It’s Time To Build…
… but build wisely

On March 11 Mark Russo will present our first program of the year. Working as a professional contractor in the industry, Mark has seen (and corrected) lots of pond construction mistakes. It’s easier, and more satisfying, if you avoid the mistakes in the first place.

Mark’s program “Building and Creating Sustainable Water Gardens” will point out some of the common pitfalls of pond and water feature construction. He’ll also offer ideas to make your pond beautiful as well as functional.

Along the way Mark will address filtration, the interface of fish and plants, sizing of pumps, and a number of less-easily-quantified issues that only come with experience – like “What makes a beautiful waterfall?” and just “why does a waterfall sound like it does?”

Are you already dreading green water? Mark will share how he keeps his own 9,000-gallon pond crystal clear.

Whether you’re considering building anew or thinking of possible improvements to your existing water features, this is a program that will inform your construction choices before you make costly mistakes.

Mark’s program begins at 7:00 PM, but be sure to join us at 6:00 for our first pot-luck dinner of the year. We tried pot-lucks for the first time last year. They were enormously successful…and yummy. And they’re easy! Just bring a dish of your choosing. The club provides the rest – drinks, plates, utensils, etc.

Do note that this season we’re meeting at a different temporary location while we await the completion of DBG’s new plant society building. The map below shows the way to this season’s regular potlucks and programs at the Montview Presbyterian Church. We’ll have signs to guide you to our meeting space in the church’s Green Room, but the box below also has detailed directions.

March Program:
“Building and Creating Sustainable Water Gardens.”
by Mark Russo
Rocky Mountain WaterScape.

at Montview Presbyterian Church, Park Hill
THIS YEAR

A calendar of CWGS Activities and Events:

March 5-7: Information Booth at “Echxpo”
Friday, Saturday, and Sunday at Echter’s, 52nd Ave. & Garrison St., Arvada

Thursday March 11: Potluck Dinner and Program - Mark Russo speaks on building sustainable water features
Dinner at 6:00 pm; Program at 7:00 pm. at Montview Presbyterian Church, 1980 Dahlia St., corner of Montiew and Dahlia in Park Hill, Denver.

April 8: Get Wet – Program by Sylvia Bernstein on Aquaponics; Concurrent Lotus Sale and Vendor Fair, Gates Hall, DBG

May 13: Potluck Dinner and Plant Swap

June 6: CWGS Annual Plant Sale at DBG

June 27: Waterside Program: - Fieldtrip to Enery Water Gardens

July 18: Water Blossom Festival

July 24: CWGS Annual Pond Tour and Picnic

August 15: Waterside Program - Fieldtrip to DU Water Gardens

Sep. 9: Potluck dinner and Annual Board Elections

Dec. 9: Holiday Banquet

From...

The Water Garden
c/o Journal Editor
1210 Clayton Street
Denver, CO 80206-3214

The Colorado Water Garden Society (CWGS) is a non-profit 501 (c) (3) organization founded in 1983 to encourage appreciation and interest in the use of water in the landscape.

To learn more, visit us at www.colowatergardensociety.org
2010 Board of Directors:

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Vice President
Janet Bathurst  303.421.1144

Secretary
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Jim Wohlenhaus  303.429.9119

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Peter Hier  303.278.2106
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Bill Powell  303.355.8098
Michael Weber  303.322.6769
Lynn Jewett  303.671.7964
Dorothy Martinez  303.279.3137

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Newsletter Assembly
Gary and Joyce Blubaugh  303.989.4464

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Cyndie Thomas  303.755.1885

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CWGS June Plant Sale
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Janet Bathurst  303.421.1144
Dorothy Martinez  303.279.3137

Pond Tour / Picnic
Michael Weber  303.322.6769
Jim Wohlenhaus  303.429.9119
Dorothy Martinez  303.279.3137

Water Blossom Festival
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Bill Powell  303.355.8098

Holiday Banquet
Dorothy Martinez  303.279.3137
Michael Weber  303.499.6578

WebPage / Archives
Bill Bathurst  303.421.1144
Janet Bathurst  303.421.1144

DBG Plant Sale & Volunteers
Bill Powell  303.355.8098
Marge Oleson  303.989.4809

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The Water Garden is published eight times a year and is made available to current members both in printed form and online. Past volumes of The Water Garden are archived online at:

www.colowatergardensociety.org

Changes are underway…
We are switching to largely-electronic delivery of The WaterGarden. We also propose to create and distribute a Members’ Directory.

Please read the article on page 5 of this issue and respond to the enclosed mail-back card in order to make your preference(s) known.

Need to join or renew?…
... The application is on page 9

Does CWGS have your current email address? If you’re not sure, respond on the enclosed card.
The Season Begins
By Vicki Aber, CWGS President

Here we go with another year of the rollercoaster of water gardening. We hope this year will be a much smoother ride than last – one without so many bumps from hailstorms!

The Board has been busy planning fun and informative meetings and events. On March 5th we'll begin the season with our information booth at the Echter's garden center spring kick-off. (Echter's, if you haven't been there, is a great garden center on the west side of the metro area at 52nd and Garrison in Arvada.) We'll be answering questions and handing out information about water gardening and the Society.

Our March program speaker, Mark Russo, will also be giving a talk at the Echter's “Echxpo” at 3:30 on Saturday. His subject is timely: “Early Spring Pond Maintenance.”

Other gardening clubs and vendors will be at Echter's as well. Talks are planned on a wide range of subjects. Some of the vendors even have free stuff and there are door prizes. If you can, stop by the CWGS booth and say hi! Echxpo hours are Friday March 5th 3pm-5:30pm, Saturday March 6th 10am – 5:30 pm, and Sunday March 7th noon – 4 pm.

The Club's first general meeting will be on March 11 in our new “temporary” home for this year - the Montview Presbyterian Church, 1980 Dahlia Street in Denver. Mark Russo from Rocky Mountain WaterScape will be speaking on “Building and Creating Sustainable Water Gardens.” For more on Mark’s presentation and for directions to the Montview Church, read the article and accompanying map on the front page of this issue.

Please take note of the program location change from last season. I think this location will be good in that it is more central. By next year we hope to be back permanently at Denver Botanic Gardens in the soon-to-be-constructed plant society building.

Our annual spring kick-off ‘Get Wet 2010’ WILL be at Denver Botanic Gardens this year on the evening of April 8th. This has become a very important annual meeting – one that sets the stage for the growing season. For Get Wet we have a very special speaker with a different and intriguing subject.

We've also listened to all the people who wanted the small lotuses we sold, but ran out of, at last year's Get Wet. This year we will offer a larger selection of small bowl lotus for sale during the event. And, we'll also have a limited number of Marsh Marigold. We've tried several times to order this plant for the June plant sale, but the supplier won’t ship them because they are out of season.

I have a Marsh Marigold and love it. It grows well, but not aggressively enough to need frequent divisions, so I haven't been able to share it. My marigold always blooms very early when everything else is still dormant. About the time you see the need to do spring clean-up but are discouraged because everything is so dead looking, bright yellow-orange flowers emerge to cheer you on.

We have a lot more stuff planned this year but I don’t want to give it all away at once. Watch the newsletter and check out “Latest Happenings” on the website for the next big thing!
Feature Articles

With this issue Denver Botanic Gardens’ Curator of Water Plants Joe Tomocik begins a recurring column for The WaterGarden. From time to time Joe will share his thoughts, passions, and expertise. This month he anticipates spring as he describes upcoming activities and exhibits at DBG.

From The Curator
by Joseph V. Tomocik
Associate Director and Curator, Water Gardens
Denver Botanic Gardens

Time is passing so quickly. Before you know it, we will be putting the water gardens together again. Hurray!

Temperatures have dropped to minus 17 F. twice this winter, and the ice depth reached nine inches in our pools. Hardy waterlilies are indeed difficult to kill, but the possible effects of this winter’s hard cold concern me. The Victoria and Romantic Gardens’ pools contain valuable plants that may be damaged. Stay tuned; we will learn more this spring.

Volunteer Sundays – A joint tradition of DBG and CWGS
CWGS has contributed enormously to the Gardens’ aquatic program for almost three decades now. The Society’s diversity, commitment and energy continue to impress me. One of the benefits its members enjoy as they volunteer at the Gardens is the opportunity of getting first-hand experience in propagating Denver Botanic Gardens’ extensive hardy waterlily collection.

Volunteers have the advantage of learning from Gardens’ staff and from each other. The chores must be done, but we are not averse to having fun as we gain expertise. And by following proven planting procedures we have a great chance to grow a bounty of beautiful, flowering waterlilies during the summer months. Proper soil, containers, planting time and fertilizing are all important. Volunteers learn these useful procedures and techniques hands-on.

I will remain in touch with CWGS volunteer coordinator Bill Powell, informing him when the Sunday work sessions will begin anew. Why not join us? Experienced and novice water gardeners are all welcome. First time volunteers are asked to complete Denver Botanic Gardens’ volunteer applications. For more information or to sign up, call Bill at (303) 355-8098.

Naming and registering plants
In the last issue of The WaterGarden, Bill did a super job explaining the essentials of naming and registering new waterlilies. There are now over sixteen hundred named waterlilies.

We need guidelines to remain orderly. Naming and registration encourage a systematic approach to describing plants. Registration is the most formal way of introducing a unique waterlily that can be successfully propagated.

From time to time Denver Botanic Gardens’ aquatic program names and/or registers new plants. At last year’s July 28 New Gardens Dedication, the beautiful white waterlily from nearby Berkeley Lake was (continued on page 8)
Growing Greener…
… And More Connected

CWGS needs your input.

We hope you noticed: Included with this newsletter is a loose mail-back postcard that requires your attention to assure your preferences are met. Please take a moment to review the enclosed Preference Response Card. There are two check boxes on the card.

First Check Box
Check the first box if you would like to continue to receive a printed, paper copy of the Society’s newsletter. Otherwise, you will receive future editions of The WaterGarden electronically via an email alert with active weblink sent to your email address.

For those of you who are comfortable switching to electronic receipt of the newsletter, take a moment to be sure that we have a current email address for you. A good test is to consider whether you’ve recently received the club’s emailed alert about the Lotus and Marigold Pre-sale. If you did get that, then we have your current email address and there’s no need to update your information. If you’re unsure, then return the postcard with your updated contact information. Or, you could save a stamp and email us at Bill.Bathurst@colowatergardensociety.org.

Second Check Box
Check the second box if you prefer not to have your contact information published in a members’ directory. The directory will be emailed or sent later this summer to members. Please note that this information will only be made available to other club members for the purpose of linking the membership more easily. The club does not share or sell members’ contact information to vendors, stores, or organizations.

Why we’re asking these questions:
CWGS is shifting to electronic delivery of the newsletter because to do so will save a significant amount in postage and printing – money that could go to other programs and activities. And we feel the change is more in keeping with the club’s mission and the times.

We hope you agree and will be comfortable receiving future issues of the newsletter electronically. However, we completely understand that some members don’t have access to a computer or simply prefer to read a paper copy of the newsletter. We’re happy to oblige by continuing to mail you a hard copy. Just make your preference known.

In the past, CWGS prepared a directory each season and distributed it to the members. The practice fell by the wayside some years ago, but a number of the long-term members appreciate the convenience and would like to see a directory reinstated. Assuming a majority of the membership agrees, we will distribute a Members’ Directory sometime this summer. But if you prefer not to have your contact information published, let us know.

How to make your preference(s) known:
1. If you’re comfortable with the proposed changes and you believe we have your current email and contact information, then you don’t need to do anything!
2. If you prefer an alternate choice for either of the preference items, select one or both and return the pre-addressed card. (You’ll need to add postage.) Or…email your preference(s) to Bill.Bathurst@colowatergardensociety.org.
3. Fill-out the contact information at the bottom of the postcard if you have recently changed your contact or you have reason to think we may not have current information. We have left space at the end of the card for you to record your physical address, phone, and your email address so that we can cross-reference our database to make sure you will never miss out on a copy of the newsletter.

The transition to largely electronic delivery will be completed with the May 2010 newsletter. Thanks for your input and help. If you have questions or observations, just contact us at the above email address.

Thanks,
Bill Bathurst and Bill Powell

——

RETURNING MEMBERS

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<th>Name</th>
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<td>Golden, CO</td>
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<td>Brenda Parsons Hier &amp; Peter Hier</td>
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<td>Nancy and Werner Neupert</td>
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<td>Kerstin Karloev</td>
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<td>Terri O’Brien</td>
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Thanks…and welcome back!
Unknown to me, my simple attempt at using pond water to grow edible plants hydroponically has a name – aquaponics. And it’s not a particularly new endeavor. Some ancient civilizations in the far East and Meso-America practiced forms of aquaponics by combining fish and rice culture or through farming on floating islands called Chimampas. (Editor’s note: The Chinampas of central Mexico were covered in an article of The WaterGarden last year)

The beginning of contemporary aquaponics, in the US at least, is thought to have been in the mid-1970s when aquaculture (fish farming) and hydroponics (growing of plants in a flooded soil-less media) were examined for their complementary advantages. 1

Sylvia Bernstein, a Colorado authority on aquaponics, explains that people in the aquaculture industry first looked to biologic filtration from ornamental water plants as a way to help reduce the ammonia load of heavily stocked fish tanks, much as water gardeners seeking a balance in pond chemistry have long done. Focused as the aquaculturalists were on production of foodstuffs, eventually someone who was also familiar with the relatively new discipline of hydroponics asked, "Why not grow lettuce instead?" 2

In 1985 graduate student Mark McMurtry and his professors at North Carolina State University "created the first known recirculating (closed-loop), reciprocating (flood and drain) 'aquaponic' system." 3

The system directed effluent from a pond stocked with Tilapia (a species of fast growing, edible fresh water fish) to a sand filter bed planted with tomato and other crops. The nutrient-laden water fed the plants while the sand bed operated as a bio-filter that harnessed the beneficial effects of bacteria and algae that grew naturally in the sand mat. Excess water, cleaned of the ammonia produced from fish waste, was returned to the pond. The crops and Tilapia were harvested.

Aquaponics has since developed in sophistication, in varieties of plant and fish cultures used, and in the purposes to which the discipline has been applied. Elaborate commercial projects are now operating, but so are simple self-built backyard systems.

Some systems are designed for indoor hobby use. Some help to encourage the new “locavore” focus on “slow” food (homegrown as opposed to fast or processed food). This movement has been a boon to inner-city populations that are often underserved by fresh green grocers and farmer’s markets.

(continued on second column of page 8)
Research for the study was funded in part by a small grant from CWGS. Sample collection involved a number of the Society members' backyard ponds so it's sure to be reflective of conditions in our area. The 27-page book is arranged by "Feeding Guilds," reflecting each species' food habits and ecological roles within the web of pond life. Whitney has included lots of large color photographs, many of which were taken by former CWGS President Cyndie Thomas who also assisted in the season-long collection process.

To obtain your own professionally printed, color copy of "Life in a Colorado Water Garden", send a check or money order made payable to Whitney Cranshaw. Include your own contact information (Name, street, apt. #, city, state, and zip code.) The cost is $12 per copy. No taxes apply. Mail your check and order to:

Whitney Cranshaw
1400 West Lake St.
Fort Collins, CO  80521

You can also download a pdf file of “Life in a Colorado Water Garden” for free at the following url:

Wet (Again!) on Thursday, April 8

CWGS will hold its signature season kickoff from 6:30 PM to 9:00 PM at Denver Botanic Gardens. The evening's program will include a presentation by Sylvia Bernstein on the new gardening technique of Aquaponics. (For more about Aquaponics, read the article on page 6 of this newsletter.)

Bob Hoffman will offer insight on how to grow Lotuses at high altitude. We’ll deliver pre-sold lotus after the program and offer a limited number of small bowl lotuses and Marsh Marigolds for sale, first come first served.

As usual, representatives of major garden centers and water gardening vendors will be available before and after the program, and we’ll staff our “Ask the Experts” table to answer all your questions. Look for more detail in the next newsletter or call Jim Arneill (303 843-9619.)

Christmas (and Volunteers) Remembered…

By Bill Powell

If you remember, the night of December 7, 2009 was very cold. Sandwiched between snowstorms, the club’s Holiday party was almost cancelled, but Janet, April, and Dorothy persevered. And, given the weather, we had a very good turnout to enjoy the delicious foods and fun gift exchange.

Vicki Aber, CWGS President, thanked all those who contributed to the operation of the club’s programs, events, and educational outreach.

Unfortunately, I was so focused on the food and gifts that I forgot to bring the list of hours I’d collected of the volunteer effort at Denver Botanic Gardens. Eighteen CWGS-sponsored volunteers contributed nearly 1,700 hours at DBG during the past year. Some individuals contributed more than 150 hours.

A belated recognition of the DBG volunteers follows, arranged alphabetically within categories of generosity.

Thanks!

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<tr>
<th>Donated</th>
<th>40 to 80 hours</th>
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Aquaponics

Many aquaponic ventures grow plants in inert, soil-less media; others employ a secondary wick mat that’s impregnated with organics and mineral additives. Some installations lie largely undetected in backyards where they function as summer planting beds, but other high-tech industrial setups operate year-round in heated greenhouses designed to maximize both plant and fish production.

Aquaponics is a fascinating and evolving branch of gardening – one that has great potential for the backyard water gardener. If I’ve piqued your interest and you want to learn more right away, you’re in luck! On March 13 Denver Botanic Gardens will offer an in-depth class on the subject. The following box gives details.

Also, next month’s issue of The WaterGarden will include more about aquaponics as well as highlight local authority Sylvia Bernstein’s presentation on the subject at our April “Get Wet 2010” event.

References

2. Sylvia Bernstein
3. From “Modern Western Beginnings” wikipedia.org/wiki/Aquaponics#History

Backyard Aquaponics

Part of DBG’s “Lifelong Learning” Series.
Saturday, March 13 - 10AM to 2:30PM
Sylvia Bernstein, Instructor

“Imagine growing vegetables and fish together in your backyard this summer. Now imagine that the only work you need to do is to feed the fish! No weeds, no watering, no heavy, dirty labor – and the plants are growing at table height for easy access. Aquaponics is a new way of growing plants organically and dirt-free using fish waste as plant food... Learn how to set up and operate your own Backyard Aquaponics system, including where to locally source fish and supplies. Bring a sack lunch; there will be a 30-minute lunch break.”

$50 for members of DBG, $57 for non-members
Day of class: $60/$67

For more information or to register, visit www.botanicgardens.org.
On the home page, select “programs” category from the green band. From the dropdown menu, select catalog of classes. Select “View and register for adult classes.” Then select “Backyard Aquaponics” from the “Event/Item” list.
Membership Application

Make checks payable to:
Colorado Water Garden Society

Return this form with your payment to:
CWGS Membership
100 Glencoe St.
Denver, CO 80220

Name: ____________________________
Address: ____________________________
City: ____________________________
State: __________ ZIP __________
Home Phone: (____) _____________
Email*: __________________________________

* Required for electronic receipt of newsletter, beginning in 2010.
(note: CWGS does not share or sell email addresses)

___ Check here if you are also a member of Denver Botanic Gardens

___ 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.

Contact me concerning volunteer opportunities I’ve checked below:
DBG Volunteer Sundays____
Water Plants booth DBG May Sale____
Hudson Gardens____
CWGS Plant Sale (June)____
Pond Tour (July)____
Water Blossom Festival (late July)____

Note: Your newsletter will be made available to you electronically unless you check otherwise below.
___ I request to receive a paper copy of the newsletter

Membership Fees:
$15.00 Individual; $20.00 Family