

# For the Birds

Text and photos by Stephen P. Katona

## How to build a spectacular pond for your feathered friends.

The term water garden does not necessarily describe only a pond with water plants and fish. It also identifies working with a water design or concept within your garden. Many homeowners would not consider an extremely shallow pond because they assume they need to provide room for fish to swim and winter over. What if you did decide to build a full scale stream, waterfall, and pond system that was only two inches deep? What good would that be? I say, a design for the birds!

After designing and constructing many ponds, I have always noticed birds perching and bathing in the shallow water around the pond's perimeter. I thought it would be interesting to design an extremely shallow pond, the entire design replicating a pond's transition edge. This unique design could be called a custom natural stone fountain or a giant bird bath. Since birds are the vector for anchor worm, protecting our pond fish is an important reason to design a pond for

the birds, apart from the fish/water garden.

A site was selected at the Schmitt household in Pittsburgh, PA. The site is well established with a 7,000-gallon, 4/5' deep pond, stream, 10 x 12' marsh area, small waterfall, a separate second pond, gazebo, and a full landscape. Existing, established trees provide a nice canopy to the habitat. Birdfeeders and birds can be seen in all directions. The exact location of 'the birdbath' fell into a protected area behind the embankment of the main pond. The final site would also offer an established bird feeding area for finches and other small birds.

The overall design would be seated into the ground, with the existing slope and natural depressions dictating that basic design. The Schmitts' grade change was minimal. This offered small waterfall drops to the design. I

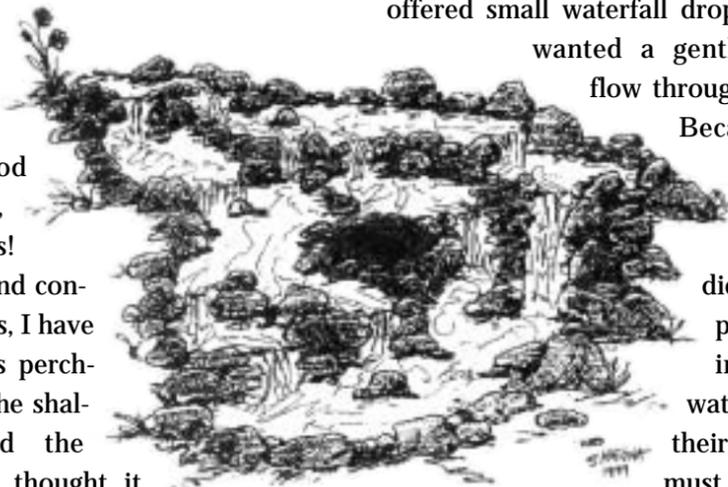
wanted a gentle change-of-pace flow throughout the birdbath.

Because birds are attracted to dripping water in shallow pools, I did not want large, powerful waterfalls in the birdbath waterscape. To invite their bathing, the birds must also be able to see

that the water is shallow enough for them to wade into.

After careful interpretation or reading of the ground, I sketched out a design.

Steve's design for the bird pond included many bathing areas and rocks for perching and drinking.



Concrete was mixed by the bag and filled into each section of the forms. The 12-inch railroad spikes holding the forms in place were pulled before the concrete had fully set.

The overall layout measured approximately 8 x 10 feet. The head, or upper pool, would start in the upper left hand corner of the design. This pool would need to be slightly raised to gain more grade change for small waterfalls. From the header pool, the water would split in two different directions. One course would run higher along the back of the birdbath and break off in several directions. This is tricky because all the branches off the same plane must be level with each other. If one branch from the same plane is lower than the rest, then all the water flows in that direction.

The second main course would flow towards the foreground, also branching in different directions from different planes. Both courses would travel around a central raised area or island. This island would later support a statue. Down stream, all branches or rivulets would meet in the lowest shallow pool and disappear under a pile of rockwork. A hidden well would



Flexible and thin wall panels were used to create forms for the concrete base.

be constructed under this rockwork to house the submersible, recirculating pump. The pump would return the water to the birdbath's upper pool or head.

We first stripped the sod from the area. I then began to dig and sculpt various main planes in the earth. Again, remember that I took what the ground offered so as to seat the whole design with the natural lay of the land. Because there are many trees above, I had to cut my way through extending tree roots. I expected this for the area. The design is shallow, however, so tap roots were not harmed. The well area in the foreground needed to be dug deeper to contain enough water for the pump and circulation. I figured a 30 to 50 gallon well would suffice. The excavation was then fine-tuned and cleaned. Because it did not offer enough surfaces to build on and was soft and crumbly in areas, ready-mix concrete shored up and added dimension to the layout. The fram-



A geotextile fabric protects the liner for the long life of the pond construction.

ing material for the concrete needed to be both thin and flexible. Old paneling worked perfectly for this detailed application.

Twelve-inch railroad spike-nails were used to hold the framework in place. Concrete was then shoveled, smoothed, and leveled in each framed area. We pulled out the nails before the concrete set entirely. The paneling was removed the next day. During this whole process, future waterlines and containment were carefully considered. The concrete process was easy but time consuming. When the bird pond was finished, however, a strong and stable base would support the extensive rock-work.

Since concrete can be rough, the next step was to pad the structure. Firestone's geo-textile underlay fabric was used. This fabric is flexible and strong. It is used to prevent puncture in Firestone's Pondgard liner (45 mil EPDM rubber) which was then draped over the felt underlay.



Fully lining the entire construction prevents water loss.

With the many channels and pool areas of the structure, it took time to work the liner into place. All the small wrinkles were formed into neat pleats. We had to be careful, too, to run pleats so that they wouldn't interfere with future spillways and flow.

Finally, the basic construction was ready for the exterior stonework. Rock selection and placement became critical. Sandstone was chosen. The rocks ranged in color tone: gray, tan-beige-brown, golden-orange-yellow, and red. Many of the rocks had surface patterns like pock marks or grooves that would be purposefully placed to best display its best side. Even small rocks had a reason behind their selection and placement. They would act as hundreds of perches for the birds. The best way I can describe this is to call the birdbath a custom painting on the ground, rich in texture and



(above) Because the shallow bird pond covers about 80 square feet, a 50-gallon, hidden reservoir will provide the water source.

(bottom) The reservoir is camouflaged with stone over and around a plastic-coated grate. The capstone is left free of mortar for easy access to the submersible pump.

color. Each rock was anchored with ready-mix sandmix directly onto the rubber liner. You would be surprised of the bond to the rubber material. I always start at the lowest point of the design and work my way up stream. Higher rocks are always built upon lower rocks. All rockwork was further concreted in place because I didn't want even smaller stones moving and shifting. Besides maintaining the long-term integrity of the bird pond, this would also provide secure footing for the feathered visitors.

The well area was slightly more difficult. A grate would support the stone placed over the pump well. I chose a piece of vinyl-coated metal grid that reached across the width of the well opening. I then set stones with standmix

on top of the grate's perimeter. Across the span I first placed the stones without sandmix, as tightly as possible. Then I tucked them from the top with a thicker batch of sandmix. I left an opening on the left side of the well top to access the pump, large enough to pull the pump in and out. An irregular capstone would be placed over the access hole. This stone would not be concreted in place. Two rock areas along the spillway leading to the well were set extremely low. Returning water would flow across these areas and drop into the well. Essentially, the water would disappear into an out-crop of rocks

In the flat pool areas, a sandmix floor was poured directly on the rubber liner. An assortment of sandstone rocks, cobbles, and pebbles were set





The plumbing from the submersible pump in the hidden reservoir would be buried to the entry point at the top of bird pond.

into the wet sandmix. Hydraulic cement, which sets rapidly, was used to glue down final small pieces of sandstone and gravel for permanent, finishing detail. Around the perimeter of the birdbath, I folded the excess liner up above the water level to ensure prevention of future water loss and then built an outside stone wall to hide both the concrete framework and the liner. Because of the shady site, plush moss will grow on the damp sandstone, adding color and detail.

Plumbing now needed to be done. I chose a 1200 GPH pump with 1 1/2" corrugated, flexible tubing to operate the system. This selection may seem large, but there were many spills, channels, and pools to accommodate. The flow from the first two spillways from the upper pool would be a little strong, but the water would spread in many directions, slowing it down. Besides providing a change of pace to every spill

area, different water sounds would be created.

Electricity had to be run to the site. An outdoor GFCI outlet was installed. The pump's electric cord and tubing were buried along side the birdbath. A few loosely placed rocks finished camouflaging unsightly electric and plumbing.

Before filling the custom creation, washed pea gravel was added to all of the water runs. The gravel covered concreted pools and joint-seams. This smaller gravel makes a nice transition between the water and the sandstone, and it adds another dimension by softening the design. When the system is running, the gravel also acts as a giant filter. The whole birdbath is a filter. Particulate matter is trapped in the gravel, acting as a mechanical filter. Eventually gravel could be shoveled out and cleaned or

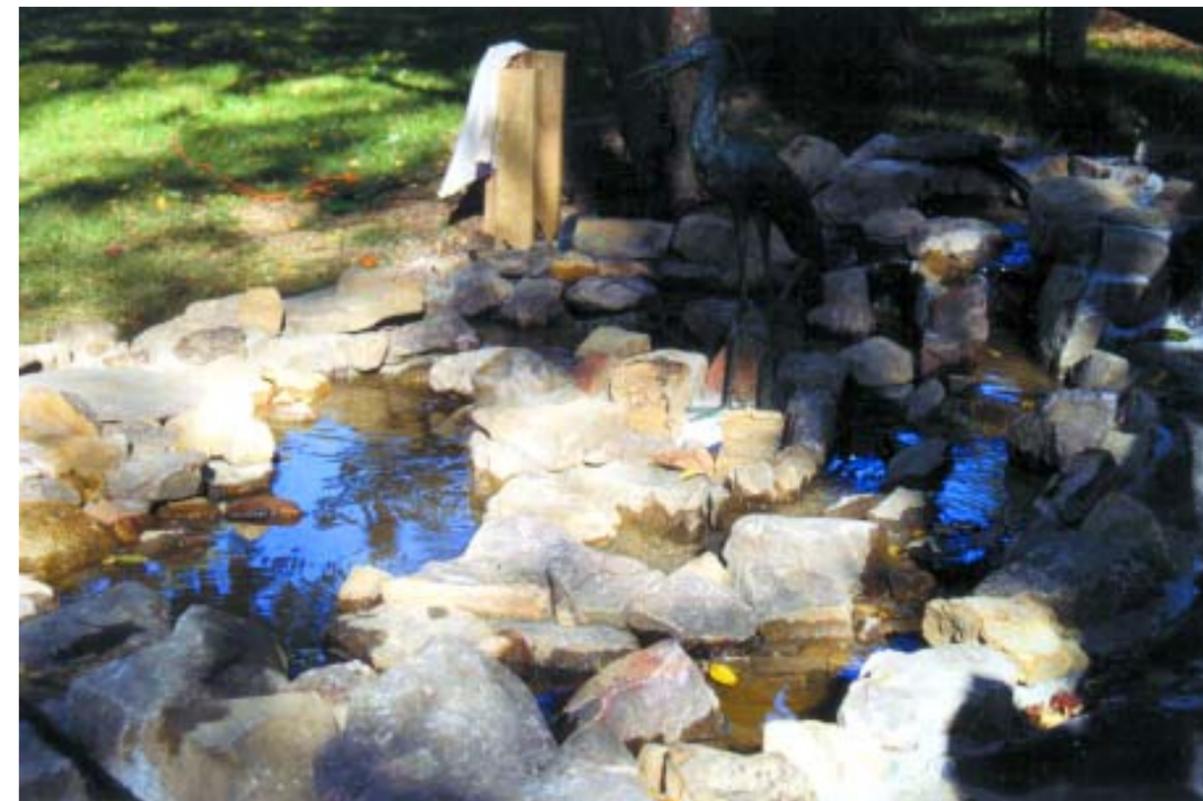
replaced, as necessary. The gravel also offers incredible amounts of surface area for biological activity. Naturally developing beneficial bacteria break down poisons like ammonia and nitrite. The end result will be water of good quality and clarity in this shaded area for the birds. The gravel, don't forget, also sets the final level of each pool. More gravel...the shallower the pool becomes. Most pools were set around two inches deep, an ideal depth for bird-bathing.

With the custom birdbath construction finished, I filled the system with a garden hose and plugged in the pump. The running effect was

incredible. Many fountains make single notes when running. This design played music. In not more than ten minutes, a sparrow found a new hang-out. What quick satisfaction for me...and I'm sure the bird was happy, too.

The final duty was to choose our statue. Appropriately, a bronze crane sculpture was placed on the pond's island. The sight and sound of running water, the movement and song of avian life — this design was for the birds. ♡

Steve Katona, the author of *Water Gardening for the Home Owner*, owns North Hills Water Gardens at 1615 Babcock Blvd. in Pittsburgh, PA. You can reach



In operation, the completed bird pond offers many shallow bathing areas for the birds, along with many vantages to preen and drink from the gently flowing water.

# Portland/ Vancouver

## POND TOUR

with LaRee Sullivan

*LaRee takes us on a Koi pond tour in the FarWest!*

### The Pond of Jeanie & Morris Bush, Vancouver

*Jeanie Bush's passion for Koi doesn't stop with her presidency of The Northwest Koi & Goldfish Club. She and Morris have created a Koi paradise at their home.*



Jeanie and LaRee visit near Jeanie's water garden that includes specimens of every imaginable aquatic plant, including *Lobelia* in blue, red, and hot pink



Morris and Jeanie Bush take their Koi very seriously. Their formal Koi pond includes a shade-cloth protection to preserve the Koi's colors and to conceal them from herons flying overhead.



Part of the Koi pond area is this elegant formal waterfall display.



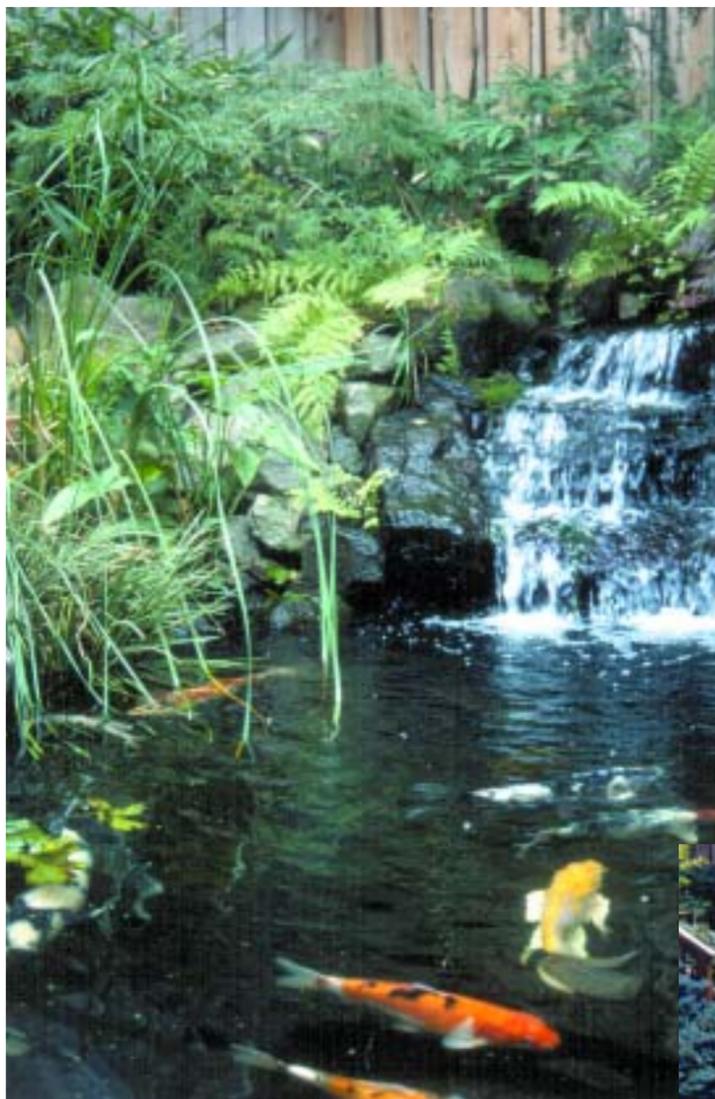
Small Koi are closely tended in their own special pond. LaRee (right) helps Jeanie hold up the special screen that protects the young Koi.



Part of the extensive filtration provided for the Bushes' Koi ponds is this long vegetable filter filled with nutrient-removing water hyacinths. The clear overhead panels can be lowered in cooler weather to extend the growing season of the tropical plants.



Cha Goi "Mary" is one of the Bushes' largest pet Koi. Mary enjoys being fed by hand.



**The Pond of Bill & Linda Montgomery, Milwaukie**

*Bill and Linda have devoted most of their backyard to a beautifully designed double Koi pond connected by a partly shaded stream. The close attention to fine details in the landscape make for a most natural setting*

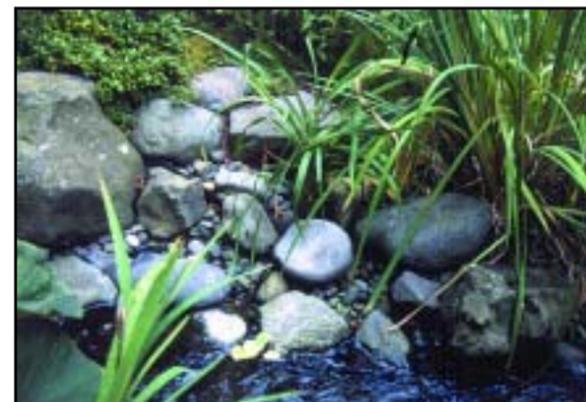
With a deck placed immediately off the Montgomery home, the upper Koi pond is readily visible and accessible. The waterfall returns water from the lower Koi pond. In spite of Koi-abuse, Linda tries to grow a couple water lilies with their Koi.



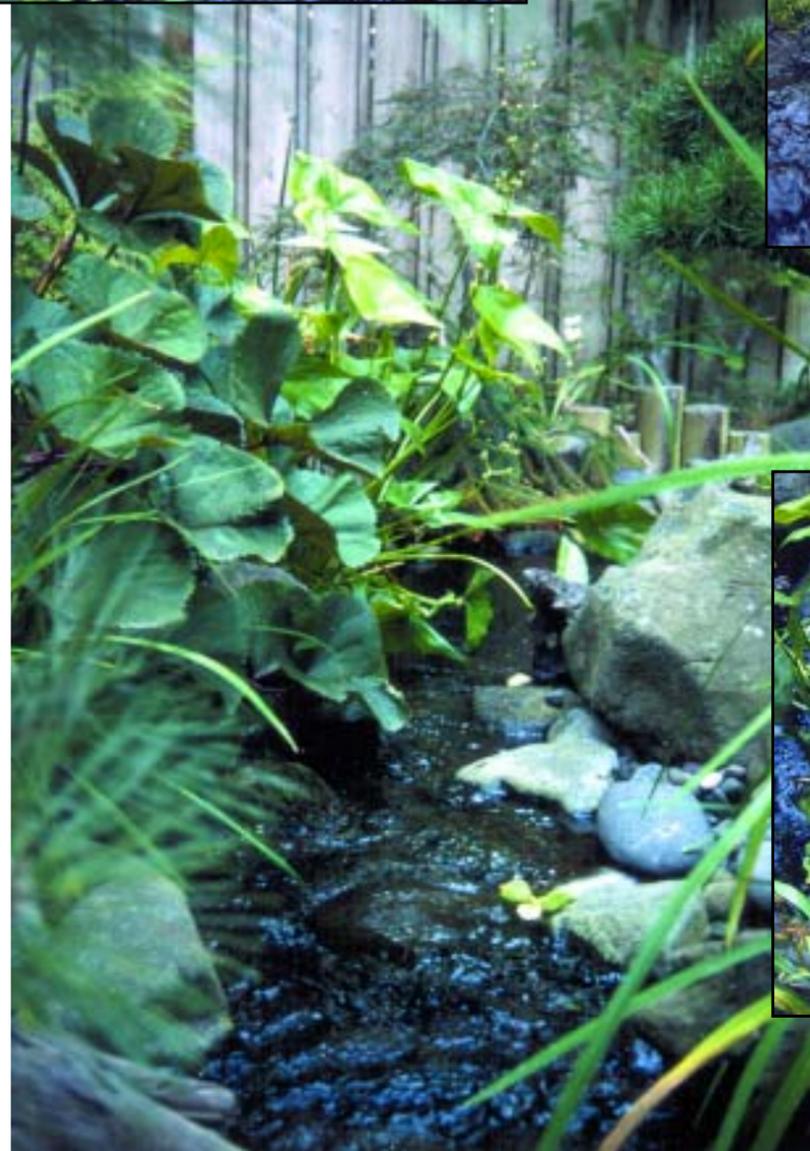
Linda Montgomery's gardening passion includes a delightful sense of detail.



The Montgomery's lower Koi pond takes up most of the lower backyard



Using a variety of sizes of rocks creates a stream of natural beauty.



Driftwood combines with rocks, ferns, and shade-loving hostas to create design detail in the shady portion of the stream.

Linda and Bill's garden stream could be a water feature of its own, but it connects the two Koi ponds.



### The Pond of Robert & Dianne Boller, Milwaukie

Robert and Dianne Boller have made the most of a sloped backyard. Near the house they enjoy a sheltered deck next to one Koi pond, while up the hill nestles another Koi pond by their Japanese tea house.

A garden path leads up the Bollers' hill to a second Koi pond set in front of a Japanese tea house. Inconspicuous fishing line is strung across the pond to discourage herons.



Outside the front door of the Bollers' home, you'll find a unique in-deck pond with a bamboo pipe recycling the water and lush canna providing bright blooms.



Japanese-styled post edging frames the lower Koi pond. The posts are set above the water level of the rubber-lined pond so that no sharp edges within the pond can harm the special pets.

### The Pond of Terri Kaufman & John Smith, Vancouver

*Terri Kaufman, an interior designer, takes her creative talents into the garden.*

*LaRee Sullivan and partner, Michael Page, own Gotcha Koi Farm & Water Garden Center at 68044 Nicolai Road in Rainier, Oregon. You can reach LaRee at 800-475-2110.*



One of Terri's creative touches: yellow flag water iris growing in an urn that overflows water into a stream leading to the Koi pond.



Terri's solution for providing shade and predator protection to their Koi is an elegant white pergola. Keeping the pond edge above the water level for Koi safety, Terri and John selected rosy landscape pavers for the pond edge. The rose-to-red theme is carried out in the garden plantings, too.



Terri's enjoyment of aquatic plants is indulged with a front yard pond.