Summer

Tropical water plants can be placed in the pond when daytime water temperatures near 70 degrees and night temperatures do not drop below 50 degrees, usually the middle of June. Fertilize marginal plants every 5-7 weeks through the growing season.

Lilies should be fertilized every 3-4 weeks, until early August. Tablet or pellet fertilizer for aquatic plants is recommended. Excessive yellow leaves or pads, few petals on flowers, or poor blooming can indicate a lack of nutrients.

Prune and remove all dead leaves (pads) or flowers from the plant at the crown level, throughout the growing season.

Add water as necessary to replace amounts lost through evaporation. Remember to use a dechlorinator and chloramine remover at the rate specified if you add more than one inch of water.

Fall

Covering a pond with bird netting can save a great deal of work if pond is in a heavily-treed area. Remove any dead leaves or dead plant material from the pond. Trim back all plants and drop hardy Nymphaea to the lowest level of the pond. Move tropical plants indoors for overwintering.

Winter

When water temperatures drop below 55 degrees, stop feeding fish and shut down the biological filter. Drain all water from any exterior piping to eliminate cracking or breaking from eventual freezing.

To keep an area open for exchange of gasses in a pond with fish, run a small submersible pump all winter. Check the GFCI to make sure it is functioning properly. Place the pump on a brick or pot with the outlet approximately 2" below the water surface. A tank aerator (available for stock tanks) also works for this purpose. Place air outlets 6"-8" below the water surface.

If extremely cold temperatures cause the pond to completely freeze over, place a pan of boiling water on the surface to melt a hole in the ice. To decrease the possibility of losing the pot in the pond, tie a string or rope to the handle. Do not use a hammer or other instrument to break the frozen surface. This can kill fish.

If you are not overwintering fish there is no need to open the surface of the pond or be concerned about gases building, this has no effect on plants.

Add water as needed to replace any that has been lost from evaporation. Be sure to add it slowly to eliminate temperature changes which could adversely affect the fish. Remember to use a dechlorinator and chloramine remover at the rate specified if you add more than one inch of water.

If waterfall features are left running during the winter, it is important to visually inspect the pond water level to ensure winter freezes and thaws have not created a leakage of water.

Colorado Water Garden Society

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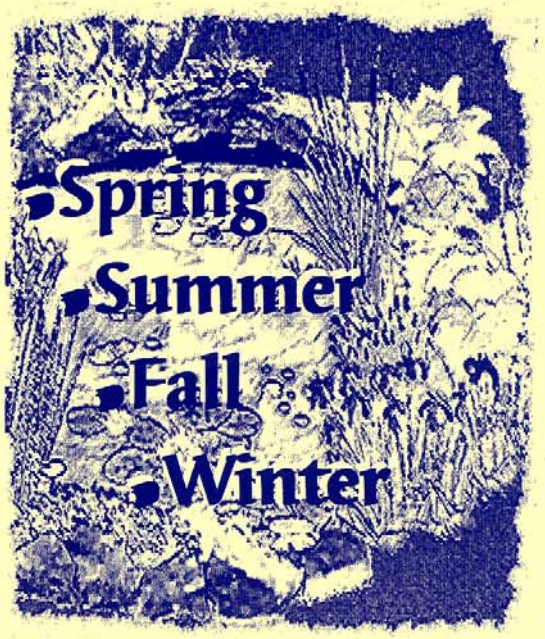
POND CARE



To enjoy your pond year round, set up a seasonal care plan. Most care is on a preventative schedule to maintain a healthy pond, which generally equates to a visually-appealing pond.

Spring

Maintenance in spring plays an important role in general pond health and enhances enjoyment throughout the growing season. Spring is a transition time in the pond. Sunlight is increasing, temperatures are warming, fish are increasing their activity, and algae begins its growth cycle.

Even the best-balanced ponds experience algae growth until the plants grow to a level to provide shade, reducing sunlight that encourages algae growth, and until nutrients in the water are absorbed by the growing plants. A little effort now can decrease water "greening" that may be unhealthy to pond life and unpleasant to the onlooker.

Using a pump or siphon, remove 25-30% of the pond water. Move potted plants from the pond to a shady area or, in sun, cover with wet newspaper. Try not to stir up dirt and debris any more than necessary so the pond bottom remains visible.

Using a fine mesh net, scoop along the bottom and edges to remove leaves, debris and dirt that have blown and fallen into the pond, creating a layer of muck. This process is called "mucking" the pond. Origins of this term are the Middle English-Norse word "myki," meaning dung, and the IndoEuropean word "meuk," meaning slippery.

This blackened "soil" containing excess fish food, fish excrement, and decaying matter has a very unpleasant odor. Remove as much of this matter as possible, as this contributes to the growth of algae and deprives fish of needed oxygen. Add the muck to the compost pile. Leave the moss-like algae growth on the pond sides, as this has beneficial microorganisms that help balance the pond ecosystem.

Look closely at the fish for any unusual behavior, injuries, swollen abdomens, or white or red flecks on the fins or bodies. If any problems are apparent, consult your fish supplier for treatment options.

Inspect mechanical equipment such as pumps, cords, filters, and tubing for damage or wear; clean and replace as needed. Assess the condition of the liner or preformed pond for possible deterioration from sun or punctures. Check the electric circuit and make sure the GFCI (Ground Fault Circuit Interrupter) is working properly. If all is well, refilling the pond can commence. Water should be trickled in from the garden hose; this will decrease any rapid temperature change that could affect the fish. A dechlorinator and chloramine remover should be used at the rate specified.

When pond refilling is completed, filtration and circulation can be started. If a waterfall or stream is included in the circulation, watch the pond water level for several days. If the water level drops, it is likely that ground freezing and thawing has created a problem that allows water leakage.

If there is a considerable amount of suspended dirt and algae in the water, adding a "Mirgon" filter can help speed up the water-clearing process. This simple, quick filter is named for its originator, a founder of the Colorado Water Garden Society, John Mirgon.

Using a bucket with a sturdy handle, place a submersible pump in the bottom and put a few rocks or pebbles around the pump base inlet. Place polyester fiberfill (pillow stuffing) around and on top of the pump and another rock or two to hold it in place.

Put the filter in the pond where it can be easily reached. Tubing from the pump outlet should be placed above the pond surface to increase aeration. Clean and replace the fiberfill frequently. Remove when sufficient clarity is reached.

Check hardy marginal (bog) plants, trim away any remaining dead foliage, divide and repot as needed. Heavy garden soil should be used to pot all water plants. Potting soil, compost, vermiculite, or perlite should not be used, as they float out and foul the water. Soil should be added to a level one inch below the pot rim, then topped with one-half to one inch of clean gravel to discourage fish from digging in pots.

Hardy Nymphaea (lilies) that have grown out of their pots should be repotted. Turn the pot upside down to remove the plant and dirt. Remove dirt from the rhizome and roots by flushing with water. Using a sharp knife on a hard surface, cut off any brown and black roots and rotted (mushy) areas from the rhizome.

If water temperatures are in the 40˚ F. range, fresh cuts on the rhizome can be rubbed with powdered charcoal to discourage rot. Separate side growth "eyes" from the primary rhizome for propagation. Hardy lilies grow horizontally and should be placed against one side of the pot at a 45-degree angle, with the growth tip (crown) above the soil so it has room to grow across the pot.

Hardy Nymphaea prefer at least one cubic foot of soil, but can do well in smaller pots. Growth is commensurate to soil area for root growth: the bigger the pot, the bigger the plant and, the bigger the show.

Fertilize plants using aquatic plant tablets and return them to their growing spots in the pond. Sink repotted plants into the water slowly to prevent release of soil into the water.

When water temperature reaches 50 degrees, fish feeding can resume using an easily-digestible, wheat-germ-based food. Regular and growth food can be introduced when water temperature reaches 65 degrees. Another test to see if fish are ready to resume eating is to drop in a sinking pellet of food. If fish rush to consume it before it gets to the bottom they are totally awake and can digest food. Fish wintered inside in unheated quarters can be returned to the pond. Water temperature differences should be less than five degrees to reduce any stress to fish.