

SECTION III: PLANT CARE

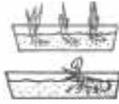
Planting Aquatic Plants



Ten Steps to Happy Plants

1. Choose the appropriate size of pot.

Marginal Plants 12" wide x 8" high
Waterlilies 14" wide x 10" high



2. Fill pot with a heavy rich sandy clay-loam.

Avoid peat, vermiculite, or perlite (they float!).

3. Soak thoroughly before planting.

Wait about 10 minutes before planting.

4. Plant into the wet loam.

Waterlilies Push rhizomes in horizontally; plant 'crown' (growing point with young shoots) facing opposite end of container. DO NOT BURY CROWN.

Marginals Push in deep enough to anchor them (i.e. like planting a rice paddy!)

Oxygenators Be sure they are varieties which root and are not free-floating. Push in either vertically (individually or as a bunch), or press them in horizontally to encourage rooting along the stem. They can be planted into loam or pea gravel.



5. Top-dress the soil surface.

Cover with 1/4" of fine, washed sand or 1/2" of pea gravel. Use larger gravel or stones if fish are present in the pond.

6. NEVER ALLOW AQUATIC PLANTS TO DRY OUT WHILE HANDLING THEM.

Sprinkle some water on them every so often and cover them if you must leave the worksite.

7. Insert a label for identification.

Push your tag deep into the mud leaving at least 1" visible so it will be easy to locate later. Labels projecting into the water will soon become coated in algae, making them difficult to read.

8. Insert fertilizer tablets.

Push tablets deep into the mud next to, but not touching, roots. Use 2-3 tablets per 1 to 2 gallon pot. Oxygenators do not need fertilizer as they will get their nutrients from the water and help keep your pond water clear.

9. Choose a location with the correct light levels.

Waterlilies, and most flowering aquatics, should be in direct light for at least 4 to 6 hours per day to bloom well.

10. Slowly lower pots to the correct depth.

Waterlilies 6-24"+ above soil level (depends on variety)
Marginals 2-6" above soil level. Keep pot and soil below water surface or terrestrial weeds will grow on the mud surface. Oxygenators 1/2" to 6' (depends on variety)

Handling Bare Root Plants



Working with Wetland Plant Bundles

Holding bundles. Aquatic plants should be transported and planted as quickly as possible. However at times planting may be delayed in which case the plants can be held for many days if bundles are kept wet, cool and in the shade.

Time of year. Planting season extends from May 15 through end of September. Best time to plant is June or July, which leaves the rest of the season for the plants to become established and prepare for winter.

Planting marginals. Tubers and bare root pieces are pushed into the mud by hand in the appropriate depth of water. Use a shovel if ground is hard. Late season plants can be quite tall and may not stand up well in waves and wind. These can generally be trimmed to 4-6", but be sure to keep cut stems above water or they may drown.

Planting oxygenators. Species such as Hornwort, a non-rooting plant, are just thrown into the pond where they will float or sink as the plant requires. Rooted aquatic plants can be pushed in by hand or with the aid of a forked stick. They can also be weighted over-board from a boat. Be sure not to drop them in water that is too deep or they will not have enough light to grow. Tubers such as Sago Pondweed can be either pushed into the mud or placed into the center of a clay mud ball and dropped overboard. Try not to stir up the muddy bottom of the pond since silt settling on the underwater plant foliage can kill them.

Bare Root vs. Plugs. Plant slightly tighter when using bare root pieces than when using plugs. Survival rates for both will depend on growing conditions and how the plants were handled. It is less expensive to ship a bundle of 1000 root/shoot pieces (soil-free) than 1000 plugs (with soil).



Waterlily tubs in empty pond

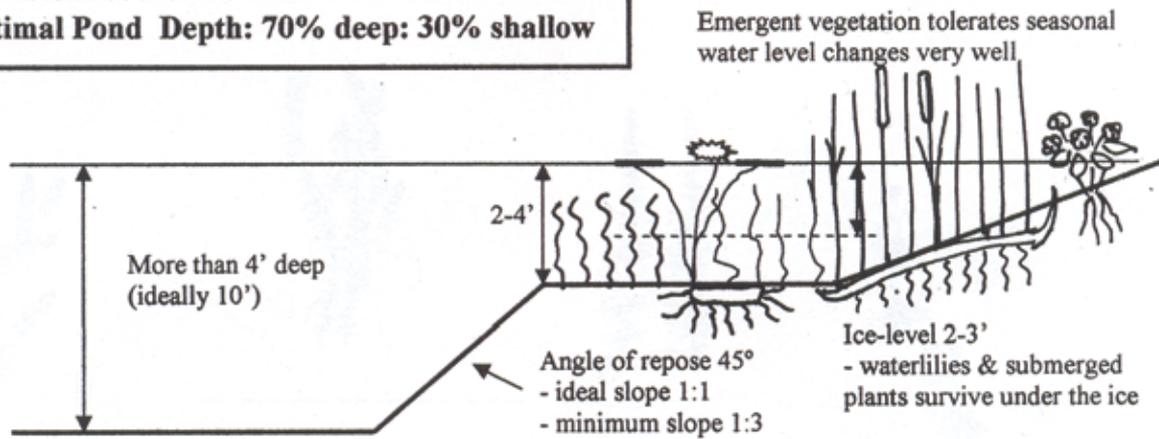


Bare root bundle of Mare's Tail



Established planting of Cattails

Optimal Pond Depth: 70% deep: 30% shallow



How do I overwinter my water plants?



Hardy Marginal Water Plants

These plants will survive being frozen into the ice. Leave all hardy shallow water aquatic plants in place for the winter. Trim foliage back above the water level in fall or in spring.

Hardy Waterlilies & Deep Water Aquatics

These plants overwinter beneath the ice and must not freeze.

Nonhardy and Tropical Aquatics

Overwinter these plants indoors. Put pot into a plastic bag. Place in a cool location. Some tropical varieties, such as Water Hyacinth & Water Lettuce, require supplemental lighting (12 hour photoperiod) and 70° F water to survive. These are often treated as annuals, and can be purchased each spring.

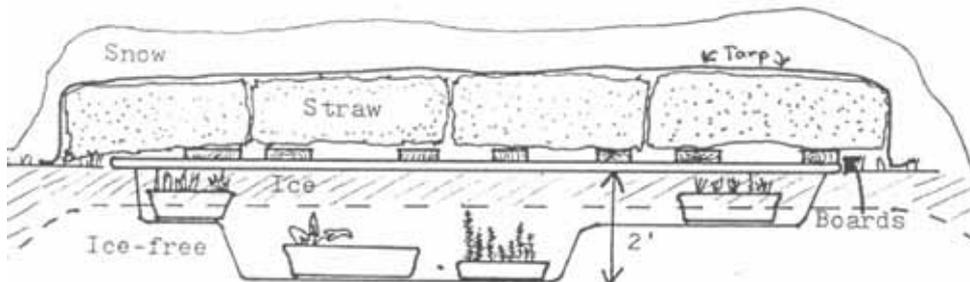
Method 1. Put potted plants into plastic bag and store in cool, dark location.



Method 2. Bring indoors, trim back foliage and submerge in a tub of water until spring. Keep in cool location with some indirect light.



Method 3. Cover pond with insulating material such as straw (on boards above the ice, covered with a tarp to keep dry) or Styrofoam. R40 rating is suggested.



Method 4. Remove rhizomes from pots and place in damp peat moss in sealed plastic bag. Store in cool, dark location.



Colour in the Water Garden



Like most perennials, the majority of water plants have a short blooming season, so it is a good idea to choose a variety of plants to extend the flowering season. As a guide, water plants bloom in the following sequence here at **Bearberry Creek Water Gardens**:

- APRILColtsfoot
- MAYMarsh Marigold
- JUNEBog Arum, Waterlilies, Floating Marsh Marigold, Bog Bean
- JULYPondlilies, Waterlilies, Water Irises, White & Yellow Water Crowfoot Smartweed, Bladderwort, Water Cannas, Arrowhead, Water Plantain, Floating Marsh Marigold, American Brooklime, Floating Heart
- AUGUSTPondlilies, Waterlilies, Smartweed, Water Cannas, Arrowhead, Water Plantain, Cattails, Floating Heart, Bladderwort
- SEPTEMBER.Waterlilies, Water Cannas
- OCTOBERWaterlilies (weather permitting)



As you can see, Waterlilies & Water Cannas bloom considerably longer than do most other water plants. You may also have noticed that colour in a water garden peaks in July & August.

If you would like to brighten the water garden further, you may choose to plant some early & later blooming bulbs, annuals, and perennial flowers around the pond where they will reflect in the water.

If, on the other hand, you prefer the restful greenery of an oriental garden, remember to plant plants with leaves having interesting shapes or textures. Some favorites of ours include Coltsfoot, Horsetails, Water Arum, and Variegated Sweet Flag.



Overwintering Fish



- Method 1.** **Bring fish indoors** into aquariums for the winter.
- Method 2.** **Use a floating pond de-icer** to keep a hole open (this allows toxic gases to escape).
- Method 3.** **Use a pond aerator** to supply oxygen to the water, and help keep a hole open.
- Method 4.** a) **Insulate top of pond.** Be sure to leave allow for a venting hole.
 b) Set a **submersible aquarium heater** (100—250 watts) in vent hole.
 c) **Aerate** using an aquarium pump and air stone. Place pump in shelter of box and check for condensation (and possible freezing) in tubing throughout the winter. This assists in circulating the water and removing harmful gases which build under the ice. Do not over-aerate since this may cause super-cooling of the water.

remember, in Methods 2-4 where the water temperature will be near freezing, **stop feeding the fish, or lower the protein content of the feed. Start feeding again when water warms up again in spring.*

