

this spot—just within six feet, which was the length of the pump's power cord.

We measured length and width, laid out the design with a garden hose, commenced to dig into that hard Mississippi clay—and decided that 12 inches was plenty deep! Our first cuts lay just inside the length of garden hose so that we could establish the pond's shape and then move the hose out of the way. In order to reach our determined depth quickly, we mounded our shovels of dirt onto the edge of the hole. When I eyeballed the depth to be about a foot, we adjusted our excavation by placing a two by four across it at several angles, measuring the depth and checking to see that the board was level.

Meanwhile, our "liners" were stretched out in the sun, becoming warm and pliable. We laid them in the hole and trimmed the edges, leaving a couple of inches for security.

The next step was something of a watershed (pardon the pun): we filled the hole with water and there—naked and unashamed—was our pond!

The "water part" was indeed pond-like, but we needed something more than fig leaves to cover its nakedness.

Our first improvement was to construct a waterfall of sorts. I had found in our woodpile a large log with a deep, smooth groove down one side of it, and we placed the log, groove



Debra decorated her pond with flowering plants and a bench. Unfortunately the goldfish didn't survive the hot Mississippi summer.

side up, so that one end slanted down to touch the pond's surface. At the top end we attached the clear plastic pump tubing by wiring it to the log with florist's wire. When we plugged in the pump, the water streamed merrily down the log's groove and splashed into the pond. Another watershed—literally! This was fun!

At this point in water garden construction, landscaping accessories such as plants, ground cover, and stones are an absolute necessity for the sake of camouflage. They are also a huge expense! Once more, I found substitutes—by using what we could find

on our three acres of property (Yankee ingenuity gone South).

We transplanted pieces of moss and irises to hide the tube at the waterfall; dug up ajuga (groundcover) and planted it so that it would drape over one side of the pond (it obliged us by blooming into small purple spires within a week); placed another log—with an attractive knot—over the niche with the pump, effectively covering that piece of equipment; and laid a weathered, split log at the "shallow" end. We camouflaged the remainder of the edges with scavenged honeysuckle vines, pebbles, and large pieces of bark stripped from rotten tree branches in our brush pile/bird habitat. Finally, we set off our rustic but elegant "water feature" with golden, fragrant pine straw, and invited three "feeder" goldfish to move in.

After a year, I pronounce our thrifty project a huge success. The goldfish didn't survive the hot Mississippi summer, but other critters took their place, including a huge mockingbird who bathed in the edges, thirsty buckeye butterflies, and—at the moment—three alarmingly large frogs. The ajuga is blooming and spreading once more, the irises are budding, and when the water splashes down the waterfall log, it's music.

In the midst of such an aesthetic moment I have to grin and say "Thirty bucks."

### Pond management:

## Pros and cons of weed control with grass carp

**A**n alternative to the chemical treatment of a pond which has become weedy is to stock it with fish which thrive on weeds.

The white amur, more commonly

known as grass carp, are native to two river systems in Eastern Asia. Their diet is predominately vegetation, with a hardy appetite for underwater weeds. They commonly consume two to three times their weight daily and may gain

several pounds per year in size. The amurs prefer submerged weeds and will not help a pond infested with either water lilies or water hyacinths.

The amurs were introduced to the US in 1963 by the Bureau of Sports Fisheries to test their potential for natural weed control in smaller bodies of water. By the early 1970s they were judged to be suitable and were released for public use.

White amurs are readily available from fish sellers in at least 40 states. However, some states may require a permit beforehand. Stockage rates for a pond needs to be determined by a combination of pond size and extent of the weeds which need to be controlled. Either the fish seller or your local County Agricultural Agent

should be able to help you here.

Amurs can grow to be several feet long. After a couple of years those stocked can grow into large weed eating machines which may overcorrect the weed problem, as some weeds are essential for other species. Thus, there is somewhat of a trade-off between stocking a smaller number initially and living with the water weeds until the amurs grow large enough to keep the weeds in check or stocking more and perhaps having to cull surplus ones in the future.

Being predominately vegetarians they are difficult to catch with a hook. Reportedly soft corn kernels, cherry tomatoes from which the skin has been removed or other fresh vegetables can be used for bait. I suspect chumming an area for a week to two in advance may be helpful, but you may end up catching catfish but not amurs.

If legal in your area culling them by a night light off the bow of a boat using bow fishing or a gig may be more practical than fishing for them, using rotenone, netting or drainage.

I have heard two reports of amurs being introduced to ponds with yards extending to the edge of the pond. The amurs come to associate the sound of a lawnmower with grass clippings being blown into the water and will come to the edge of the yard to feed on the clippings. Thus, one way to turn clippings into pond fertilizer may be to dump a bag or two into the pond.

Unlike the common carp, which has a downward-turned snout much like a vacuum cleaner to obtain feed from the bottom, amurs have upturned mouths with large comb-like teeth in their throats for grinding vegetation as they eat.

I have seen a number of recipes for cooking the common carp. Most involve placing the fish on a board, a lengthy and elaborate preparation and then, once cooked, throwing away the carp and eating the board. Fillets from amurs are said to be excellent table fare. Two methods recommended by the Arkansas Game and Fish Commission's Fisheries Division are to remove the dark stripe along the lateral line, seasoning the fillets and then putting them in a water cooker

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**The amurs come to associate the sound of a lawnmower with grass clippings being blown into the water and will come to the edge of the yard to feed.**

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(steamer?) for two hours or to pressure-cook them for fish patties.

The long-term impact of the amur has yet to be determined. It is believed they will not reproduce outside their native river systems. However, it seems like most species introduced to solve one problem end up creating others.

An example is the Nile perch. I'm told they were introduced into a single lake in Central Florida in the 1960s to study their potential for weed control and sports fishing. However, they proved to provide neither and are now resident in almost every Central Florida lake. They grow to a large size; compete with native fish, such as the bass, for food and spawning areas; can spawn several times a year, versus once or twice a year for most native fish; and can only be harvested in quantity by netting.

Most literature on the amur says they will not impact the population of other fish if sufficient vegetation is present and, in fact, enhance it by turning water weeds into nutrients for the smallest critters of the food chain. At least one private fish hatchery (Zetts) cautions against their introduction. As an experiment they introduced the amur into three ponds used to produce bass fingerlings. They reported a very small bass reproduction level in these ponds, while ponds in which they used Israel carp for weed control had excellent bass reproduction levels. However, their pond management techniques may not have provided sufficient food for the amurs, causing them to eat the young bass.

Israel carp and the Japanese koi are also algae eaters. Two sources for either are Zetts Fish Farm and Hatch-

eries, Route 53, Drifting, PA 16834 (814-345-5357) and Ken's Hatchery and Fish Farms, P.O. Box 449, Alapaha, GA 31622 (912-532-6135). Check with your state's Fish and Game or Wildlife Resources agency as there may be a closer source.

The introduction of ducks on a pond will also help to provide both a degree of weed control and pond fertilization.

(In my own pond I was having trouble with floating mats of algae. Since the water had a low pH level I had one truckload of field lime broadcast into the pond at about 10 places. Perhaps it was just coincidence, but the floating algae almost completely disappeared within a week.)

Grass Carp for Pond Weed Management, OSU Current Report 9292, is available from the College of Agriculture and Applied Sciences, Extension Service, Oklahoma State University, Stillwater, OK 74074 (405-744-4081). — *Ken Scharabok*

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## Pyrethrum

Pyrethrum (perennial) is a member of the Chrysanthemum family, and is widely used to make an organic insecticide. It is non-toxic to mammals and is considered a safe alternative to chemical insecticides. However, it can be harmful to beneficial insects and fish. Plant this herb around the garden to keep neighboring plants insect free.

### Planting

Sow the seeds outside after the last spring frost, spacing the plants six to 12 inches apart.

### Harvesting

Cut the opened flowers off the stems and place on wire racks to dry. The flower petals can then be powdered and used as an insecticide.

**Caution:** Cover your nose and mouth, and do not breathe in large amounts when making this powder. Some people are allergic to this plant, so the use of rubber gloves is recommended when working with the flower heads. — *Heirloom Seeds, mail@heirloomseeds.com*