



The Water Garden

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September 2002

Water Gardening and Pond Expo – September 8

If you have questions on anything to do with water gardening or ponds you will find the answers at our first annual Water Gardening and Pond Expo. Experts in pond design and construction will be available to estimate costs for a pond. They will also talk about various pond add-ons to ease maintenance chores. Pond suppliers will be able to tell you about the latest developments in new equipment and products for ponds. The Rocky Mountain Koi Club will be on hand to answer your fishy questions.

We will have a number of seminars to meet all interests:

12:30 p.m. - "Walk Through the Water Gardens" at DBG will highlight various water lilies and plants that do well in Colorado. Bruce McLane from Florida Aquatics Nursery in Fort Lauderdale, FL will conduct the walk.

2:30 p.m. - "How to Design and Build Your Own Pond" for the do-it-yourselfer will be held in Classroom D by Richard Koogler of Lilyponds Water Gardens.

In Mitchell Hall at the Demonstration Pavilion we will have a series of mini-seminars.

- 1:30 PM - Pond Filtration
- 2:00 PM - The Naturalized Pond
- 2:30 PM - Dividing Aquatic Plants
- 3:00 PM - Pond Fish
- 3:30 PM - Container Water Gardens
- 4:00 PM - Keeping a Healthy Pond

There will be also an ongoing slide show of more than 100 ponds built by local contractors and each will have representatives at the Expo. This is your opportunity to get new ideas and learn how the pros do it.

Elections – Don't forget to Vote at the Expo

Elections for board positions will still take place during our September Expo. The Board will be presenting the following slate: Vice President – no candidate, Secretary – Bill Powell, and Member at Large – Moe Belisle. Write-in spaces will be available for all positions. Members need to cast their vote at the CWGS booth during the Expo. Voting will be completed by secret ballot.

Season nears the end. . . Now What?

Labor Day is usually the grim reminder that Colorado's growing season is nearing an end. Days are becoming shorter, the sun is less intense and nights are cooler. Hardy lilies are slowing with their bloom show and Pickerel is nearly done blooming.

Many are wondering what to do with plants for the winter. If you have a pond 18" deep (at least 300 gallons), most hardy plants will over winter in the pond. Make sure plants are at the lowest depth. Moving water has more difficulty freezing, so place a small pump in the pond with the outlet about an inch below the surface. This will keep the water open to allow for air exchange.

If your pond is small, or you have plants in a container, plants will have to be removed and over wintered by one of several methods.

Hardy lilies can be stored in their pots in a cold area, such as a garage or crawl space. Temperatures need to remain above 32 degrees. This also is a successful way to carry over hardy marginal plants. They should be damp and not be allowed to dry out.

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Bob Hoffman 303 978-0124

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July Pond Tour & Picnic

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Newsletter Editor

Bob Hoffman 303 978-0124

The Water Garden

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Go Figure

Have you ever really stopped to figure how much water your pond uses compared to other everyday water uses?

First lets look at the toilet flush. If you flush the toilet four times a day you have used 14-28 gallons of water (98-196 gallons per week). You will use 3-8 gallons of water per minute to take a shower. You use 9-45 gallons of water to take a bath, depending on whether you fill the tub to capacity or only a quarter full. Do a load of laundry and you use 35-50 gallons of water. Do a load of dishes using the dishwasher and you will use 10-15 gallons. Each time you wash your hands you will use an average of two gallons of water. In the yard, a Kentucky bluegrass lawn, will need one to two inches of water per week; a turf-type tall fescue will need twice that amount.

To determine how much water you are using each time you top off your pond due to evaporation and transpiration from plants, you will need its dimensions. For the round pond use this formula to determine the amount of water it holds in gallons:

Diameter (in feet) X Diameter (in feet) X Depth (in feet) X 5.9 (For example, 8 foot diameter pond that is two feet deep holds 755 gallons). Topping off the pond with 1 inch of water would be 31.5 gallons. This is how to determine the amount you are adding; for a round pond use Diameter (in feet) x Diameter (in feet) multiplied by 5.9, then divide by 12. This gives you the number of gallons per inch of water added.

If the pond is square or rectangular, use this formula to determine total gallons:

Length (in feet) X Width (in feet) X Depth (in feet) x 7.5
To determine the amount of water you are adding use this formula:
Length (in feet) X Width (in feet) X 7.5 then divide by 12. Again this will give you the number of gallons per inch of water added. For irregular shapes you will have to do some "guestimating." If half of the pond is two feet deep and the other portion is three feet,

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Waterline Continued:

average the two depths and call it two and one-half feet deep. You should be able to come fairly close to your total number of gallons.

There are several reasons why it is important to know how many gallons of water your pond(s) hold. If you have to replace more than 5% of the pond water and you have fish, you will need to add a chlorine and chloramine remover. You will need to size your pump based on total number of gallons, as water should be turned over once every two hours. It also sounds more impressive to say, "I have a 755 gallon pond," instead of an 8 foot round pond. It is pretty simple to figure what to use for conservation methods to offset the one-inch of water to top off the pond each week. Skip a load of laundry once a week. Skip one shower, spend the day by the pond in the open air . . . no one will notice.

Actually just removing all turf and replacing it with more ponds would be a great conservation method.

The pond provides many needs for backyard wildlife. Check out these websites for some good information on habitats and plants:

Backyard Conservation

<http://www.nrcs.usda.gov/feature/backyard>

National Wildlife Federation Backyard

Wildlife Habitat Certification Application

<http://www.nwf.org/backyardwildlifehabitat/application.html>

eNature.com

<http://enature.com>

On line field guides for Amphibians, Birds, Butterflies, Fishes, Insects, Mammals, Native Plants, Reptiles, Spiders, Trees, and Wildflowers by region.

More water use information at:

http://www.water.denver.co.gov/conservation/water_use.html

Season nears the end. . . Now What?

Continued:

Another method is to dig a hole in the yard at least 18" deep put plants in and cover with weed cloth, followed by the dirt you removed from the hole, then top with 4-6" of mulch. This method is termed "healing in."

Hardy lilies can also be removed from pots and rhizomes need to be washed of all dirt. All foliage and roots should be stripped, then place rhizomes in damp peat and place in an area where temperatures remain around 40-50 degrees. Make sure that the peat does not dry out completely, but don't keep it wet or rot will set in.

Marginal plants left in the pond can be cut back after the first hard frost. On most plants, leave 3-4" of the dead material above the pot. If you'd like some winter interest in your landscape, wait until early spring to do plant trimming, but it is best to remove any plant material hanging in the pond. Water lilies left in the pond should be stripped of leaves after blooming ceases. Don't forget to remove floating plants such as lettuce, hyacinth, *salvinia*, *azolla* and frog bit. Any plant foliage left in the pond will die and fall to the bottom of the pond. This adds to the sludge and increases gases as it decomposes. This is detrimental to fish. It will also provide nutrients to support algae in the spring.

Tropical plants will need to be moved indoors or to a greenhouse. Tropical plants begin to experience stress when temperatures fall to 45 degrees at night. Depending on weather conditions, which differ from year to year, begin moving these plants into their winter home in September.

Before bringing any plant inside, check carefully for insects. Spider mites, white flies, aphids and mealy bugs are common pests that can multiply and overtake the plant indoors. If pests are found, a hard spray of water may be enough to dislodge the insects. If insect populations still exist, the next step is finding the least toxic method of control. Remove plants from the pond before using any insecticide. Neem oil is effective in controlling spider mites, but several applications may be necessary. Insecticidal soap is effective on aphids. Mealy bugs sometimes can be controlled by dabbing them using a cotton swab soaked in alcohol. When insects are under control, then plants can be brought in. White flies on a plant usually can't be controlled. It is best to leave the plant out for a frost, then bring it in after removing all leaves and giving it a thorough washing. It has a better chance of living using this method than spending time trying to eliminate the insecticide-resistant white flies.

Set plants in a container that holds water and place near a bright window. Unless the plant is in a pot without holes, it is not necessary to submerge it. Water will need to be replenished as needed. All will go through an adjustment period with foliage that will yellow and die; this is normal. Continue to watch for insects throughout the winter season.

COLORADO WATER GARDEN SOCIETY
2002 CALENDAR OF EVENTS

September 8, 2002 Water Gardening and Pond Expo
Denver Botanic Gardens, Mitchel Hall, 9th and York St.

December 7, 2002 Annual Holiday Party & Awards
Denver Botanic Gardens, Gates Hall, 9th and York St.

Board Meetings are held two hours prior to general meetings and are open to the public.



Bob Hoffman
5110 S. Estes St.
Littleton, CO 80123

