

Colorado Water Garden Society  
1210 Clayton Street  
Denver, CO 80206-3214

FIRST CLASS MAIL

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

**Holiday Banquet**  
**Saturday Dec. 6**

6:00 – 9:00 Morrison Ctr.,  
Denver Botanic Gardens

*(NOTE DATE CHANGE FROM  
LISTINGS IN PAST NEWSLETTERS)*

**IT'S FREE...and fun!**  
*See page 3 for details.*

**Coming in 2009:**

- *More waterside programs*
- *CWGS Annual Plant Sale – this year at Hudson Gardens.*
- *Our pond tour and picnic*
- *Special speakers*
- *Evening programs with food*
- *And more!...*

*Details of the 2009 calendar  
will be announced in the  
spring*



Swim by!

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Signature \_\_\_\_\_

Date \_\_\_\_\_

Pond Experience (Beginner) \_\_\_\_\_ (Some Skill) \_\_\_\_\_ (Pro) \_\_\_\_\_

**Check one:**

- I would like my contact information included in a membership list that will be distributed only to the members.
- I do not want my contact information published in the membership list.

\* 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 Festival (July/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*

## Holiday Banquet Saturday December 6

Mark your calendar! The CWGS annual Holiday Banquet will be held on Saturday, December 6 at the Morrison Center from 6:00 to 9:00 pm. Come and enjoy this festive event. It is a great time to socialize with old friends and get acquainted with some new people.

CWGS will be providing turkey, ham, and dessert. Hot chocolate, cider, and tea will be available. You are asked to bring a side dish or salad. There is no charge!

The club always recognizes our tireless volunteers on this occasion. They are a great part of why the DBG water gardens are so outstanding. This year there will also be a streaming view of water garden photos to inspire and treat the attendees.

We have decided to repeat the gift exchange after last year's produced so much fun and hilarity. This means bringing a wrapped gift worth \$10 or less. The gift should be pond related if possible. A few gifts will be available for \$10 for those who forget.

Dress for the party can be casual or festive as you choose. The Morrison Center is directly across the street from the main Denver Botanic Gardens facility and north of the former public parking located between York and Josephine Streets.

### Important Holiday Banquet Parking Information:

Please be aware that DBG's public parking lot located between York and Josephine is not available this year because of reconstruction.

The Garden's temporary parking (off the west side of York Street, just north of the educational building) may not be accessible for our banquet either because the parking lies inside of the Garden's gated area and the Gardens normally close to the public at 5:00 pm. Check to see if the gates are open. If not, street parking is available, but pay attention to signage about parking zones.

If possible, why not carpool? That way you can begin your evening with friends early!

Please RSVP to April Hough (303) 499-6578. An RSVP helps us to estimate the food requirements.

*April Hough*

on behalf of the Holiday Banquet Committee.

### TREASURER'S REPORT

Balance as of Oct 31  
\$17,327.82

## The President's last letter of the year...

**...Man, 2008 went fast!**

*By Vicki Aber*

First, I'd like to welcome a couple of new faces to the Board of Trustees. One is a very familiar face, but he hasn't been on the Board for a while - Lynn Jewett. Lynn will bring some knowledge of where the club has been and a willingness to look forward and see new possibilities. The other newcomer is Michael Weber. Michael is fairly new to the club and was willing to jump right in and be part of deciding directions we'll be taking. Thank you two for stepping up.

We also welcome back returning board members Jim Arneill, April and Jonathan Hough, Marge Oleson, and Bill Powell. The officers for next year will be President Vicki Aber, Vice President Janet Bathurst, Secretary Bill Bathurst, and Treasurer Ken Lange. We do still have two open spots on the board, if anyone is feeling left out.

It's hard to believe that the year is almost over. The ponds are put to bed for the winter and we can all start thinking of next year's growing season. We tackled quite a lot in this Silver Anniversary year. Hopefully, next year will be rewarding also.

As you all probably know, 2009 will bring some challenges. We'll not be able to meet at the Botanic Gardens because of construction. During the 'off season' we will hold some meetings at night. We've found a church that is willing to host us. Since the meetings will be in the evening and many people will probably be

rushed, we'll be doing some pot luck dinners so we can eat, meet, and learn.

We'll continue the waterside meeting format that we began this year. These were well attended and have the added attraction of allowing time to investigate member's ponds in more depth than is usually possible on the pond tour. We need volunteers to host these meetings and ideas for programs to go along with them. Many people had to travel a distance to get to our two 2008 waterside meetings because they were both in Boulder. You people in the south end of town, be thinking about inviting the club down your way in June or August, the months tentatively selected for next year's waterside offerings.

Our pond tour and picnic will be in July. If you don't feel up to hosting a waterside meeting, think about being on the tour this year. If anyone has ideas for general program topics in 2009 or if you can give a program, now is the time to let us know.

We've had a request to start publishing a yearly membership list so members could get in touch with each other more easily. When you renew your membership, you will be asked if you want your information published. The membership list would only be available to other members.

We are also looking at publishing the newsletter online. We would still mail a hard copy to anyone who wants it in that form. With this change the club could save quite a lot of money in mailing and printing costs that could be redirected to other programs. But before we get that far, we'll be getting input from everyone on how they would like to see this possible change work.

### For those who might travel there:

Late winter / early spring is an excellent time to visit the water gardens of South Carolina's low country. In mild years the azaleas come into bloom as early as February. Middleton Place, Magnolia Gardens, Hobcaw Barony, and Brookgreen Gardens are all, to one extent or another, open to the public. For details about fees and hours, simply "google" their names. Each has an extensive website. As does Carolina "Aromatic Rice" should you care to order some genuine Carolina Gold.

Photos by Bill Powell



Two views of Brookgreen Gardens

### Volunteer Sundays at DBG end with a thank you...and a nice lunch!

The CWGS-sponsored fall volunteer season concluded November 2<sup>nd</sup>. at Denver Botanic Gardens. For five Sundays CWGS volunteers helped to put DBG's water features to bed for the winter, reversing the process they assisted last spring. Each year this group donates more than a dozen Sundays helping to divide, pot, maintain, winterize, and store tropical and hardy water plants. Several from this group volunteer year round, assisting operation of the program between the intensive spring planting and fall winterization efforts.

Joe Tomocik, the Curator of Water Gardens, thanked the CWGS Volunteers with a tasty lunch of sandwiches supplied by the Gardens. Joe and DBG's Director of Horticulture Sarada Krishnan also wrote a grateful note to Vicki Aber, our CWGS President. (See the accompanying boxes below for a facsimile.)

Thank you, volunteers, for a job well done! Your generosity makes coordination of the yearly program at DBG easy.

*Bill*

On behalf of Co-Volunteer Coordinators Bill Powell and Marge Oleson.

"Super CWGS volunteers,

congratulations, you did it again. The spring / fall help, the plant sale, and the water Blossom Festival were all truly super. Too, we had some wonderful discussions and big-time fun.

Thank you so much for your valuable support of the water gardens and Denver Botanic Gardens.

Joe"

**Joe Tomocik**

Curator, Water Gardens at Denver Botanic Gardens

Dear CWGS Volunteers,

As the season winds down, it is truly amazing to see the dedication of our CWGS volunteers as you all help with our aquatic program. We could not have done it without your help and service.

Thank you so much for making DBG's aquatic program one of the best in the country!

Sarada"

Sarada Krishnan,  
Director of Horticulture, Denver Botanic Gardens

**Carolina Gold continued from page 7**

Following the Civil War, tidal rice plantations fell on hard times. Most of the hundred-plus plantations that flourished prior to the war ceased operation and were subdivided. A few transitioned to become water gardens of a different sort for a new market – tourism.

Charleston’s Middleton Place, home to multiple generations of Revolutionary leaders (and Civil War secession signers), is a National Landmark renown for its formal dignity. The shaped landscape that steps down to the Ashley River recalls the earthworks of the low country rice culture.

Magnolia Gardens, an early example of a less formal, naturalized ornamental landscape, opened to the public in 1870. (It was also the first garden in America to introduce azaleas and among the first to popularize outside culture of *Camellia japonica*.) The “Audubon Swamp” garden within Magnolia is a true water garden, unique for it’s romantic appeal and lush jungle of bald cypress and azalea islands. The interconnected ponds were originally part of a 60-acre reservoir used in rice cultivation. Today they provide habitat for native wildlife as well as tourists.

Farther up the South Carolina coast from Magnolia and Middleton is another former rice plantation (and home to financier Bernard Baruch until the 1950’s.) Hobcaw Barony has become a research reserve. Like Magnolia and Middleton, Hobcaw can be toured by the public. Its rice fields are abandoned, but one can still imagine.

The remnant of an Alston plantation located near Murrells Inlet was transformed in the 1930’s by Archer and Anna Hyatt Huntington to

form the backdrop for figurative sculpture. Today Brookgreen Gardens is also a National Historic Landmark. Numerous ponds and water features are scattered in a formal setting beneath an historic allee of live oaks dating from the early 18<sup>th</sup>. century. Beyond the garden walls, the flooded remains of rice fields extend to the Great Pee Dee River.

None of these rice plantation gardens continues to grow rice. Nowadays commercial rice production has moved west to Arkansas, Louisiana, Mississippi, Missouri, and Texas. Rice is even grown in Florida and California. To find original Carolina Gold you have but one option. Plumfield Plantation, located along South Carolina’s Pee Dee, markets its rice online. Ironically, rice was not grown on this plot historically. Production began in 1996 in order to re-introduce the crop to the state where rice plantations, and perhaps water gardening itself, began in North America 250 years ago.



**References:**

1. Quote from [www.carolinaplantationrice.com](http://www.carolinaplantationrice.com)
2. From [wikipedia.org/wiki/Henry\\_Woodward](http://wikipedia.org/wiki/Henry_Woodward)
3. From [www.answers.com/topic/rice-culture-and-trade](http://www.answers.com/topic/rice-culture-and-trade).

**And the winner is...**

This year we had a year-long vote on most popular plants. It was much more fun than all the political advertisements assaulting us from every side. The following are the winners:

**In the Hardy Lily category:**

Winner – *Joey Tomocik*  
 Runners up – *Chromatella, Pink Grapefruit, & Carnea*  
 Honorable mention – *Gonnere, Luciana, Almost Black, and Lily Pons*

**In the Tropical Lily category:**

Winner – *Mrs. E. G. Hutchins*  
 Runner up – *Blue Aster*  
 Honorable mention – *Panama Pacific, King of Siam, Colorata, and Red Flare*

**In the Hardy Marginal category:**

Winner – *Pickereel Weed*  
 Runners up – *Forget me not, cattail or miniature cattail, Lotus and Siberian or Japanese iris*  
 Honorable mention – *Water Hawthorn, Water blue bells, Nuttalli sunflower,*

**In the Tropical Marginal category:**

Winner – *Canna (Cleopatra and Australis)*  
 Runner up – *Taro*  
 Honorable mention – *Giant Papyrus, Bog lily, Umbrella Palm, Parrot’s Feather*

**In the plant I’d like to have, but don’t category:**

*It’s a tie with one vote each for: Everything, Texas Dawn, Peach Lily, Victoria, Hardy hibiscus, Cypress Tree, Blue Hardy lily, Dwarf Hardy lily*

Don’t see your favorites? That’s probably because you didn’t vote! Take note of the winners; presence on the list probably means that several members of the club have had good luck with this plant in our climate. Maybe some of these winners should be on your wish list. I know the plant sale committee will be looking at this list for next June.

*Vicki Aber*

Along with potential publishing changes we are also looking at doing a bit of an overhaul to the website. If you have any expertise in this area, we could use your input. Bill Bathurst is in charge of that committee. You can contact him or me (Vicki Aber). All the Board contact info is on page 2 of the newsletter. Or tell us in person at the Christmas party!

Yes, the Christmas party is right around the corner. See April’s article on page 3. We really had fun with the white elephant gift exchange last year. It’s back this year, so be sure to come and enjoy some good food and good fun.

**Correction...  
...and an apology**

In August the club enjoyed our second waterside program of the year in Boulder when we toured the Hakubai Temple grounds. During our visit Abbot Martin Mosko and Alxe Noden told us something about the inspiration and history of the garden. They also mentioned, but I failed to record, that the Temple’s pond had been planted in honor of Kiernan Teague Watson.

Deirdre Parker, a longtime CWGS member, is Kiernan’s mother and the creator of the Temple’s pond plantings. She caught my oversight regarding the pond’s dedication. She also noticed we’ve been spelling her first name all sorts of ways. For the record, the correct spelling is Deirdre. My apologies for both oversights.

*Bill Powell*

Editor, The Water Garden

## Carolina Gold

*The first American water gardens may have been purely practical ...and very profitable.*

By Bill Powell

Excluding the Chinampa (floating islands) of Mezo-America, the first plantings in North America to qualify as water gardens may have been the rice plantations of the pre-colonial low country. Certainly the tidal rice culture that developed in the early 18<sup>th</sup> century along the coast of South Carolina and Georgia was the first widespread use of water in gardens constructed by Europeans who settled in the new world.

Beginning in the late 1600's rice was first raised as a dryland crop on upland fields. Harvests were unreliable because of wide variations in rainfall. By the early 1700's rice culture shifted to freshwater swamps that offered abundant water and the benefit – at least initially – of improved fertility and reduced labor. The opening of coastal lands following the Yamasee Indian war of 1715 made possible a third, more sustainable, method of water-based rice horticulture.

Lands located along waters neither too close to the coast so as to be saltwater nor so far inland as to be immune to the diurnal pulse of the tides were ideal to produce high yields at lower maintenance. Over the course of 125 years until the Civil war, rice became the “cash” crop of southern agriculture - it's “Carolina Gold.” Coastal estuaries offered ideal conditions for rice horticulture. Ample water, regular and controllable nutrient-enriched flushings that simultaneously drowned weeds, and a predictably large harvest located close by

deep-draft shipping all contributed to great profits from a growing world market.

The beginning of rice culture in America is murky. Popular history has it that sometime around 1685 a “brigantine ship, captained by John Thurber and sailing from the island of Madagascar, encountered a raging storm, perhaps a small hurricane, and put into Charleston Harbor for repairs... Captain Thurber met Henry Woodward, the town's best known resident... Thurber gave Woodward a bag of rice.”<sup>1</sup> Woodward planted the rice. The crop flourished. And so (says legend) Carolina rice culture was born.

What little is known of the real Henry Woodward suggests he was primarily a trader and interpreter who headed missions to Indian tribes and other non-English settlements in the region. He did temporarily hold title from the Lords Proprietors as an Indian Agent and titular landowner of the region, although it seems unlikely he could have perfected rice culture (if indeed he farmed at all) before he died in 1690.<sup>2</sup>

The species of rice that was first used on tidewater plantations is as uncertain as its appearance in South Carolina. Two major subspecies are possible candidates – *Oryza sativa* and *Oryza glaberrima*. Because *O. glaberrima* is native to Africa and modern scholarship has documented rice planter's preference for slaves taken from the rice-growing regions of West Africa, an African origin for the rice seems likely.<sup>3</sup> However, it's also possible that Portuguese traders may have introduced Asian rice species and cultural practices to West Africa first from which American rice growing was later informed through the slave trade.



Left:  
*Oryza sativa* (Asian rice)

Below:  
Historic photo of a rice trunk



Whatever the origins, the basics of American tidal rice culture were established by the time of the Revolution. Although tidal flooding reduced labor in tilling the crop, development of infrastructure was not simple. Initial investment in constructing the extensive hydraulic water distribution systems was substantial. In addition to land clearing, ditches had to be dug and embankments formed to segregate fields and control inundation of the basins. Tidal flow had to be mastered and reconciled with the horticultural demands of the crop, and a system of floodgates called “trunks” had to be constructed.

Trunks varied in design and complication. All were constructed of wood, usually of bald cypress (*Taxodium distichum*), itself a water plant in riparian settings. The earliest trunks may have used hollow logs to conduct water – hence the speculative source of the apparatus name. Trunk designs that have been historically recorded (and some of which remain in service today) use dimensional lumber to form the water channel or sluice box.

The most complicated trunks were constructed to conduct water through gaps in the embankments under a variety of hydraulic conditions. To admit

water to a field during an estuarial flood tide, an in-flow gate – a suspended and hinged wood flap - was manually released, allowing the gate to open with the pressure of the tide and admit water through the sluice. Because the gate could only operate in one direction, at ebb tide when the tidal water fell below the level already admitted to the fields, the gate would automatically close under the pressure of the entrapped field water.

Another gate in each sluice box was configured to allow flow in the opposite (out-flow) direction. To empty the fields, the in-flow gate was manually locked and the out-flow gate released.

The whole of the trunk apparatus with its directional gates and common sluiceway constituted a semi-automatic water control manifold with rudimentary check valves. Nevertheless, highly skilled operators – usually slaves – still had to monitor both the tides and the operation of the trunks.

An article from the January 1867 issue of Harper's Weekly included the following outline of “the rice growth/harvest cycle.”

1. *Burning fields to destroy remains of last crop.*
2. *Plantings, one in early March, the second by early April.*
3. *Fields flooded until seeds sprout, then water is released.*
4. *2<sup>nd</sup>. flooding to drown weeds. Water is released gradually.*
5. *Dry growth for about 40 days; daily weeding.*
6. *Harvest-flows flood the fields every 10 days with fresh water.*
7. *Gathering of the rice starts in late August and continues through early September.*

Continued on page 8