill Powell by phone 303.355.8098 or via [wbpow@comcast.net](mailto:wbpow@comcast.net).**

### All Election Campaigns Come To An End...

*At the beginning of the season we invited members to vote on favorite water plants. Your last chance to express your preference is coming up at the meeting on September 14.*

*Preferences (and winners) will be announced at the Christmas Party.*

## Canary in the Water

*Algae marks "dead zones" in world oceans*

By Bill Powell

Last month's issue of 'The Water Garden' included an article on the potential commercial use of fast growing algae as bio-fuel. An earlier newsletter from last season covered the phenomenon of hypoxia that threatens much of the Gulf of Mexico and other seas around the globe. The proliferation of Algae is common to both articles.

Fast growing and prolific, Algae "explosions" mark areas of salt water where oxygen content has dropped below the level required to sustain marine life. While sudden algae growth is the direct cause of this hypoxia (in that subsequent decay of the algae robs the water column of oxygen), the condition that makes Algae's explosive bloom possible is the actual culprit. Algae is merely doing its job... too well.

Excessive nutrients in the water, coming mostly from agri-chemicals that leach into rivers, foster algae growth at the mouths of the river basins where the water turns still and fatal. The result is the expanding phenomenon of the ocean's "dead zones."

### The expanding hypoxic cycle

Certain forms of bio-fuel production and hypoxia are related in that: Fishermen must skirt dead zones in search of catch. Extra travel increases fuel use, which in turn puts additional pressure on fuel production. Increases in world demand for fuel encourages farmers to plant more corn to satisfy growing demand for ethanol – a biologic source of fuel.

To grow more corn on the same acreage, farmers increase applications of nitrogen and phosphorous. Rains and sedimentation sweep the runoff from farms into rivers that feed into the world's oceans. There, explosive algae blooms eventually decompose, depleting the water of oxygen, driving out aquatic life, and enlarging the dead zone for fishermen.

### About Waterside Programs:

1. *CWGS tried Waterside Programs for the first time this season. In June we visited the Neupert's pond. A program on the history of naturalized pond design accompanied the tour. In August we visited the Hakubai Temple grounds and Deidre Parker's home. Both programs were among our best-attended general meetings of the season.*
2. *Waterside Programs offer the flexibility of moving meetings to various areas of the Metro area and experiencing new water gardens.*
3. *In 2009 DBG will be undergoing major reconstruction. CWGS may not be able to secure meeting space at DBG as frequently as in previous years. Programs held outside DBG will be needed, but as this year's Waterside Program demonstrated, holding meetings pondside can be interesting.*
4. *Waterside Programs can be as flexible and as varied as our Members' ponds. Where the water garden suggests a topic, the Board will be happy to find a speaker to pair with a visit to your garden...or we can simply visit your handiwork for an afternoon of conversation.*
5. *Why not nominate your water feature – or another that you'd like to visit? No need to provide refreshments. The club will take care of that. Contact Bill Powell at 303.355.8098 or via email [wbpow@comcast.net](mailto:wbpow@comcast.net).*

## Salt. Hold the pepper... (...and maybe hold the salt as well?)

By Bill Powell

Questions, if not controversy, surround the use of salt in garden ponds.

Salt (sodium chloride) has long been used for treating sick or injured fish in temporary “hospital” tanks, but salt is also used – in lesser solutions – in ornamental ponds. The addition of small amounts of salt is believed to help balance osmotic pressure in fish and thereby ease stress and deter parasites, bacteria and fungus.

So...what IS osmotic pressure? It's the force that exists when fluids (in our area of interest, water) on either side of a semi-permeable membrane (fish tissue around the gills) have differing solutions of salt.

The fish in our ponds, like most life forms including humans, are essentially bags of water. Fish membranes, particularly in the vicinity of the gill structures, are fairly permeable. Because freshwater fish are inherently saltier than the water that surrounds them, an unequal state of solution exists on two sides of a semi-permeable membrane. These unequal solutions result in the unbalanced flow of water from the less saline solution toward the more saline solution (that is from the pond to the fish) as the unequal solutions attempt to reach equilibrium.

To deal with this fluid imbalance, fish have special mechanisms that allow them to counter the inflow of fluid, but to do so they must exert

energy through the use of their gills and organs – hence the rationale for increasing the salt level in pond water so as to lessen the inequality of the solutions and thereby reduce the work the fish must do to maintain their own internal fluid equilibrium. There's also speculation that dilute salt helps to increase fish production of natural stress coats as well as to make potential problems, like parasites, less prevalent by altering their internal fluid equilibrium. (Some Koi keepers, noting that it's salt's “irritating” property that encourages the stress coat, question the wisdom of adding an irritant to the pond. I was able to find very little information regarding the impact of dilute salt solutions on amphibians)

But as we all know intuitively, unless you're keeping a saltwater pond in your backyard stocked with saltwater fish and plants, freshwater fish (well most of them...there are species that can transition from marine to fresh water) will not flourish or even survive in truly salty water. Neither can most common lake and pond plants, including waterlilies, tolerate large doses of salt. In fact most plant species are far less tolerant of salt than are fish.

Salt, then, in fresh water applications must be quite dilute, so as to avoid toxicity while gaining the benefit in reduction of osmotic pressure. And if freshwater fish do well on their own without salt in nature, then why bother to add it in our ponds, one might ask?

Well, of course, not all fresh water aquifers are entirely salt free. And PH and mineral content also play roles in osmotic pressure and fish electrolytes as well. The science is rather complicated, but experience by reputable pond keepers through the years seems to show that

dilute amounts of salt aren't harmful to ornamental pond culture and may be beneficial to fish, particularly over winter when stress is high. Not every source agrees. There IS general agreement that too much salt is harmful.

If you're interested in adding salt to your pond, the key is to do it slowly, incrementally, and to avoid deadly miscalculation. As in cooking, you can always add more salt to the pot, but it's all but impossible to deal with over-salting of stews...or ponds.

### Guidelines:

1. *Use pond salts or rock salts. Do not use table salt, which contains iodine. Do not use other specialty salts such as those used in water treatment. Evidence is conflicting as to whether iodine or “anti-caking agents” in specialty salts pose threats to fresh water fish, but to be safe, stick with unadulterated sodium chloride.*
2. *Unadulterated sodium chloride comes in several forms. “Pond Salts” are more expensive than bulk, but they come with instructions and formulas on how to dose at supposedly safe levels for plants and fish. As the formulas can be rather daunting, it may be worth the extra cost to get the extra information and peace of mind. Formulas are also available in books and online, but be sure you understand the formula and confirm that it generally agrees with information gleaned from other sources.*
3. *If your pond has both plants and fish, aim for a solution that's half, or less, of the dosage for ponds with fish alone. Most references suggest a .05% (one half of one percent) solution maximum for ponds with fish and plants.*

5. *Buy a salt level test kit or hydrometer. Use it to establish the current level of naturally occurring salts in your pond and use it to monitor slow, small incremental changes in the solution as you add salt.*
6. *It's probably best to determine amounts by weight, not volume of salt. The size-to-weight ratio of salt crystals varies depending upon the method of production and harvesting, and the potency of the salt may be quite different for one crystal shape to another.*

Keep in mind that evaporation and filtration will not remove salt. Water changes can dilute salt solution over time, but short of complete evacuation and cleaning of the pond, it's hard to dramatically reduce salt content.

Four or five years ago I added salt to my pond. Testing at the time confirmed that I was just under the .05% level recommended for a water garden with plants and fish. Out of curiosity, I retested today. Despite seasons of occasional partial water changes and no further additions of salt, the water remains between .03 and .04% - testimony to the staying power of salt.

But, for the record, in four-plus years of operating my pond just below the .05% level of salt solution, I've experienced no problems with plants or disease in my fish, except for one Shubunkin that developed a glaucous coating on one eye. It was sequestered and treated with antibiotics and a “hospital” solution of salt and then returned to the pond. The fish improved and lived several years, but died last winter of unknown causes. The remaining Shubunkin and three Koi, all original to the pond and now 8 years old, are healthy and active.