

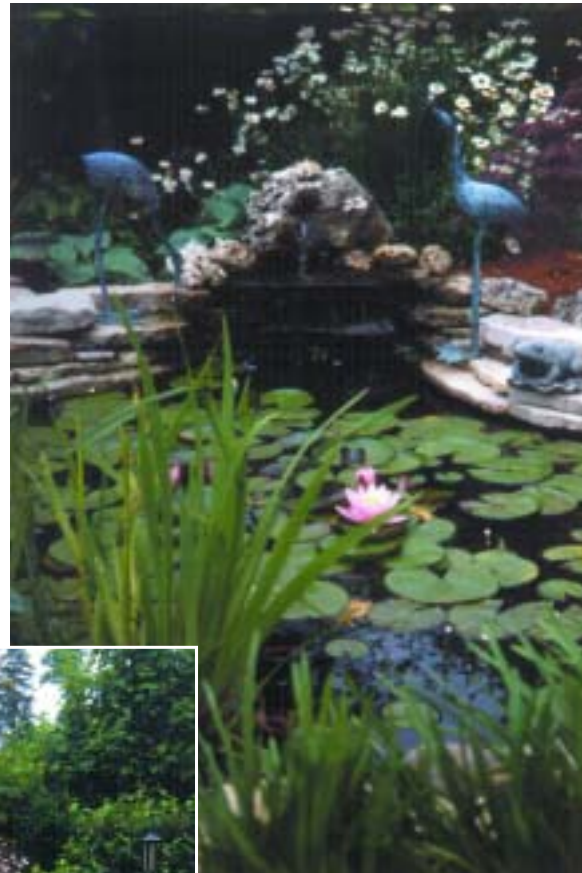
St. Louis Pond Tour

with Linda Dollard

This next year when you plan your vacation, consider timing your travels to a pond tour. Based on the concept of the popular public garden tours, pond tours are held throughout the country by water garden and Koi clubs and societies. For a small fee, usually five to ten dollars, you gain a map to participating gardens which you can visit at your own pace during the tour hours. Often you have the opportunity to speak with the owners and learn from their experiences. Besides being boggled by the creativity and enthusiasm of these people, you come away refreshed with the delight of meeting warm and friendly folks who willingly share the joy, the peace, and the tranquility of their gardens. Pondkeepers are special folks, and the members of the St. Louis Water Garden Society are at the top of the group.

The day Linda Dollard took me to visit some of their members' ponds was cloudy. Cancel that. It was rainy. But the people I met were the sunshine of life.

Linda & Ken Dollard, St. Louis



Just out the back door, the Dollards enjoy a large deck with a large water garden nearby. The waterfall provides a soothing backdrop of sound.



With a pond tour coming up, Ken and Linda spent one day adding this new pond that even includes a stepping bridge. The pond appears to connect to the larger pond and is so attended by detail you would never imagine it was brand new!



Linda is an enthusiastic gardener with every corner of their yard landscaped with special plants and flowering beds. In a shady side bed next to the fence, a small pond attracts the garden songbirds.



Siting the ponds just off the back deck allows Linda and Ken to enjoy their water gardens from inside the house, too.

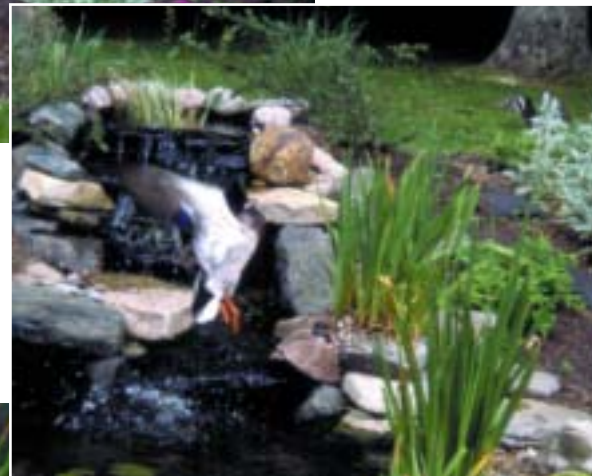


Using free-standing trellises, Linda created a clematis-adorned frame to a flowing fountain.

Pat Fitzwater, Belleville, IL



Pat Fitzwater's year-old pond is the focal point of her backyard, nestled into a natural rise of land before the backdrop of woods at the rear of the yard.



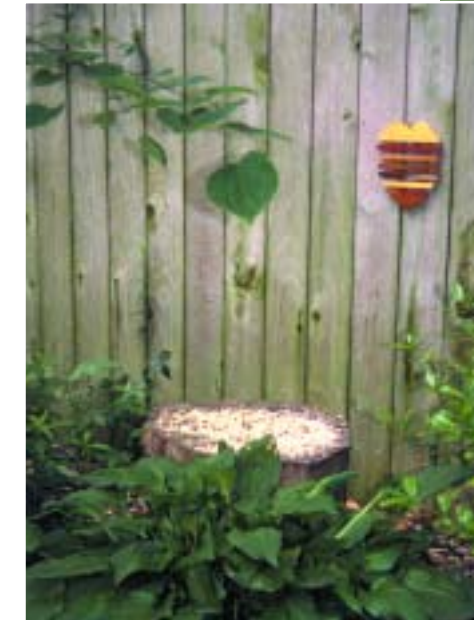
It's a fact: a pond in your yard will attract wildlife. Approaching Pat's pond, a mallard floated motionless as an exquisitely painted decoy. As we neared the pond edge, he sprang to life and flew away!



Because Pat's pond is sited near trees, a surface skimmer unit was installed in the side of the pond to lessen the maintenance involved with constant leaf removal from the water. A flat rock is easily moved to allow cleaning of the skimmer bag inside.

George W. Thornburgh, St. Louis

George makes no pretense about his small pond: it is part of his total backyard – devoted to the birds! A perching stick invites 17 species of birds to preen after dipping into the pond.



Perimeter beds around the Thornburgh fence offer feeding stations for the birds. George acquired this stump by chasing down a city truck!



Part of George's garden routine is to fill the many flat saucers of water and small feeders set throughout the garden. Everywhere you look, you see garden art and special features to tend the birds.



When his next-door neighbor took out a pine tree, George confiscated trunk portions to use as mid-level feeders on the fence.

Gary Leabman, St. Louis



In the back corner of the Leabman garden are two handcut, nine-foot-tall Ionic columns made of Missouri limestone. They originally stood in a Gaslight Square building that Gary's grandfather owned. The columns frame the entry to the water garden area.



Inside the home, through a small portal in the master bedroom, is a corner sunroom where Gary keeps a small pond.

Gary began developing his garden nine years ago. The water garden area was created on a former garage foundation that is now topped with gray granite.



A touch of whimsy in a Leabman tree: a spider made by Bob Tooley for a float in the 4th of July parade!



The brick-edged pond is actually a Rubbermaid 150-gallon stock tank. Behind the pond is a piece of Georgia granite that had been the back bar of a restaurant.

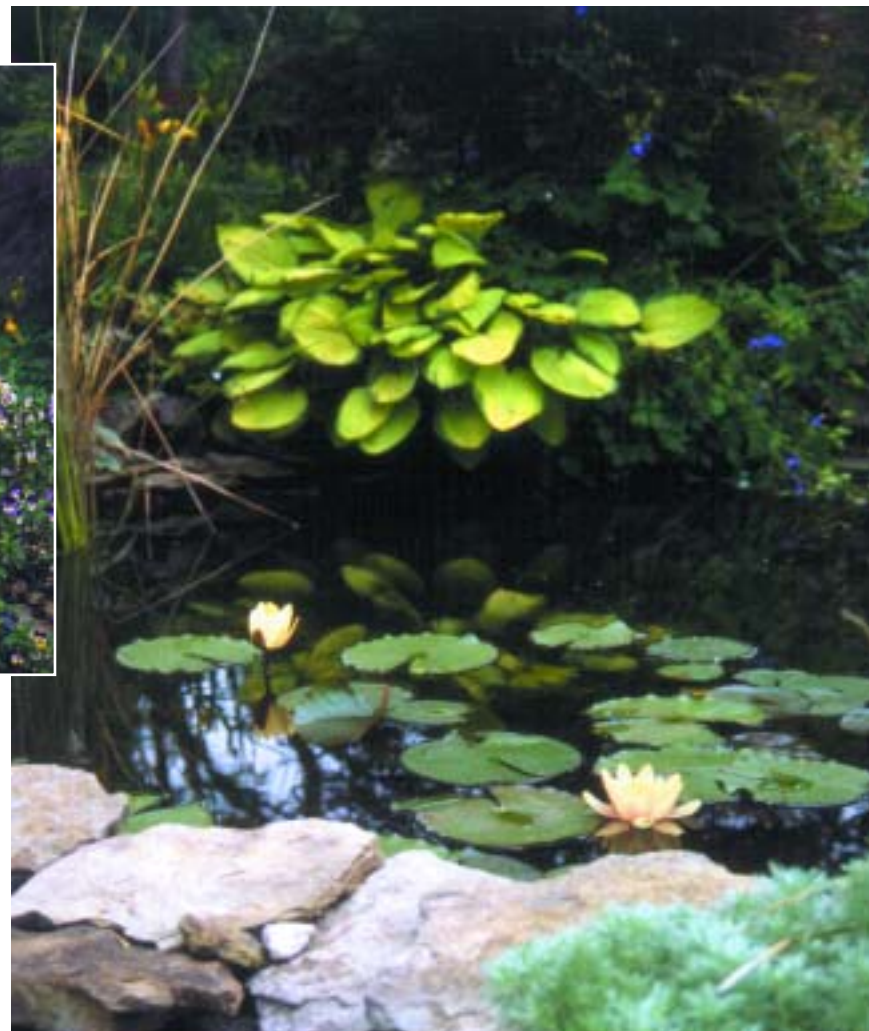


Gary Leabman has fully restored both his classic home and its gardens. Flower beds are framed by the brick pathways that Gary has laid himself.

**Maureen and Vance Halterman,
St. Louis**



After meeting Maureen and Vance (shown on page 32), there's no doubt that a subtle touch of irony was intended with the planting of Johnny Jump-ups around the whimsical frog statue/planter.



Working together, newlyweds Maureen and Vance carved out flower beds, ponds, pathways, and a stone floor to their outdoor living room.



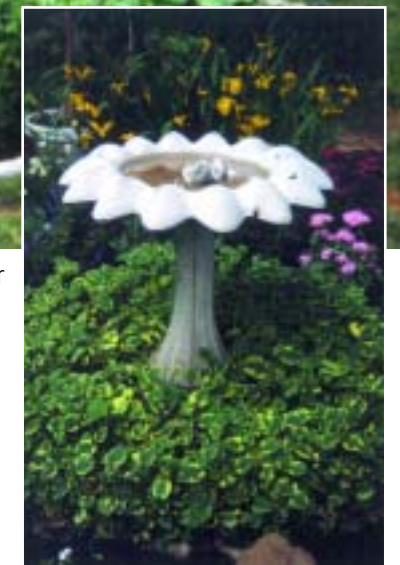
You can tell Maureen and Vance love plants. Throughout the garden, plants are celebrated in striking color and texture combinations.



A recently introduced Japanese variegated willow brightens a vignette with a fish ornament near the main pond.



But a few years ago, none of this was here! When Vance and Maureen surveyed their new yard, they saw only grass and a perimeter fence.



Each eye-catching portion of the Haltermans' garden is finished in exquisite detail.

Thank you, St. Louis Water Garden Society and Linda Dollard, for sharing your warm hospitality and creativity with P & G!

Doing It Yourself

Text by Carol Lersch, photos by Jim Lersch

Jim and Carol Lersch created a real backyard paradise... on a shoestring budget.

At some point during the beginning of our pond thinking, we went to a seminar at which Helen Nash was speaking. She had an incredible amount of user-friendly information and also presented a slide show of ponds from around the country. We fell in love with all of them, but mostly admired one that had a nearly life-size elephant on top of a huge configuration of rocks, the elephant's trunk spewing the recirculated water down into the pond. Well, dreams be us!

Those are the kind of things you can create with much acreage and unlimited funds, but it gave us more than enough inspiration to get started.

To begin such a project, first have a good heart-to-heart talk with your spouse. Let spouse tell you how it should be done, when and where. This seems to be the logical way to approach any project. Then, while spouse is congratulating him/herself, figure out the correct placement, depth and configuration, and either instruct spouse or hire someone to dig the hole in the appropriate place.

Shovel at the ready, spouse was digging the hole; I sat in the house in an easy chair reading a magazine. Suddenly I came across an article that



Seated in the open-sided 'party-room,' the pond and its visiting birds can be enjoyed.



Carol wanted wisteria, so she painted it on the door.

said you should incorporate some shelves around the perimeter to hold water plants.

"Wait, wait!" I cried, running out the back door at breakneck speed. "This magazine says we need shelves!" Well, too late for one side, but we were able to make shelves around 1/3 of the pond. In our opinion, shelves are an absolute necessity. Without shelves, you really end up with just a big hole full of water. The shelves add another dimension – transition actually, because the water is one level, water plants on the shelves create another level, soften the edges of

the rocks with greenery, (minimizing the 'ring of rocks' look) and bring you visually up to the ground plantings, (another level), and finally up to the yard. After all, that's the way it is in nature, many levels blending into one another. (At this point, we got smart and joined the Springfield Water Garden Society and found that, had we joined them first we could have saved ourselves some time and money and averted some uncorrectable mistakes...details unavailable due to pride.)

After the hole is dug, you must line it with something so those Missouri rocks don't push up through your liner, tear it to shreds, and allow all



Many birdhouses are sited to blend in with the landscaping.

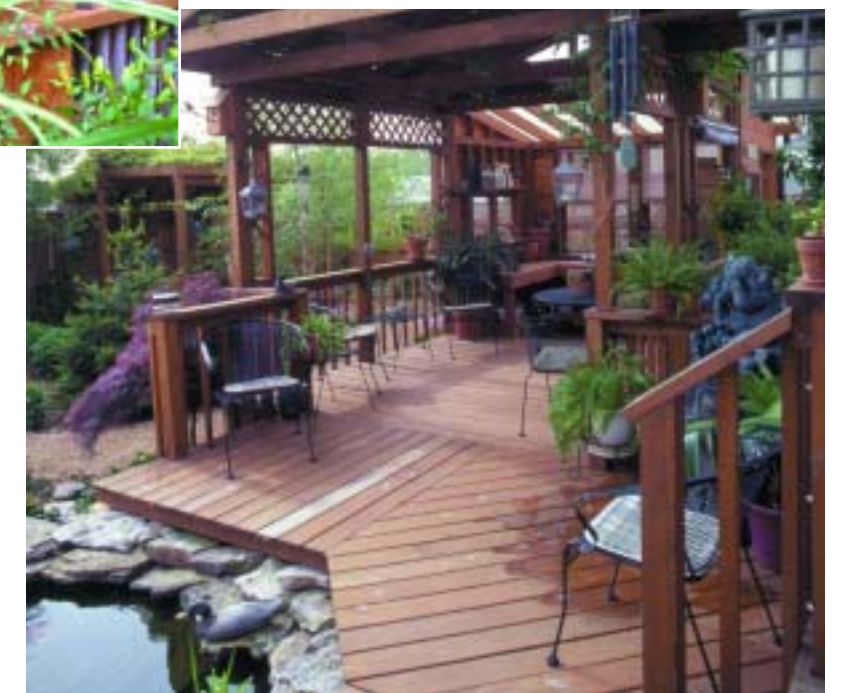
that water to drain to China. With a tip from our beloved O'Quinn's, our fantastic water garden supplier, we went dumpster-diving at a carpet shop and found more than enough remnants of pad and carpet to line the pond. This was actually fun! The placement of the liner was considerably not as much fun – that stuff is heavy! We pulled and tugged to get the liner to fit the pond, and truthfully, it really



White clematis provides a stunning backdrop to the waterfall.

wasn't as difficult as I had imagined.

That done, it was time to add the water. We added water slowly (1500 gallons plus a 150-gallon biological filter) and hung around the edges, cold drinks in hand, so if we saw that the water wasn't smoothing out the liner evenly, we could maneuver it by pulling at the edges to get rid of the wrinkles and make it as smooth as possible. (Another tip we learned from the wonderful people at O'Quinn's.) Had we not had this info,



A combination entertainment area and potting shed provides a dry place to enjoy the pond and garden even when it rains.



The view from the Lersches' backdoor.

we would have just walked away and ended up with tons of wrinkled liner — not only unattractive but also a waste of materials. Voila! Six drinks and 3 quarts of sweat later, we had a POND! Congratulations all around!

Next we needed fish...and a masseuse. Ah! Female spouse just happened to have a small aquarium in the kitchen with three very pale, one-inch-long, 3-year-old goldfish. Should we throw them in? Not until we called O'Quinn's and asked permission. "Those fish will think they died and went to heaven," said Linda. In they went. Initially, I had a pet name for every fish, but since someone seems to have snuck into the yard and put a school of little fish in the pond, we can only remember the names of 4 or 5

of the largest fish.

By then it was looking pretty bare *around* the pond. At that point we thought maybe we should have a 'plan.' We hadn't really considered that up to this point. So the 'plan' was to go rock shopping. Although I was apprehensive about this, it quickly became like a game. I learned the difference between



Jim and Carol agree this is their favorite daylily.

good rocks, bad rocks, pretty and ugly rocks, which rocks will blend well, which rocks will fit — all more fun than I had expected. We loaded them up, brought them home, and spouse placed them around the edges of the liner. With the rocks in place, the pond looked great from the water up to the rocks, but still very bare *beyond*.

We needed plants. Not being independently wealthy, we decided to buy whatever was on sale. At the end of the season we lucked out and found perennials for 25 and 50 cents. Deciding to "see what will happen," we loaded up the car. Great things happened. We bought only perennials and planted them wherever we had a spot of bare soil, and we had a lot of bare soil.. a whole backyard to be exact. We dug hole after hole, amended the soil, and tucked in our pot-



Sections of the bamboo fence contain charming detail.



The tropical nightbloomer *N. 'Red Flare'* is the highlight of many evening gatherings around the Lersch pond.

which you live. In this area, we have found that composted manure and sometimes peat works best. Now we are pruning, cutting back, and hauling away way more stuff than we ever planted to begin with. Advice? We do live in Missouri and whatever you plant will at least double in 12 to 18 months. I pruned last week and thought I was done; today we gathered 3 more wheelbarrows full. But this is not a problem because while we're pruning, we are outside, enjoying the yard, listening to the quiet broken only the trickling of the waterfall and the birds singing, and we're sculpting the plants and trees to fit our landscape. It is the most relaxing 'chore' we have ever encountered!

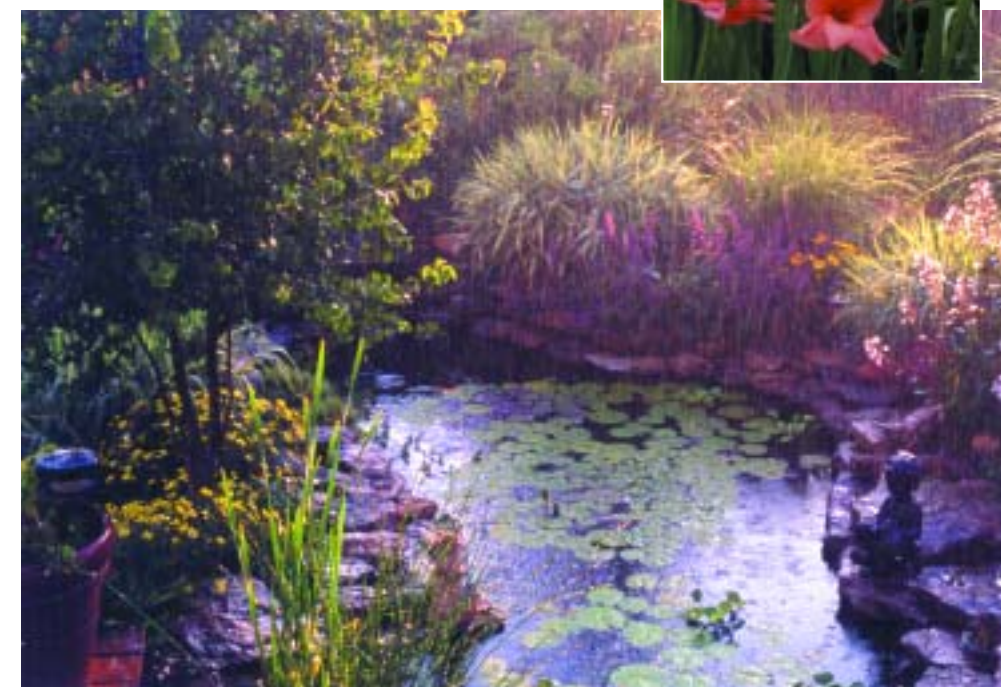
We have actually created an environment that I had thought existed only in books and pictures, and all in less than 3 years. We have many varieties of birds, butterflies, frogs, fireflies, dragonflies, (one snake...he's gone), and many other creatures whose

bound treasures. Amending the soil can be crucial, depending on what part of the country in

identities we have yet to learn. Would we go on a luxury vacation, buy airline tickets, spend untold dollars, stand in line, worry about lost luggage, eat food of origins unknown, pay cab fare, listen to screaming children, wonder if the plane is going down, or would we stay home in our own backyard? What started out as a hole in a bare yard with some rocks and cheap plants around it has turned into a truly, truly incredible paradise. And since it's all ours, we think we'll just stay here and enjoy!

Now, honey, about the barbecue.....☺

Jim and Carol Lersch live in Nixa, Missouri. In case you hadn't noticed, Jim is a professional photographer! He can be reached at 417-724-8637.



(above) Jim's favorite time in the garden is early morning. (inset) One of their inexpensive plant treasures turned into this salmon-pink gladiola.

Garden Adventures – WINTERING TROPICAL WATER LILIES

by Joe Summers, Missouri Botanical Garden

Joe Summers shares the MBG method, developed by George Pring, of wintering tropical water lilies.

Once pond owners discover the pure joy and satisfaction of tropical water lilies, they never make it through another season without adding tropical lilies to their ponds. Tropical water lilies are the best plant that can be added to a pond. They give you flowers every day of the season if given sunlight and some fertilizer. Tropical water lilies offer shades of blue, and there are also night-blooming varieties. Hardy water lilies do not have blues or night bloomers. When you compare the price of the lilies, you by far get more bang for your buck with a



While our tropical water lilies at the MBG could be wintered intact within the greenhouse, we use these plants for propagation, which is basically what you are doing when you store tropical tubers for the winter to restart in the following spring.

tropical lily.

Late October in St. Louis concludes a long, colorful show for the tropical water lily. Now is the time to make a choice: either let the winter cold take your lily, or bring your lily indoors. What, you don't have a pond inside with lights? No problem, you can store your lily dry, and here's a step-by-step way to make your choice successful.

Step One: Remove your potted tropical water lily from the pond. If your night temperatures are above 50 degrees, all you need



You can set your tropical lily pots outside the pond to dry out, but I just drain the water from their tanks in the greenhouse.

to do is set your lilies on the rocks outside the pond. For the propagation collection of tropical water lilies at MBG, I remove the water from the tanks.

Step Two: After one week of dry time, remove your plant from the pot. Next, cut away all the foliage and remove all the roots and soil from the hard, bulb-like structure. This storage unit is called a tuber. The tuber should be firm when you apply pressure. A tuber can range in size from a marble to a football-size mass and will be purplish brown in color.

Step Three: Wash the tubers. Clean all the soil from the tuber and remove any roots and leaves. Allow the tuber to air-dry overnight.

Step Four: Moisten sand. This is the most

important step of all. You need only slightly moisten a batch of sand. Two cups of sand per tuber is about the amount you will need. *Be sure your sand is barely moist.* When you scoop up a handful, it should stay in a clump but not be so wet that water is dripping from your hand. It is better to have the sand drier than to be too wet.

Step Five: Treat your tubers with a fungicide. I like to use Banrot. The fungicide will keep your tuber from rotting. Follow the product's directions and you should not have any problems.

Step Six: Use a plastic air-tight container with a lid to keep your tubers through the winter months. Place a thin layer of moistened sand in the bottom of your container. Lay your tubers in the sand, making sure they do not



After hosing the soil from the lily's root mass, John Spitler begins looking for the smaller tubers around the mother plant's rhizome.



Day-blooming tropical lilies will produce the nut-like tubers around the base of the mother plant. Night bloomers produce theirs embedded within the mother plant's rhizome. John locates a tuber.



John pulls the tuber free from the mother plant.

come into contact with each other. If needed, place another layer of sand, and then another layer of tubers. Fill the container up with sand and seal.

Step Seven: Label the outside of your container. Use a separate container for each variety of water lily.

Step Eight: Place your tuber containers in a cool, dark place, like a basement. Keeping your tubers at room temperature works well.

Step Nine: Check your containers about once per month. You are looking for mold on the tubers. If you find any rotten or moldy tubers, discard them and retreat the remaining tubers in that container with fungicide. Also, add moisture to containers if the sand has become dry.

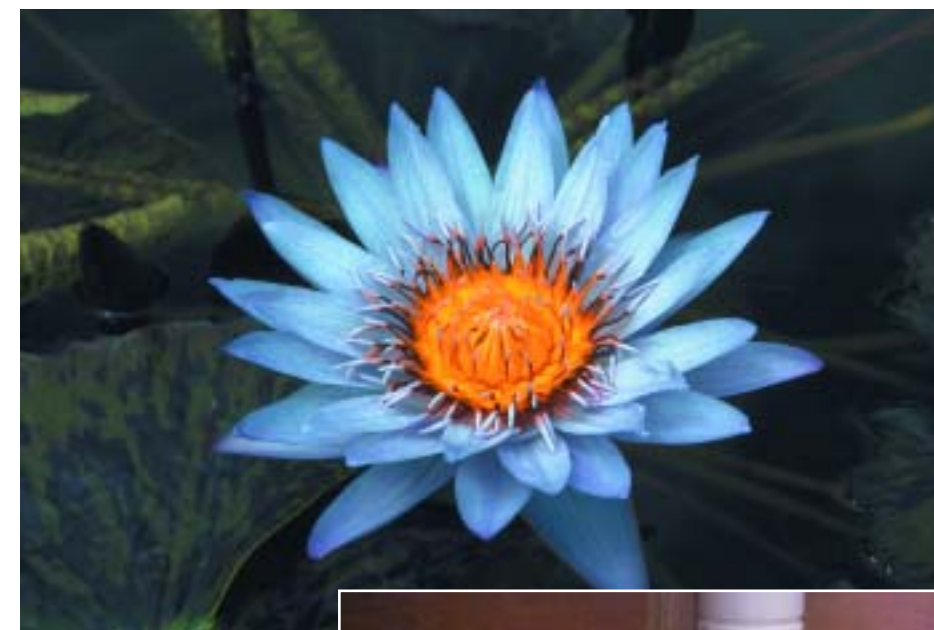
Step Ten: Check *Pond & Garden* magazine in the late winter for a Step-by-step method of bringing your tropical water lilies out of storage.

You can leave tubers in dry storage for up to three years without any problems. This storage method will allow you to feature different tropical water lilies for a number of years. You can also trade for different tubers among your local water garden society members.☺

Joe Summers is a Horticulturist with Missouri Botanical Garden. Additionally, Joe is on staff at Plant, Ponds & More in Affton, Missouri. Currently, he is president of the St. Louis Water Gardening Society.



The tubers are allowed to air-dry for a day or two and are treated with a fungicide.



Many of George Pring's tropical water lily introductions are included in the display at Missouri Botanical Garden. *N. 'Bagdad'*, shown above was introduced in 1941. Tubers of 'Bagdad' can be stored in the method demonstrated in this feature, or you can use a heated and well-lighted aquarium to winter viviparous plantlets produced by the mother plant.



Packages are prepared with barely moistened sand. The dried tubers are placed onto the sand, taking care that none of the tubers are touching. Barely damp sand will cover each layer of tubers before they are sealed inside and the package labeled.

Indoor Water Gardening

by Mike Mullen,
The Kansas City Water Garden Society

You can keep plants
and fish in indoor ponds!

Those of us who have outdoor water gardens hate to see winter arrive and throw our ponds into a silent frozen state. However, there is a way to extend the water garden season through the winter by setting up an indoor pond. An indoor pond may not provide the lush growth of plants like the outdoor water garden in summer, however, it does provide a place to over-winter your tropical plants and gives you an opportunity to enjoy some pond fish during the winter.

Some people may not be able to install an



Keith Kinney, a wood craftsman from Dayton, Ohio, has built an indoor pond that includes hidden shelves for storing fish food and other pond supplies.

outdoor pond, such as condo or apartment dwellers. In this situation, an indoor pond or tub container may be the only way to experience the joys of water gardening. An indoor water garden can vary from small tub containers to the elaborate concrete and rock water features constructed in some hotels.

I think of a water garden as a pond or tub container with aquatic plants and fish. A water feature adds some sort of water movement by fountain or waterfall which provides soothing sounds and the visual appeal of moving water. A water feature can be included in a water garden full of plants and fish or be by itself in a tub or tabletop container. When adding a water feature, be careful you don't go overboard on the fountain or waterfall. Too much water sound in a quiet room may become distracting rather than soothing. In addition,



Even a small container set near a sunny window or in a sunroom can be a home to parrot's feather and other tropical aquatic plants.

the humming noise from a large pump in a quiet room will be more noticeable compared to that of a small pump.

Major factors determining your options with indoor water gardening include available space, the size of the indoor pond you would like, the amount of money you're willing to spend, the amount of sunlight available, and access to electricity, water, and drainage. These factors should be taken into consideration before you become involved with indoor water gardening.

Tub Containers

If you have limited space, then tub containers may be your only choice. You can purchase tub containers in various sizes or you can build your own custom size wood frame container lined with PVC or EPDM. Prefabricated fiberglass garden pools designed for in-ground use are also an option. These pools come in a variety of shapes and sizes.

Tub containers can be placed in front of a south-facing window allowing you to successfully grow dwarf water lilies, such as the tropical *N. 'Dauben,'* and other water garden plants which need direct sunlight. There are many water garden books on the market which discuss commonly available aquatic plants and list general information on the size of the plants and the amount of sunlight needed. For tub containers,

the dwarf varieties which need only 3-4 hours of direct sunlight would be your best choices. A small 30-gallon tub can hold a dwarf water lily, a couple of marginal plants such as a red iris, several bunches of submerged plants such as *Cabomba*, and a few small goldfish.

Indoor Pond Considerations

If you decide to build a larger size indoor pond, there are additional factors to take into consideration. Water weighs 8.34 pounds per gallon, so the location of a large indoor pond may be limited to a concrete floor. My 500-gallon pond has a water weight of 4170 pounds, which is more than most cars. Include the weight of the wood frame and you're looking at a significant amount of weight. One cubic foot of water contains 7.5 gallons of water, so you can calculate the water weight of an indoor pond by determining the cubic foot capacity.

When reviewing your location options, you need to make sure you have access to a water faucet for filling and topping off the indoor pond, along with drainage for emptying the pond and conducting partial water changes. If an indoor sink faucet is the only access to water, you will need to obtain an adapter from a hardware store so you can connect a garden hose to it.



Larger tropical aquatic plants can be wintered indoors as though they were houseplants. Provide ample water in a deep saucer along with enough light to maintain their rich green color.



A landscape timber pond is an attractive pond construction you can build indoors.

Another important consideration is electrical needs to operate the pump, any heaters, and lights. An outlet next to the pond will be handy to plug in the pump and heaters. A ground fault circuit interrupter would be highly recommended for the outlet and can be purchased for about ten dollars. If you have a large indoor pond with fish, a pump and filter setup should be used. A submerged pump will also be needed if you want to add a water fountain or waterfall. Heaters may also be needed to maintain the water temperature in the low 70's if you are over-wintering your tropical plants from the outdoor pond. I'm not sure how much extra electrical cost is associated with my indoor pond, but my electric bill has averaged almost thirty dollars more per month compared to last year when I didn't have an indoor pond. The 300-watt floodlight and two 300-watt aquarium heaters are probably the biggest reason for the jump in the electric bill.

Plant Lighting

When you fill your pond or add water, you need to de-chlorinate the water so it will not harm the fish or plants. Tetra Pond AquaSafe or other similar chemicals can be used for this purpose. AquaSafe

also removes heavy metals and provides a protective coating to fish. If chloramines are used in your city's water treatment process, such as in my Kansas City water, you need to use Tetra Pond AquaSafe NH/CL or similar type chemical to neutralize the chloramines. When filling a new pond it would be a good idea to add beneficial bacteria to your pond. Otherwise, development of micro-organisms will take weeks to reach a beneficial bacteria population.

Indoor fish do not have insects and algae to feed on, so they should be fed at least twice a day. During the winter, the air in the house is rather dry and a surprising amount of water will be lost to evaporation. However, the extra humidity in the house during the winter is beneficial. If your pond doesn't receive direct sunlight, algae shouldn't be a problem. This will reduce the frequency of filter cleaning as compared to outdoor ponds. I try to clean the filter about once every 2-4 weeks, however, I don't have a set cleaning schedule because weather is the determining factor. If anyone



1. To build a landscape timber pond, cut some 8-foot-long timbers in half to form a 4x8-foot frame. Drill holes a couple inches in from each end so that the timbers can be anchored on a long post screw.



2. Add timbers alternating from length to width sections as though you were building a log cabin.

has tried to flush out a foam filter when the temperature is in the 20's, you'll know why I avoid cleaning the filter during freezing weather.

Periodic water exchanges of approximately 10-20% are recommended to keep the water fresh. Siphoning the gunk off of the bottom of the pond during these water changes keeps your fish healthier. You can use your outdoor pond vacuum for this job, or, in many cases, a Python aquarium siphon fitted with an extension tube. Partial water exchanges also



3. Build your timber walls as high as desired.

prevent your water from becoming too hard due to evaporation.

When cleaning and maintaining your pond, take precautions to prevent the carpet and wood sides of the pond from getting wet. You can clamp a piece of liner or plastic tarp to the inside edge of the cap board and let it hang over the side and across the floor a few feet. This works well when lifting out the filter or plants.

Indoor Pond Construction

Larger sized indoor ponds for residential use will likely consist of a wood frame with a polyvinyl chloride (PVC) or butyl rubber liner. Wood frame ponds are much easier to construct and less expensive to build than a brick pond or concrete water feature. However, if money is no object, a concrete water feature with waterfalls built into a rock landscape surrounded by tropical plants is an impressive sight.

There are a number of construction techniques and materials which can be used for wood frame ponds. Use quality materials and a



4. Line the inside walls with pieces of plywood cut to the interior side and bottom dimensions to keep the liner from pressing into the gaps between the timbers. Next, set in your liner, folding the corners tightly like wrapping a package. Use a staple gun to hold the top overlap in place, trim away excess liner, and fit the top edging. To create a solid outer wall, cut additional timbers to fit into the alternating gaps.

good design for the frame because the consequences of a structural failure could cause water damage to your house and a big cleanup problem. It could also be fatal to your fish. PVC liners are usually available in fixed sizes, while a butyl rubber liner can normally be cut from a large roll and purchased in custom sizes.

A simple construction technique for a wood frame pond is to stack 2x4's on the flat side to the desired height and insert steel rods in the corners to hold them together. 4x4 timbers can also be used in place of 2x4's. Since this technique results in gaps between the boards, plywood is attached to the inside to contain the liner. A 1-2" layer of polystyrene Styrofoam should be placed on the bottom for insulation from the cold concrete floor and plywood placed over the Styrofoam. The blue-colored Styrofoam is recommended over the white-colored Styrofoam because it is much easier to cut and is denser. The plywood should be thoroughly sanded to prevent any splinters from puncturing the liner and causing a leak. After the liner is positioned, a staple gun can be used to temporarily hold the liner in place during the filling process, taking care not to staple

below the anticipated water level and producing a later slow leak! After the pond is filled, the liner can be secured with a staple gun and any excess liner trimmed off. Six-inch-wide cap boards can then be installed on top to hide the liner and provide a finished look. The outside of the frame can also be stained if desired. Foam can be cut into strips and placed between the frame boards or timbers for additional insulation.

The frame material is a significant cost that is determined by the size of the indoor pond and type of material used. Other components include plywood, Styrofoam, steel rods, screws, cap boards, and lighting. After you settle on the size and design for the indoor pond, a scouting trip to the store will give you an idea on the cost of the materials. A pump and filter should also be obtained if you plan to have fish.✪

Mike Mullen divides his spare time between cycling and gardening in Kansas City, Missouri. This article was originally published in Reflections, a newsletter supplement of The Kansas City Water Garden Society.



If you live in a cold climate and have a shallow or raised outdoor pond, you may wish to build an indoor pond for your fish. Many pondkeepers bring in their smallest fish, too, for safe wintering.