

The Water Garden

Volume 20 Number 2

April 2003

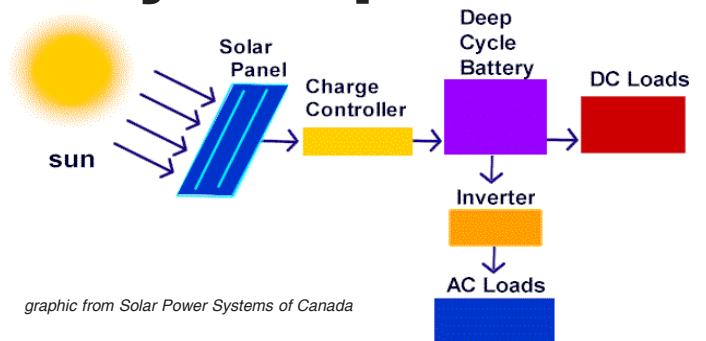


The Blizzard of 2003 is now a memory for most people but, at the time, we all wondered what effects it would have on our ponds. Two duck decoys in this pond had trouble shedding their white coats, but the fish just hibernated a little longer.

April 13 General Membership Meeting

Use the Sun to power your pond

Patricia Weis-Taylor, CWGS member and owner of PWT Communications in Boulder will be our guest speaker on April 13. Weis-Taylor writes about research and applications of solar energy for organizations such as the National Renewable Energy Laboratory (NREL) and the International Energy Agency (IEA). She is a long-time water gardener and will speak about using electricity generated with solar cells to power equipment for ponds. Her presentation is entitled, "**Off-Grid Ponds: Benefits, Costs, and Details.**"



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CWGS members to vote on by-laws change at April meeting -- goal is to enlarge Board and expand member involvement in decision-making

In an effort to boost new ideas and involvement in CWGS, the board is proposing changes to the Articles of Incorporation, also called the Constitution.

Article IV. Government, Section 2, reads: "The Board of Trustees shall consist of seven members of the Society who shall be elected President, Vice President, Secretary, Treasurer, Program Chairperson and two Members-At-Large."

The proposed change is "to increase the Board of Trustees to consist of no more than 15 members of the Society, seven members of the Society, who shall be elected; President, Vice President, Secretary, Treasurer, Program

Chairperson and two Members-At-Large, and up to eight members comprised of the committee chair positions that are appointed by the Board of Trustees." (see masthead at left)

With the increase in board members, Sec. 6 would be amended from a quorum of four (4) members of the Board required to five (5).

It is the sincere desire of the current board to have more involvement in the leadership and direction of the organization. To that end, survey results will be tabulated and published in the May newsletter.

A vote on the by-laws change by the membership will be taken at the April 13 meeting.

Planting mediums and evapo-transpiration to be topics of CWGS research this season

Throughout this season we will be undertaking several research projects for members to conduct in their own ponds.

The first of our research projects will be aquatic planting mediums. Schultz Aquatic Plant Soil, made from a kiln-fired 100% mineral substance and a second proposed planting medium, composed of a heavy, lava rock composite, will be the planting mediums we will study. They will be tested to determine quality of plant growth and the effect on pond quality.

Pond evapo-transpiration will be our second research activity for the season. By studying pond locations, pond aeration, wind, temperatures, exposure to sun, and plant coverage in several metro area locations, we will be able to determine more accurately water usage in water gardens.

Members who completed their survey last month and indicated they would be interested in participating will be contacted and supplied with all necessary materials for a successful research project.

Blast from the past...

Questions and Answers for Water Gardeners

1. Nymphaea refers to: 1 _____
A. Water Lilies B. Lotus C. Bog Iris
2. Nelumbo refers to: 2 _____
A. Pond Lilies B. Aquatic Canna C. Lotus
3. Spatterdock refers to: 3 _____
A. Lotus B. Cape Cod Lily C. Nuphars
4. Helvola has mottled pads and a nice yellow blossom. Is it classified as a _____ lily? 4 _____
A. Pygmaea B. Small C. Medium
5. Dr. George H. Pring is best know for his work with: 5 _____
A. Orchids B. Nymphoides C. Tropical Lilies
6. Typha latifolia is a tall hardy bog plant commonly known as: 6 _____
A. Cattail B. Bullrush C. Hardy Water Canna
7. One man's work can be seen in almost every lily pond. Who is he? 7 _____
A. Randig B. Tricker C. Marliac
8. Changeable water lilies are also sometimes referred to as: 8 _____
A. Fulgens B. Graziella C. Chromatella
9. The beautiful, yellow, native American lotus is also known as: 9 _____
A. Nucifera B. Speciosum C. Nelumbo lutea
10. Blue flowers are found only on: 10 _____
A. Night-Blooming Tropicals B. Hardy Lilies C. Day-Blooming Tropicals
11. Acorus calamus is commonly known as: 11 _____
A. Calla Lily B. Sweet Flag C. Caladium
12. The most common insect pest on water lilies in our area is: 12 _____
A. Nymph Fly B. Black Aphid C. Brown China Marks Moth

Answers can be found on page 4

Adapted from the CWGS Christmas Program - 1987



Ready, Set GARDEN!!

Saturday & Sunday, April 12 & 13
9:00 am - 4:00 pm

* Seminars * Resource Booths * Q&A with Master Gardeners * Author Chats
* Book Signings * Garden Talks and Tours * Drought and Water Issues * Kids' Activities

Admission \$2.00 for adults, \$1.00 for children 4-11, Free to Members

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Welcome to CWGS!!

New Members

John Alden
Terri Dickson
Terry Anthum and Keith Grisham
Sandra Hammer and Kathleen Quinn
Paul Oerter
Kerry Preston
Casey and Hanna Sparks
Jim and Marilyn Wilson

Renewing Members

Jim and Tudi Arneill
Ann Bennett
Ron and BettyLou Bissonnette
Mike and Bonnie Collins
Lowell and Larissa Coon
Len and Doris Freestone
Larry and Janie Griffin
Mike and Susie Hawes
Jonathan and April Hough
Trina Jacobson and Les Petrash
Lynn and Nancy Jewett
Scott Klingensmith
Jeff and Lois Meinerz
Dave and Donna Nelson
Werner and Nancy Neupert
Mike and Vickie Pervich
Bill Powell
Chuck and Mary Purdy
Gary and Judy Reid
LuNelle Riggle
Diane Thompson and Dennis Martin

Out-of-State Members

Perry Slocum, North Carolina and Florida
Jim and Betty Wibby, Michigan

Honorary Members

Lois Mayerchak
Marian Metsopoulos
John and Mary Mirgon
Merle Moore
Charles B. Thomas
Joe Tomocik
Ellen Westbrook

Blast from the past... Continued from page 3

Questions and Answers for Water Gardeners

1] A 2] C 3] C 4] A 5] C 6] A 7] C 8] B 9] C 10] C 11] B 12] B

11-12 Correct - You're Good!

9-10 Correct - Not Bad!

7-8 Correct - You Could Use a Refresher Course!

6 or Less Correct - You Better Start Coming to Meetings!

New garden show kicks off next weekend at Castle Rock

The Garden Centers of Colorado is sponsoring the premier opening of "The Gardening Showcase: Gotta Dig It, Gotta Plant It, Gotta Love It." The weekend event will be held Saturday and Sunday, April 5th & 6th, 9:00 am - 5:00 pm, at the new Douglas County Event Center, 500 Fairgrounds Road, Castle Rock. Plenty of free parking is available.

Get the latest information on managing your landscape. Independent garden centers, landscape contractors, landscape architects, and product suppliers will be on hand to teach about the practices and products that will help you be water-wise in this time of water restriction.

Visit the exhibits, purchase gardening products, attend free seminars, and see the fun stuff for the kids! The cost is \$5.00 per adult, with children under 12 free! Discount coupons are available through some south Denver Metro & Colorado Springs Wells Fargo Banks, special ads in the Denver Post and Val-Pak. Food is also available on site.



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Water Garden Problem Solver

Water pumps provide lots of options if you get the right one

by Mike Thomas

A common question people often ask is how one goes about sizing a pump to use in a pond or fountain. What constitutes TOO MUCH water flow, or TOO LITTLE?

If you buy a fountain kit with a container, the math has been done for you and you simply have to install it and make a minor adjustment to the pump. If, on the other hand, you replace a pump that has stopped working, or you create a new water feature and need a new pump, you have to do the math yourself.

Begin with a rule-of-thumb - Circulate all the water in the pond EVERY two hours for maximum aeration and filtration (either mechanical or biological, a topic for another time).

Start by measuring pond size

Before you do anything else, you need to know two things about your setup: 1] the size of the pond (cubic feet and gallons); and, 2] the height you want the water to rise, or discharge height.

To calculate the first unknown, pond size, cubic feet is estimated by multiplying the average length by the average width by the average depth, or $L \times W \times D = C.F.$ If you measure in inches, remember to convert the measurements to feet first! [For example: an 8 foot by 10 foot pond that is 2 feet deep would be $8 \times 10 \times 2 = 160$ CF].

Then compute the gallons

Once you know the cubic feet in your water feature, calculating the pond volume in gallons is easier. Multiply the constant 7.48 (from 7.48 gallons of liquid in a cubic foot) by the cubic feet you just calculated. In our example, $160 \text{ CF} \times 7.48 = 1196.8 \text{ Gal.}$ You will need at least a 600 Gallon per hour (GPH) pump to move the amount of water you have, if you turn it over every two hours.

Now figure in discharge height

The packaging the pump comes in will provide two important pieces of information for this calculation: 1] the GPH for each head height; and, 2] the maximum height the unit can pump. At either of those maximums, most pumps will only deliver a small proportion of what the pump is capable of producing.

Obviously, the lower the height the water has to travel, the more output the pump will produce. To get a lot of height of travel, expect to put a LARGER pump on the system.

Other considerations

- Most pumps are adjustable. They will have something like a slot or flap to determine how much water gets into the pump in a certain period of time. A small pump "wide open" may produce the same stream as a larger pump "closed down." You may have to experiment with this concept to get it right, so ask around and play with water features a while before you run out and buy a lot of expensive pumps (and most ARE expensive!). Serious water gardeners tend to "collect" pumps for some reason. I've never figured out why, exactly, but I never seem to have problems finding a few to experiment with.

- For waterfalls, the recommended flow over the spillway (the weir) is about 50 GPH for a thin sheet of water, up to about 150 GPH for heavy flow, a one-inch thick sheet of water. If your waterfall was a foot across, a heavy flow would require about 1,800 GPH from the pump (12" x 150 GPH).

- Never install a pump that isn't plugged into a GFCI (Ground Fault Circuit Interrupter). This is a special electrical plug that shuts off to prevent accidental electrocution in the event of mixing water and electricity in any way.

- In these times of drought (or near drought, depending on where you live), turning your pumps, waterfalls and fountains down, or even off, can cut down on water loss. Turning the water on intermittently can still aerate and filter properly, and you can add other units to the pond to aerate in place of moving water (fish tank and stock tank aerators, air bubblers, and the like).

Moving water, both the motion and sound of it, is one of the more enjoyable aspects of gardening for many people. Just look around at the expanded offerings in desktop fountains and other similar devices in every store you can imagine. There is even something healthy and relaxing about it in our hectic work schedules. Just don't waste the water while you're enjoying it!

If you have questions regarding water gardening, send them to: michael.thomas@attbi.com. They will be answered in future newsletters.

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History of the Colorado Water Garden Society

by John B. Mirgon

A water garden society - in Colorado's Mile High City? A few years back this question was asked by many people around the United States. Before long the society became well-known in the U.S., and other countries around the world noticed Colorado's interest in water gardening. Since the Colorado Water Garden Society's beginning, other water gardening societies have formed, and water gardening has become one of the fastest growing branches of horticulture.

The birth of the Colorado Water Garden Society was initiated by Denver Botanic Gardens' aquatic horticulturist Joseph V. Tomocik. He gave a class on *Nymphaea* (water lilies) on February 13, 1983. He asked anyone interested in forming a water lily society to remain after the class. Ten people remained. Three were willing to accept officer positions for the society's board of trustees: myself, president; Jody Cue, vice president; and Scott Sprague, secretary/treasurer. The seven others who served as supporting members were very helpful later as committee chairpersons and with other activities.

Correspondence soon began with commercial water gardening suppliers to learn about how other plant societies - water gardening societies in particular - were structured. However, when registering with the Royal Horticultural Society in England, the board was informed that there were no other water gardening societies. This meant that Colorado's water garden society was the first in the world. To the board this meant one thing - they were on their own.

During the next few weeks meetings were held to write - and rewrite - the society's constitution and to put together committees and assign chairpersons. It was decided to name the society the "Colorado Water Garden Society" rather than the "Denver Water Lily Society," which might have restricted the membership. By April 2, 1983 the constitution was written to satisfaction, and on April 24, the first Colorado Water Garden Society general meeting was held in Denver Botanic Gardens' administrative building, the Botanic Gardens House. From this meeting the society has grown to what it is today.

On May 11 and 12, 1984 the Colorado Water Garden Society (CWGS) made its first appearance at Denver Botanic Gardens' Plant and Book Sale. Each year since the society has handled the aquatic and bog plant section of the sale. A day for garden and pool tours of the CWGS members also was started in 1984. A barbecue or picnic now ends this annual event.

In June, 1985 the CWGS held its own first plant sale. Since the Gardens' May sale was too early to sell tropical *Nymphaea*, the focus of the June event was the auction of these tropical water lilies. Of course, hardy *Nymphaea* and other aquatics also were sold. This sale, too, has become a yearly event for the CWGS. Also in 1985, CWGS members were first present at garden centers for weekend seminars and events to answer questions and inform people about water gardening. Members still participate in these events, helping meet one of the CWGS objectives - to stimulate the study and culture of aquatic plants. In 1986 the CWGS was invited to exhibit at the Colorado Garden and Home Show in the Horticultural Hall. This was the society's first showing before the public. Because of its affiliation

with the Colorado Federation of Garden Clubs for many years, the society was present each year. Also in 1986, CWGS members joined with speakers from Lilyponds Water Gardens and a speaker from England and held a mini symposium.

In 1987 the CWGS started an endowment fund at Denver Botanic Gardens. The funds are used for the Gardens' aquatic plant collection and other related water gardening expenses. Contributions have continued most years since. The same year, the CWGS and the International Water Lily Society held the International Water Lily Society Symposium at Denver Botanic Gardens.

In the May, 1990 issue of *Horticulture* magazine, associate editor Teri Dunn wrote an article, "The Colorado Water Garden Society." The article told about the CWGS and water gardening in the Rocky Mountain region. It also told about Denver Botanic Gardens' aquatics and Tomocik's work with *Nymphaea*.

In August, 1994 at Sparsholt College in Winchester, Hampshire, United Kingdom, the International Water Lily Society presented an Award of Appreciation to the Colorado Water Garden Society. The award recognized CWGS's contributions to the International Water Lily Society's purpose of promoting the appreciation and enjoyment of water gardening.

Currently, many CWGS members volunteer at the Denver Botanic Gardens throughout the year. Each fall members help put away the aquatics for the winter. In spring they help report the aquatics and place them back into the pools for the summer display. The society also participates in community projects, such as the restoration of Denver City Park's water lily pond and work at Hudson Gardens south of Denver.

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Several CWGS members worked at the Society's information booth at the recent Echter's Expo, answering questions and handing out brochures. Echter's is one of the annual garden center programs that CWGS has participated in for several years.



Space is still available to help with the Spring Planting at Denver Botanic Gardens. If you haven't been contacted, but would like to work, contact **Lowell Coon**, Volunteer Coordinator, at 303-427-8532.

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Colorado Water Garden Society - Meeting Dates 2003

April 13, 2003 - Off-Grid Ponds: Benefits, Costs, and Details (Patricia Weis-Taylor, CWGS)

2:00 pm, Waring House, Main Room, 9th & York St., Denver Botanic Gardens

May 18, 2003 - Drought and Water Gardens (Guest: Representatives of Denver Water Department)

2:00 pm, Waring House, Main Room, 9th & York St., Denver Botanic Gardens

June 1, 2003 - Annual Plant Sale (9:30 am - Members Only; 10:00 am - Open to the Public)

Morrison Center, 11th & York St., Denver Botanic Gardens

July 13, 2003 - Annual Pond Tour - Southwest Denver and Lakewood

August 10, 2003 -

2:00 pm, Morrison Center, 11th & York St., Denver Botanic Gardens

September 20, 2003 - Annual Pond Expo (Discuss water gardening with contractors and vendors)

12:00 - 4:00 pm, Mitchell Hall, Denver Botanic Gardens

December 6, 2003 - Annual Christmas Party

Board Meetings are held at 12:00 pm prior to general meetings. Members are welcome to attend.



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