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Beauty in a Bowl

Micro lotus, a small but
mighty flower p. 34

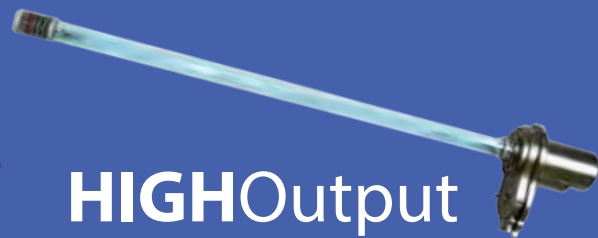


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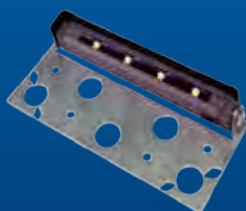
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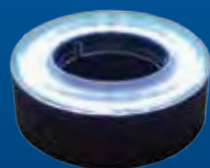
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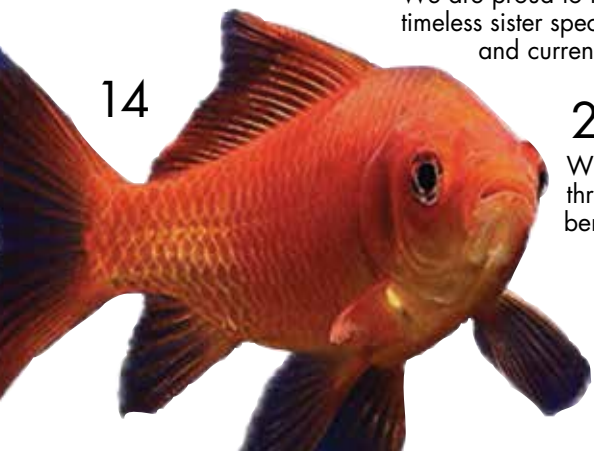
FEATURES

8 Billabong Bling POND CONSTRUCTION

Did you know that recreational ponds are called "billabongs" in Australia? Go Down Under with **Sally Bell** for a recap of her beautiful billabong build with massive boulders.

14 Gold Rush

We are proud to feature koi in every issue, but it inevitably means we tend to snub their timeless sister species — the goldfish. **Mike Gannon** takes a deep dive into the history and current proliferation of these swimmers with short memories.



21 Pond Belly

What do men and ponds have in common? The way to their hearts is through their stomach. **Patrick Simmsgeiger** introduces you to the benthic layer of the pond — where all the magic happens.



27 35 and Thrive

When you've been around this industry for more than three decades, you've definitely got some stories to tell. **Jeff Weemhoff**, the president of Atlantic-Oase, celebrates a big milestone for his company and talks history, the big merger and his company's future plans.

34 Beauty in a Bowl COVER STORY

Micro lotus were first conceived in Asia, where dwellers in dense cities were longing for access to elusive aquatic plants. **Larry Nau** has been importing them for years and has everything you need to know about growing small-scale flowers with a large-scale impact.

40 The Upsell Factor LANGUAGE OF KOI

If you sell koi or the thought of selling koi intrigues you, you'll want to check out what koi expert **Brian Fitzsimmons** has to say about the business case for selling (and upselling) Japanese koi. For Fitz's Fish Ponds, it was a total game changer.

49 The Turtles' Turf

After having to keep them in extended quarantine, **Kent Wallace** finally got to introduce a group of turtles to their new luxury habitat. If you've ever thought about building a dedicated turtle pond, there are certain nuances (like filtration!) that you'll want to be aware of.

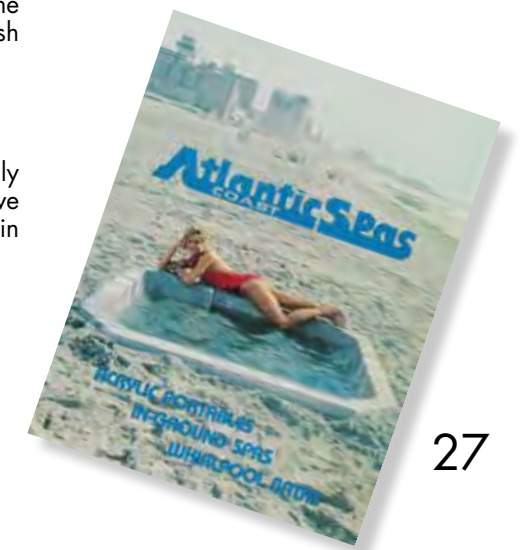


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Upcoming Events

2023

November 13 - 15

International POOL | SPA | PATIO Expo
Las Vegas Convention Center
Las Vegas, Nevada

August 17 - 21

Pondemonium
Q Center
St. Charles, Illinois
www.aquascapeinc.com/professionals/
pondemonium

2024

February 28 - March 1

Water Garden Expo
Firelake Grand Casino
Shawnee, Oklahoma
www.wgexpo.com

March 8 - 10

Central Florida Koi and Goldfish Show
Avanti Palms Resort
Orlando, Florida
www.cfks.org

March 26 - 28

National Hardware Show
Las Vegas Convention Center
Las Vegas, Nevada
www.nationalhardwareshow.com

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Publisher's Perspective

Not a Numbers Person



Behind every good businessperson is a good bookkeeper. Can I get an amen? I don't know about you, but I am not a numbers person. I can design and publish a magazine, do fine art and create a beautiful garden, but when it comes to the left side of my brain, forget about it!

If you feel much the same, be sure to hug your bookkeeper today. POND Trade's bookkeeper and my lifelong friend, Lois, lost her fight with cancer a couple of weeks ago. For many of you who have spoken with her, you will know what a gem she was. She loved working at the magazine and checking out all the ponds and types of plants on display. Needless to say, she will be sorely missed.

Back to business at hand, we are seeing the Water Artisan of the Year entries start to come in. We can't wait to see what you've all been busy building this year. Check out this year's judges on pg. 58, and be sure to get your entries in by Nov. 15!

As you peruse this issue, be sure to take a look at Mike Gannon's profile of the goldfish ("Gold Rush," pg. 14), Larry Nau's feature on the micro lotus ("Beauty in a Bowl," pg. 34), and Jeff Weemhoff's personal journey to 35 years at Atlantic-Oase ("35 and Thrive," pg. 27).

And Lois, thanks for 10 years of being an integral part of the POND Trade staff and, more importantly, 60 years of being my friend. I can still hear you saying, "Lora Lee! Lora Lee! You're talking too fast. Slow down when you ask me a question!"

Happy PONDering!



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| **Pond Construction** |

Billabong Bling

Natural recreational pond
build in Australia

by **Sally Bell**,
Bells Water Gardens

We felt an immediate connection with Emma when visiting her at her property in Woodend, Victoria, Australia. She had fallen in love with the idea of a natural recreational pond, or “billabong,” as we say in Australia, that she and her family could swim in all year round, even when temperatures plummet to zero degrees in the winter.

The Dream

Emma had recently been introduced to Wim Hoff’s cold-water therapy, and with encouragement from Sally, who was also a keen advocate of cold plunging in the recreational pond back at Bells Water Gardens headquarters, she was ready to give it a go!

A natural billabong was a dream she had wished to include in her beautiful existing garden, which she had designed and constructed herself. Emma is a renowned jewelry designer with a refined eye for detail and style. The garden itself is truly inspired — a curated design with rustic elements including weather-worn timber, rusty patinaed metal, grays, greens, soft pinks and purples, and old red bricks. There is a veggie patch, a chicken pen and an arbor covered with a grapevine with views borrowed of the neighboring Aussie bush. The property has a natural clay farm pond at a low point in the garden with fruit trees scattered around.

Toby (top, left) installs one of the large basalt boulders onto the bottom terrace of the 6 ½ foot deep pond. We broke ground (top, right) on site in Woodend with our bobcat and excavator. The billabong (bottom, right) looks great from the circular deck, and the waterfall (bottom, left) is fabulous.

Design Plan

The new billabong was to be viewed and easily accessed from the back veranda. A natural grassy descent from the veranda down to the pond was the obvious best position for the pond, with plenty of space and potential around the pond for seating and entertaining.

After a few visits and discussions going back forth with Emma and our team regarding the design and size of the pond, construction began. It was important to Emma and our team that her personal involvement in the design and build be included in the actual construction, as she had very clear ideas of how the pond was to look and feel.

Many of our clients have trouble visualizing the finished product and have to trust our design process, so it was refreshing to have someone with a strong design ethic involved in the process. Many a discussion between and among Emma, Toby, Corey and Odin was had during the construction about various types of rock and their shapes and sizes. Emma loved the look of the local basalt, which was chosen for her

pond and the perfect fit in the garden.

The final plan was that we would build an Aquascape ecosystem recreational pond with a surface area of 23 ft. x 33 ft. x 6 ft. deep with wetland filtration. A meandering creek approximately 33 ft. long would flow down a small incline to the pond. The final plan also included a negative edge as the intake bay, not only adding to the visual aspect of the water, looking like it was heading towards the farm dam, but also enhancing filtration. The inclusion of the negative edge involved excavating 5 ft. deep and 6 ½ by 10 ft. wide, lining, and adding AquaBlox and two Ecowave pumps.

We believe that the pristine water quality existing in the now fully established ecosystem pond is a testament to the success of this extra addition to the design. The Bells Water Gardens team is a huge fan of this design and endeavors to include negative edges in most of the recreational pond we build.

Construction Details

Building the pond began with the excavation. Using our heavy machinery, includ-

ing a 3-ton excavator and bobcat, Corey dug out the main area of the 6 ½-foot-deep pond with shelving for shallow areas for sitting on and placing aquatic plants, steps down into the deep section, and an area for paddling with a small island to be planted out with Japanese Iris.

The excavation also included — integral to the water quality — a wetland at 4-foot depth and 6 ½ long by 6 ½ wide, filled with various grades of river pebbles and rock. The Aquascape Wetland Filtration system is highly effective in removing sediment from the bottom and perfect for natural recreation ponds. A babbling brook around 1 foot wide and 13 feet long came from the wetland to arrive at the pond, adding extra filtration. Finally, the negative edge, which was 6 ½ ft. by 10 ft. with 4 feet of depth was built using large AquaBlox, a pondless pump vault, an extension and Ecowave pumps. All these components work in symbiosis, creating a balanced ecosystem and healthy, crystal-clear water quality.

We had a few challenges with this excavation due to the many under-



ground pipes discovered after breaking ground. Water and power lines were directing running through the center of the excavation, and moving the position of the pond was not an option. We set about redirecting existing pipe work so that the pond could be excavated in the exact position required. Issues like these are common and costly, and they can unfortunately lead to interrupted schedules. There was also drama at the end of the build when a huge tree fell directly in contact with our trailer that was still on site and took out the power on the whole street! Luckily no one was on the property at the time, and the trailer and tree were the only collateral damage.

Our skilled team lined the excavation firstly with geofabric underlayment and then Firestone EPDM rubber liner. The Aquascape filtration components included all the pipe work, Ecowave pumps, small AquaBlox in the wetland filter, and large double AquaBlox for the negative edge and subdrainage. Aeration was also added to the deepest section of the pond to supply dissolved oxygen to the pond water, helping the biological process for healthy water, fish and plants. We installed underwater LED low-voltage lighting at this stage in 1, 3 and 6 watts, bringing



Toby and Odin (top) place a large, flat boulder for the top step. Emma (bottom) is in awe of the boulders going into her pond!

next-level bling to the pond at night and another dimension to the garden, while extending the use and beauty of the watery oasis into the night.

Next was rocking the entire pond with basalt boulders and various grades of river pebbles. This is when the artistic capacity of our team shines forth, with masterful rock placement led by foreman Toby. Our ethos is that natural stone, with all its shapes and textures, “speaks” to its handler when it is being placed in the water feature.

Emma enjoyed being involved in this part of the process and was



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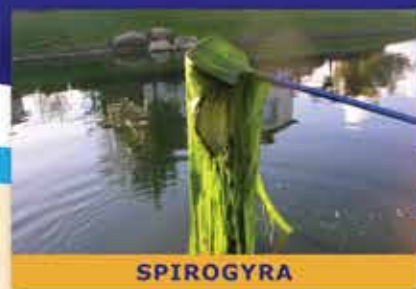
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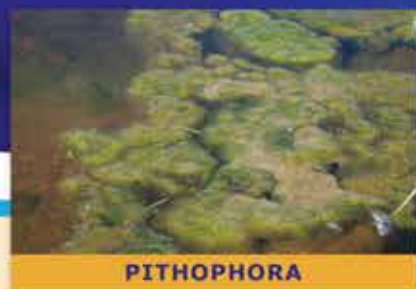
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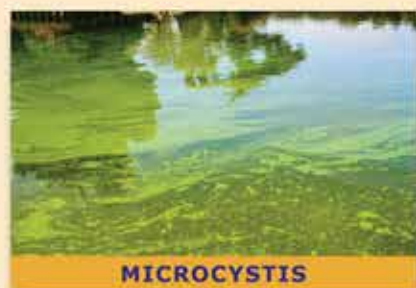
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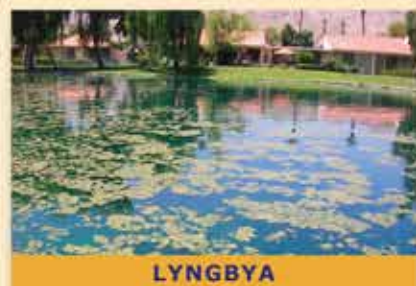
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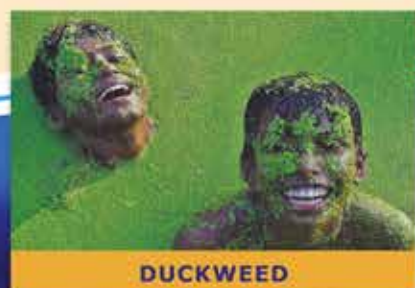
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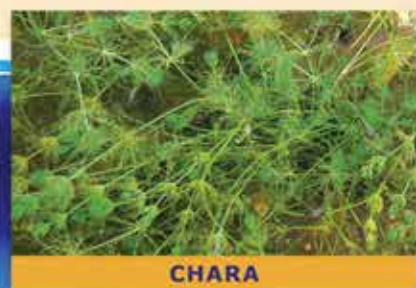
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The sun sets on another beautiful day (left) spent by the pond. The negative edge, or intake bay, flows into a pondless pit (right) and gives the impression of disappearing in the direction of the farm clay pond.

amazed at the size and quantity of rock that was used. It was exciting for Emma seeing the dream coming to fruition, and she was often hands on during construction. Each boulder presents a challenge in where it is placed in the design. The shape, size and surface value of each boulder is integral to the way it is placed for strong stability foremost, and then its aesthetic value and position in the design. It was important to our clients that the rock had a low profile with no interruption to the view beyond and didn't appear to jut out of the landscape.

Surrounding Touches

A circular deck with a Corten steel edge was built on site using beautiful Merbau timber, which was requested for the family to practice yoga. This is a gorgeous functional and well-designed addition to the space, where you will not only find practicing yogis, but also Ziggy the Labrador soaking up the rays and ambience.

Garden beds surround the pond, and a rock wall was built behind one end of the pond to give a feeling of enclosure and intimacy. This area was levelled and covered with Tuscan toppings chosen for its integrity and color, which blends in well with the granite boulders. A Corten steel fire pit and seating were the finishing touches for this space, which is now used daily by the family and regularly for entertainment.

The pond nestles into the landscape beautifully, like it has always been there.

The attention to detail shines through aesthetically and is a strong testament to the collaboration between Emma and our team. Not only is the design excellent, but the way it functions is also top notch. The water quality is perfect; we believe this is enhanced because the pond being used on a daily basis. The algae and debris are moved through the system and filtered out constantly.

The whole family is thrilled with the final result and are true pond devotees living the pond life. The recreational pond is a showpiece on the property, and we often take potential clients out to visit — with permission from the owners, of course — to help visualize the possibilities of what our team can achieve.

The shape of the water feature is reminiscent of one of Emma's signature ring jewelry designs called Garden of the Beloved, with bejewelled circles of various sizes and colors in yellow gold, blue sapphires and green emeralds.

Emma swims in the billabong every day without fail, no matter the weather. She uses the round deck to meditate on and has coffees and meals at the small intimate seating area by the pond. It has been fully integrated into their lifestyle.

The surrounding landscape and plantings are now fully established, and the whole area is a beautiful addition to the country property. What a truly magical water garden that will be enjoyed for years to come. ☘

About the Authors



Sally & Richard Bell,

along with their sons Jacob and Toby, are the owners of Bells Water Gardens. They have 12 employees on their pond construction, pond maintenance, administration and retail teams. They are Master Certified Aquascape Contractors. They have been working in the water industry for more than 30 years and have constructed more than 400 ponds. Their work has been shown on television and in various newspapers and magazines. They have been interviewed on radio and educated hundreds of gardeners and pond enthusiasts at garden shows and workshops held at their premises. They also have an aquatic plant nursery with a large diverse range of waterlilies, submerged aquatics and moisture-loving plants. See their work at www.bellswatergardens.com.au or on Facebook, Instagram, TikTok and YouTube.



| Mighty **Goldfish** |

GOLD RUSH!

Get to know goldfish, koi's timeless sister species

by **Mike Gannon,**
Full Service Aquatics

Koi are awesome, right? But how about them goldfish?

It is interesting to see how the once mighty goldfish, or *Carassius auratus*, has transitioned into a much-overlooked secondary fish-keeping choice for pond owners. After sharing such a long and, at times, esteemed history with human cultures, the goldfish has been relinquished to the sidelines. Koi fish are the new starting line up these days.

Perhaps after so much time together, the goldfish has become blasé to us pond keepers. We've become somewhat indifferent to the incredible beauty and fascinating behavior goldfish exhibit. Could the same thing happen to koi when the next pretty fish comes around?

A Household Name

There is good reason that goldfish are still at least on the playing field of the modern pond keepers. The goldfish is an icon around the world and probably the most recognizable domestic fish species. Many children by the time they are 3 years old are very well acquainted with the image and concept of a goldfish.

Take a look around you. There is goldfish imagery everywhere. Koi still take a

backseat to goldfish in today's modern culture at large. Koi are still relatively exotic and fairly unknown to the world outside of pond keeping. Within the hobby, koi are the new darlings of the pond-keeping scene, but goldfish are ingrained into our



Goldfish sellers during the Victorian era could be found making door-to-door sales.

multicultural psyche.

This shouldn't be a surprise. Goldfish have been with us humans for thousands of years by some accounts, as compared to the relatively newer koi fish, which came on the scene less than a couple of hundred years ago. The farming and cultivation of carp, the base stock of today's goldfish, extends far back into ancient times. Those early crucian carp served as a food source

Shubunkin, also called "poor man's koi," are a highly developed variety of goldfish.

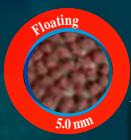
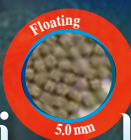
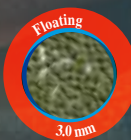
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and were also employed as ancient pest control, improving water quality and traded as a commodity. These stock fish were typically gray or olive-colored with occasional color “defects” ranging into red, yellow and orange. Over time, these “defective” colored fish were removed from being a food source and selectively cultivated because of their color and unusual beauty.

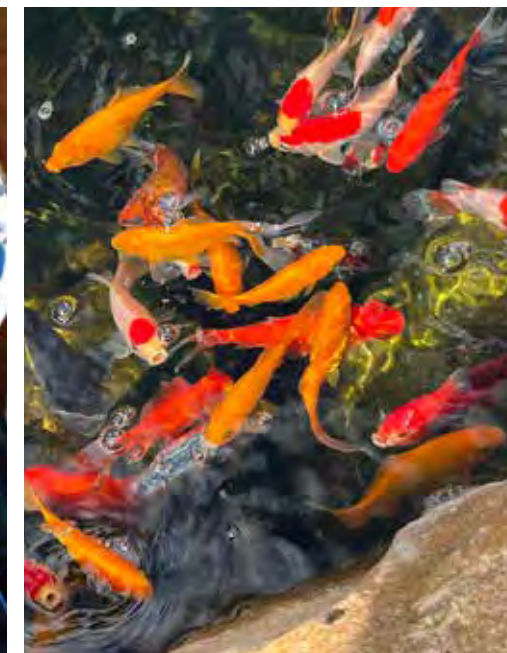
Some of the first accounts of goldfish breeding appear in China as early as 260 A.D. By this time in history, the human-goldfish connection was very well established; the pleasure hobby of keeping the now domesticated goldfish was in practice. Since that time, various cultures and countries have added their breeding preferences into the mix. Japan played a big role in the development of some goldfish types, and many other countries, especially in Europe, practiced selective breeding. These days, Thailand and the Philippines are producing interesting goldfish varieties.

In the almost two millennia that have elapsed, *Carassius auratus*, with its origins from East Asia, is still with us — still in our homes, our garden ponds, our classrooms, our waiting rooms and lobbies, our fairs and celebrations and our frat parties... (wait, scratch that).

All That Glitters

The common goldfish, with its stout yet slender-bodied appearance, is not a delicate fish at all, easily growing into the range of 12 to 14 inches. Goldfish have very large eyes, very good vision and excellent hearing. Goldfish even have communication by way of grunts, whines and other sounds. Their medium-length fins are paired pelvic fins and pectoral fins, but they have single caudal, anal and dorsal fins. There are no scales on the head of common goldfish, but the body is fully scaled. The age of a goldfish can be told by careful examination of the quantity of rings of its scales.

Goldfish love to explore, grub and forage in their environment using their forward-facing mouth as the main tool of exploration. Goldfish,



In aquariums, a bowl, or the pond — goldfish thrive within a broad range of environments.

like koi fish, have pharyngeal teeth in the back of their throat to help crush foods. Goldfish will accept a wide range of prepared foods but will do best with a healthy pellet food in captivity. They will eagerly accept foods such as krill, bloodworm, earthworm, shelled peas, zucchini and other treats. They will also graze on algae from rocks within their pond and take down any small insects that happen to make the mistake of landing in a goldfish pond. Mosquitoes don't stand a chance!

Goldfish are non-predatory, non-territorial, peaceful, schooling fish. They are curious and social fish, very active in the pond with little hesitation to interact with humans, dogs, cats and even herons (often to the detriment of the



Carassius auratus, the classic goldfish & a worldwide icon.

friendly goldfish). The buoyant, cheerful, eager disposition of goldfish is a big part of what endears them so much to humans. Of course, the bright colors of the goldfish complement their merry personalities.

The goldfish is quite forgiving when it comes to water quality, handling a broad range of water parameters. They are cold-water fish and handle the harsh winters of the northern climates without issue. Goldfish seem to do just fine in everything from a kid's backyard bucket to a professionally installed pond or state-of-the-art aquarium facility. Of course, the classic goldfish bowl is a testament to how easily kept these fish are — the species is included among a small group of fish that can take oxygen directly from the atmosphere by “gulping” air from the surface of the pond or enclosure they are in, which is why they can stay in unequipped goldfish bowls. Goldfish can also tolerate a wide range of environmental conditions, thriving in most climates around the world.

Raising Goldfish

Goldfish typically spawn during late spring to early summer. The summer

solstice is a good time of year to use as a marker for high levels of spawning activity. However; goldfish that are well conditioned have the ability to spawn several times throughout the season. Goldfish are broadcast egg layers, meaning they spray their eggs across a broad area. Many fish will choose a particular rock or leaves to lay and protect their eggs on, but the goldfish is not one of these fish. The female will typically spray her eggs into a planted area or along the edges of a pond. The males will follow up by fertilizing the eggs with their milt.

The spawning behavior of goldfish is usually quite raucous, with lots of frenzied activity within the pond. Chasing, nipping and even breaching the water are very typical spawning behaviors, which may appear to be fighting or aggression to the untrained eye. At times, the courtship can seem brutal, and the female goldfish can indeed become injured. Once the courtship is complete and eggs have been expressed, the water conditions within the pond will often become very murky. Even a foamy surface condition can occur, and a fishy smell may linger for a short time. Goldfish are notorious for eating their own eggs, sometimes to the point of not leaving any eggs to grow out a new



A mixed-variety goldfish pond is constantly swirling with color and activity. You never see the same show twice!



Throughout its history, the goldfish has gone from a food source to being revered by royalty and even protected by law and decree.

Fancy and highly decorative goldfish such as this oranda variety are best kept in controlled aquarium environments.

generation of goldfish.

Of course, one could remove eggs from the pond should they want to raise the fry, which is easier than it may seem and a rewarding experience. There has been great patience and discipline over the centuries by those who do practice the rearing of goldfish. Through selective breeding, the types and varieties of goldfish available are plentiful. Varieties such as red comets, shubunkin, sarasa comet, apricot comet, yellow comet, bronze comet and other varieties will have the classic *Carassius auratus* body shape.

Goldfish enthusiasts will also find dozens of varieties of ornamental goldfish these days. The ornamental varieties come in varying body shapes, varying scalation, varying fin arrangements and lengths or lack thereof — even ornamental head growth in the oranda varieties. The most ornamental types of goldfish, such as bubble eye, celestial eye and pom pom varieties, are not the best candidates for outdoor pond keeping. The ornamental varieties are best kept in very controlled conditions or aquarium-type environments. Also beware of mixing the very ornamental goldfish with koi fish and other pond fish due to the ornamentals' more delicate disposition. Goldfish varieties with the classic body shape generally do very well mixed among koi fish.

Go For the Gold

If one should get involved in the breeding of goldfish, a trip to a goldfish show might be in their future. Like koi, and often along with koi, fish keepers can find goldfish shows all over the world. These events are great fun and

provide the attendees with access to the goldfish world that won't be found in a retail environment. Award-winning goldfish and new varieties will be found at these shows, providing opportunities to meet the breeders, professionals and other enthusiasts in person. Goldfish shows have been popular since the 1800s and treat the visitors to a dizzying and colorful array of goldfish. During the Victorian era, when goldfish were en vogue, the goldfish shows were very popular and well attended high-society events.

Throughout its history, the goldfish has gone from a food source to being revered by royalty and even protected by law and decree. At one time, ownership of the yellow goldfish was punishable since that particular color was reserved for the emperor. Goldfish have been the center of cultural trends, even given as a traditional wedding gift, and spawning various goldfish societies such as the British Goldfish Society. In the mid-1800s, having a goldfish bowl in the home parlor was considered very chic and elegant. Keeping goldfish was considered healthy and good for the minds of children. Door-to-door goldfish vendors and street hawkers were not uncommon during those times. In early America, goldfish farms were among the earliest aquaculture industries that sprung up. There were even government programs that provided goldfish to the citizens and encouraged the building of ponds, but these ponds were more utilitarian and not for the enjoyment like we experience today.

Even though the glory days of the goldfish are likely not returning any time soon, especially with the rise of koi

fish popularity within the industry, pond professionals can educate and encourage new pond owners on the keeping of these incredible historically valuable fish. There is no doubt they will fall in love with their goldfish. Goldfish have earned the moniker of water puppies for a reason. Maybe with some fresh interest in the keeping of goldfish, the long-time relationship between goldfish and humans will continue for another 1,000 years. Perhaps someday we will see goldfish in outer space — I'd put money on it!

Today's modern pond professionals are in just the right position to keep this age-old tradition alive well into the future. Goldfish have been allegiant to us for a very long time, so let's return the loyalty. ☞

About the Author

Mike Gannon is the owner of Full Service Aquatics based in Stewartville, New Jersey. Mike has been a lifelong pond enthusiast and fishkeeper. Mike began Full Service Aquatics after working as a fish importer/dealer and time at the New York Aquarium. FSA has been specializing in koi pond, water garden, and water feature design and services since 1995; and more recently Mike opened a destination pond retail location called THAT POND PLACE also based in Stewartville. Mike is also the author of the Love Your Pond blog found at www.fullserviceaquatics.com.





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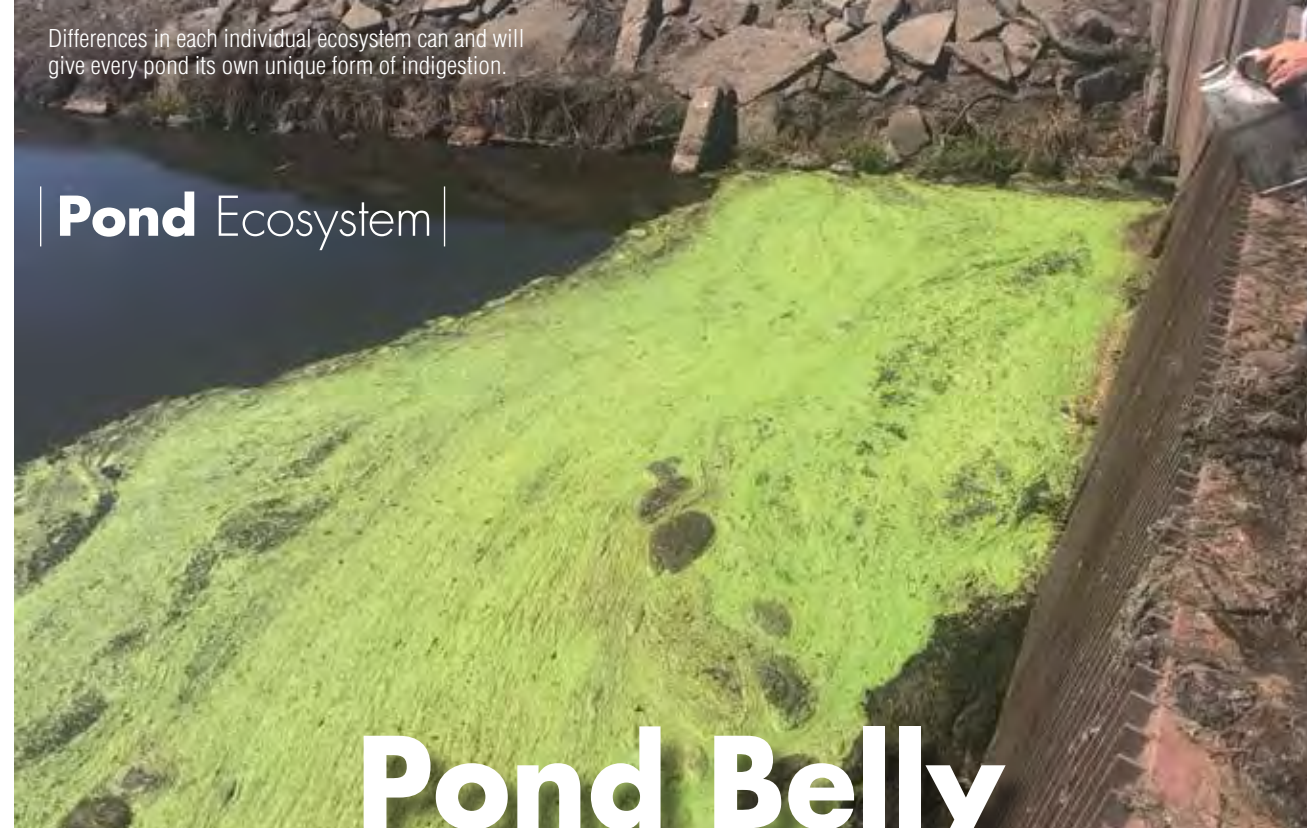
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Differences in each individual ecosystem can and will give every pond its own unique form of indigestion.

Pond Ecosystem



Pond Belly

The way to a pond's heart is through its **stomach**

by **Patrick Simmsgeiger**,
Diversified Waterscapes, Inc.

Ponds and lakes are living systems. Inside that giant puddle of water, there is an intricate ecosystem with many important players coexisting and shaping the characteristics of the lake from the inside out. As easy as it would be to focus on the surface of the water, it is what lies beneath the surface that keeps the lake alive.

When managing a lake, it is crucial to view the lake as the ecosystem that it is. When problems arise, the entire system needs to be considered, not just the affected area. It is just like a human body. Each part of the body of water plays an important part for the overall health.

The Pond's Digestive System

The benthic layer is the layer of mud and muck at the bottom of the pond or lake. It is made up of the sediment that settles from the water column, as well as plenty of microorganisms and bacteria. The benthic layer is the digestive system of

the lake. Organic matter settles from the water column and is decomposed by the benthic bacteria. During this decomposition, minerals and nutrients are released back into the water column for the other inhabitants to use, as well as gaseous by-products (carbon dioxide and methane, for example). In a healthy system, the benthic bacteria will be able to keep up with the amount of

When managing a lake, it is crucial to view the lake as the ecosystem that it is. When problems arise, the entire system needs to be considered, not just the affected area.

organic matter that settles to the bottom, and it will likewise release just enough nutrients to sustain the aquatic life.

The benthic layer will dictate the overall water quality. When the benthic layer is sick, it will not be able to keep up with the organic matter. This leads to a number of issues throughout the lake — most notably, an increase in algae growth and harmful bacteria. When the benthic layer

is digesting too much, the harmful gaseous by-products will start to cause odors and potentially harm the other organisms living in the lake.

Keeping the benthic layer healthy is a challenge. There are many factors that can have an influence.

Stomach Aches

Many small lakes and ponds are surrounded by slopes. This means that water will naturally flow into the lake when sprinklers are running or during any rainfall. If fertilizers are used in the surrounding landscaping, then that water runoff will be saturated with nitrogen and phosphorus from contact with the fertilizers. When this nutrient-rich water enters the lake, it is like throwing a bunch of junk food into the benthic layer!

The same issue is faced with using reclaimed and recycled water. Often times, the nutrient loading is far greater than that of potable water, and the

salinity levels are also much higher. This upsets the balance in the aquatic ecosystem.

Certain systems may also become contaminated with street or storm drain runoff. This water runoff will contain a lot of sediment, heavy metals and oil from automobiles driving on the road. This is particularly hazardous to the benthic layer because these constituents cannot be digested. Contaminants in the water will cause a buildup of sediments, nutrients, biomass, heavy metals and oils. This will cause a big stomach ache for the lake.

Plants & Wildlife

Aquatic plants will also have an effect on the benthic layer. Aquatic plants can strengthen the benthic layer by consuming some of the nutrients and minerals before they reach the benthic bacteria. Emergent and rooted floating plants will uptake nutrients from the soil, free-floating plants will

consume from the water column itself and submersed plants will consume the nutrients from both the soil and the water column. All nutrients that are removed by plants are nutrients that the benthic layer no longer has to digest. As long as these plants are healthy and are in balance with the size and strength of the benthic layer, the two will be symbiotic.

Wildlife, while aesthetically pleasing, is detrimental to the benthic layer. Where there is wildlife, there is feces, and where there is feces, there is nutrient excess and fecal coliform. The nutrient excess, as you can surmise, is hard for the benthic layer to keep up with. Fecal coliform, if left to fester, can turn into a serious human health hazard. There are various pathogens that can be transmitted to humans via water (E. coli, swimmers' itch, etc.). When there is abundant wildlife in a lake, you are increasing that risk to the people who frequent the body of water.

In many water systems, the lakes



There are algae that can double in size in a 24-hour period. If any of these are covering half your lake, you have one day left.

are surrounded by large trees and other landscaping. While this certainly increases the aesthetic value of the system, special attention needs to be paid to the foliage. The occasional leaf or grass clipping is not going to be detrimental to the system. However, when the fall comes around and there are leaves covering the entire water surface, or when the lawn is freshly mowed and all those clippings end up in the lake, these are problematic situations. Foliage is organic matter, which is what would flow into natural systems, so it is "healthy food," so to

speak. But too much healthy food can be a bad thing, too.

Diagnosis & Management

There are several ways to identify issues with a benthic layer. The first are visual indicators. If there is noticeable sedimentation like islands, sandbars or a noticeable buildup on the shoreline, this is a sign that there is too much biomass building up in the system.

Another visual indicator would be bubbling or boiling, like a pot on a stove. This indicates excess gas production from the bacte-



The benthic layer can be overfed with normally good biomass, creating buildups of sediment below the water line.

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rial digestion process. Other indicators of this issue would be bad odors coming from the water, getting a headache or feeling light-headed when you are walking around the water. (This is a result of inhaling methane and carbon dioxide.)

One of the best indicators of healthy pond muck is the presence of frogs and dragonflies. They will only lay their eggs in areas with good, stable muck. Their presence is a sign that the system is in good shape.

If it does happen that your benthic layer is not healthy, there are several management options.

The first option is biological treatment. This is like taking your vitamins. Biological treatments are a mixture of enzymes and supplemental bacteria. Enzymes are proteins that break up substrate. They are specifically designed to break apart one particular kind of substrate (another type of protein), so it is important to have a wide blend of enzymes in any treatment. Once the substrate is broken up, it becomes exponentially easier for the bacteria to consume.

There are two main categories of bacteria in aquatic systems, aerobic and anaerobic. Aerobic bacteria require oxygen to decompose substrate while anaerobic bacteria do not. Aerobic bacteria typically need to reside in the water column or the very top of the benthic zone to receive enough oxygen. Anaerobic bacteria thrive under the top

layer of the benthic zone, where they do not face competition from aerobic bacteria. When choosing biological supplements, it is important to make sure that you have not only the blend of enzymes, but also the blend of aerobic and anaerobic bacteria. The main benefit of using biological management is that it is extremely gentle on the system and has very long-lasting effects. However, the drawback is that treatment can be slow with unpredictable results, as you are still dealing with living organisms.

The second treatment option is chemical. This is like taking prescription medication. You need to use chemical treatments when biological treatments are not strong enough, or if there are any pathogens present. Chemical treatments neutralize the benthic layer and degrade the organic matter with chemical reactions. One of the benefits is its high effectiveness; however, chemical treatments are harsher on the system. They will destroy the beneficial bacteria that you need to keep the benthic layer healthy and kill the pathogens. It could also take the ecosystem a long time to readjust from changes in chemical compositions and pH.

The final management option would be physical — like getting surgery. The premise of this method is very simple. You remove the unwanted or unhealthy muck from the system completely. The results from physical maintenance are instantaneous. Removing the sediment

that has built up also reduces the effective age of the water body, meaning the water body will keep living strongly. Physical removal is extremely harsh on the aquatic environment, just like surgery is harsh on your body. It can also be quite expensive and take weeks of time.

Physical removal is definitely beneficial for some systems; however, it should not be confused with dredging. Dredging is scraping and scooping the mud and weeds with a dredge, whereas physical removal via vacuum extraction removes debris by layers. Dredging destroys the contour of the lake bed, which causes ecosystem problems later on, whereas vacuum extraction is more gentle and retains the lake contour.

Sometimes surgery is completely necessary. Just make sure you go to the doctor and not the butcher!

All in all, you need a blended system. You can't get surgery every time your knee is sore, and taking Vitamin B-12 is not going to cure your pneumonia. You need all three management types to keep a fully healthy system.

Preventative Maintenance

Just as in healthcare, lake and pond management has preventative care. Preventative-care measures help maintain the overall health of the lake. As the lake gets healthier, it will be less susceptible to issues with the benthic layer, as well as a myriad of other issues. There are six key areas of preventative care:

aeration, circulation, filtration, biological, chemical and water quality testing.

Aeration is the process of dissolving air into water. This makes sure that there is plenty of oxygen available for the aerobic bacteria, as well as the other organisms (like fish) that need oxygen. There are two ways to aerate a lake — passive aeration, when the substrate and organisms are exposed to the air at the water's surface, and active aeration, where you introduce the air into the water column using surface aerators or diffusers.

Circulation is the process of mixing the nutrients in the water so they are available to more organisms. Some systems have natural circulation that provides sufficient mixing; however, for water bodies with irregular shapes thanks to alcoves and fingers along the shoreline, it is more difficult to achieve equal circulation throughout the water. Installing features such as waterfalls will help with circulation while adding aesthetic value. There are also underwater circulating pumps that achieve very good circulation throughout the water column.

Filtration is the separation of solids from liquids. If your lake is prone to sedimentation issues, installing a filtration system would be of great benefit. Filtration will reduce the overall level of sedimentation and contaminants

that would otherwise accumulate on the benthic layer.

Biological preventative care encompasses the enzymes and bacteria that were discussed previously. Even without an immediate issue at hand, supplementing the bacteria in the system can improve the overall lake health.

Chemical preventative care is beneficial to systems that have had ongoing algae or digestion problems. The basic idea is that you would dose your lake with very small amounts of chemicals at the end of winter when algae is first starting to grow. This will prevent the algae from blooming so drastically in the spring and summer, which would require a much higher chemical dosing. As stated, this option should only be taken with systems that have ongoing problems. You wouldn't do this to a completely healthy lake, just like you wouldn't take prescription medication that was not prescribed for you.

Water quality testing is like getting the lake's blood work done. Generally, it is a good idea to test for heavy metals, pH, dissolved oxygen, alkalinity and temperature. These values are sensitive to disruptions in the aquatic environment, so they serve as good indicators for lake health.

In addition to shedding light on current problems in the system, getting

regular water quality tests can help you predict future issue you may encounter. For example, if you notice the dissolved oxygen levels in your pond steadily dropping year to year, that could indicate that you have an issue with your aeration system, or that you have too much organic matter decomposing, and the aerobic bacteria need more and more oxygen to keep up.

The benthic layer is a fascinating and vital part of any aquatic ecosystem. It is only with a firm understanding and careful observations that you can learn to manage your water systems and avoid those trips to the doctor! ☞

About the Author

Patrick Simmsgeiger is the president of Diversified Waterscapes Inc. (DWI), a certified lake management company and manufacturer of aquatic



products for 35 years and counting. A vital supplier for the industry, DWI is maintaining service to its clients during the COVID-19 pandemic with modified work practices and procedures.



A pond in need of a simple, healthy cleaning can become a full clean-out project in a very short time.



Once bacteria have been dealt with properly, the pond can resume having a good reflection on the community.

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35 & Thrive

Atlantic Water Gardens celebrates a milestone

by Jeff Weemhoff,
Atlantic-Oase

You could almost say it all started in a hole in the sand at a beach on the Jersey Shore. Founders Bill Lynne and Bashir Soudan established Meridienne International doing business as Atlantic Coast Spas in 1985. The “Atlantic” part came from the location of the warehouse and manufacturing plant — less than a mile from the Atlantic Ocean in Mays Landing, New Jersey.

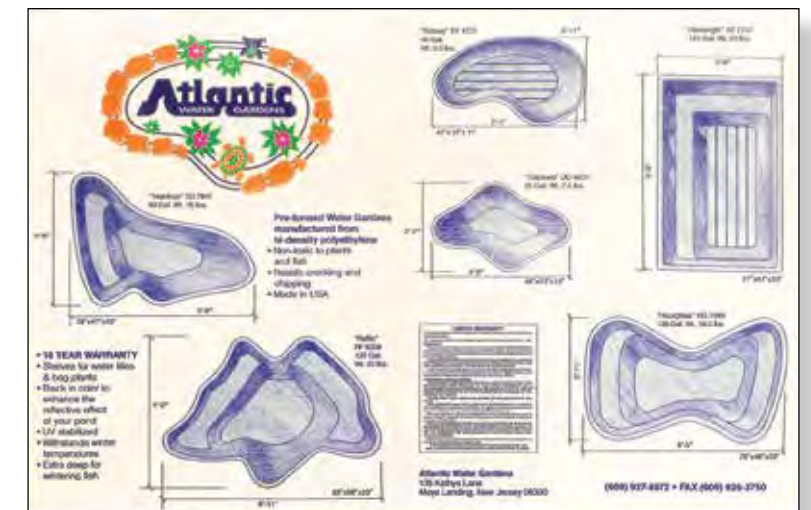
Bill and Bashir’s initial focus was on residential, jacuzzi-style bathtubs and outdoor hot tubs. After becoming proficient in designing and producing the molds for the spas in house, the next step was to open a fiberglass molding shop to produce the spas themselves. The fiberglass shop allowed for a lot of creativity and thinking outside the box. When Bashir saw preformed ponds at a home center, he thought it was a great idea — something that could be made with the company’s existing equipment!

And so, in 1988, with an hourglass pond, a kidney pond, a diamond pond, a rectangle pond and

a teardrop pond, Atlantic Water Gardens was born.

Going National

These six ponds did well enough that Bill and Bashir started thinking about national sales and distribution, and that’s when I joined the team. I had been working full time as an inde-



These drawings of the original pre-formed ponds gave Atlantic Water Gardens its start.

pendent lawn and garden sales representative at Weemhoff Associates, the agency my dad George founded. I learned a lot about sales and business from him, and I’m proud to say Weemhoff Associates is still going strong today under a new

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With the move to Ohio (left) came the need for more employees! More than half of these original team members at Atlantic Water Gardens are still with the company today! This EZ Router C&C machine (right) is one of the originals from New Jersey and is still in use in the Ohio facility to this day. It's currently being fitted to cut our new Fountain Basins for their 2024 launch.

name and management. We had already dipped a toe in the water by 1990, having added pond pumps and accessories to our line card when I met Bill and Bashir at the Mid-Atlantic Nursery Trade Show (MANTS) in Baltimore. I liked what I saw and signed on as their Midwest regional independent sales rep. After a year or two, Bill asked me to help develop a sales team and a national distribution network. I started working part-time as the National Sales Manager for AWG. It was a good fit. I inherited a love for selling and a love of the green industry from my father. Over the years as a rep for other lawn and garden lines, I developed strong contacts in the network of rep agencies. I could see the potential of water gardening in the lawn and garden market. It was all coming together.

An Industry is Born

In the '90s, the industry was really starting to take shape. Many manufacturers, distributors, dealers and contractors were getting into the business of water features. We sold Atlantic Coast Spas and began focusing solely on the water-garden industry. By the late '90s, we had grown the Atlantic line to 12 ponds, an up-flow bog filter, and even a couple of "pond-free" fountain and waterfall kits with graveled basins — way ahead of the curve, and all for the retail market. It was time to get serious. We started developing higher-end retail equipment like pond skimmers, waterfall filters, spillways, whiskey barrel liners and kits

for water gardens and water features for the dealer market. We added C&C machines to keep pace with demand and scale up production. Believe it or not, we still use the same machines today in our current facilities. We developed great relationships with companies in lawn and garden distribution, including Servistar, Arret, US Garden Sales, Mollema, Commerce Corp., Bradley Caldwell, BFG, L&L and many others. The specialized pond distribution market was born during those years. Many are still customers today, including AKT, Discount Pond, Webbs-Universal, Pond Supplies of Ohio, Holmes Farms, Fourth Generation, Coastal Pond, Unit Liner, Van Isle, Linzel, Water Landscape Supply, Castle Aquatics, Complete Aquatics, Jolie, Greystone, Oregon Aquatics and more. Public interest in ponds was booming. Most water-garden manufacturers and distributors, many dealers and even some contractors would attend Roseanne Conrad's now legendary Pondapalooza shows, which were typically held twice a year in Atlanta and Portland. They were can't-miss industry events with booths, builds, lectures, networking and much more. Many great business relationships were born there, and many industry friendships were established. Even today, many of those same friends and businesses are still actively involved in the pond industry, and those that are not have left a lasting and memorable legacy. **Coming Home** By 2004, we had outgrown our facil-

ity, and the business needed a boost in terms of space and talent. First, we needed to move from the Jersey Shore. We bought a 30,000 sq. ft. facility in Mantua, Ohio, and moved operations there in the fall of 2005. For me, Ohio was the perfect choice, and not just because I grew up there. The Greater Cleveland area had hardworking, dedicated employees, a well-developed plastics manufacturing infrastructure and major shipping lanes to the east, west and south. We set up the facility for distribution, light manufacturing and C&C machining, outsourcing thermal forming and injection molding to local manufacturers, many of whom we still use today. Things started to change quickly. We bought out Bashir, and I became an owner and President of AWG with Bill Lynne. We brought many talented people on board, like our current vice president, Brandon Dwyer, a key hire who helped us move into professional equipment. I started to travel the world to research and find partners for pumps, lights and other key items. We developed the Colorfalls and established an office in China. The demand for backyard ponds was starting to level off just as outdoor living and the idea of staycationing in the backyard oasis was building up momentum. The Colorfalls, the first lighted spillway, had launched us into the hardscape market, opening new opportunities at the perfect time. With Brandon's expertise in design, we developed Fountain and Colorfalls basins, pump vaults, Eco-Blox, lights and other "pond-free" products, while continuing to refine our pumps,



Office Space: our Mantua office (left) after the outdoor water features were completed, and our new 170,000-square-foot building (right) in Aurora.

biological filters and skimmers for the evolving pond trade.

We organized similar products into systems with interchangeable components — a major sales advantage. This greatly simplified the job of specifying equipment for both the installer and the counterperson. We had always had great relationships in the traditional pond-distribution market, and we could now add key distributors in the irrigation and landscape contractor space.

The Roaring 2010s

I've always felt that businesses are grown by their employees and that good people are the key to success — and they were. Our staff, starting with just five people in New Jersey, now numbered 20, with some very dynamic and talented employees.

Now, we had the people we needed to concentrate on more than just building and shipping product. We began working on support materials – brochures, videos,

presentations, social media, blogs and posts to help our customers with sales and installation.

Our systems-based approach to water features, which contractors and homeowners appreciated as much as our distributors and dealers did, was one factor contributing to double-digit growth through the early 2000s and into the early 2010s. We had to add another 7,500 sq. ft. to our facility in 2014 and built various water features on the prop-



erty to provide photos and backgrounds.

We embarked on an ambitious training campaign to get the word out to our distributors across North America. Within a very few years we were again bursting at the seams. By our 30th anniversary in 2018, we were again looking for a new place to call home, having outgrown the 38,000-square-foot facility in Mantua (even with storing a lot of product outdoors). Things were about to change again.

The Merger

Oase Living Water, the water-feature giant based in Horstel Germany, had expressed some interest in Atlantic and sent out some feelers through their national sales manager. It didn't happen overnight, but Thorsten Muck, CEO of the Oase Group, and I sat down together at Randy Stewart's Water Garden Expo in 2018 and found that we had something to talk about.

Our visions aligned; we both felt that the product lines would intertwine well. The idea of Atlantic Water Gardens and Oase joining forces made pretty good sense to everybody. The companies' philosophies and product lines were natural complements to each other with very little overlap. At Atlantic, we focused on the waterfall and making beautiful water features easy to build and maintain. The key products in the American market were strong, dependable pumps in skimmers to collect floating debris and



Thorsten Muck, CEO of Oase Group, and Jeff Weemhoff, President of Atlantic Water Gardens, (left) celebrate our merger and future plans at the 2019 Professional Conference. Atlantic-Oase (right) moved into our new 170,000-square-foot home in January 2020.

deliver generous flows to waterfall boxes at the tops of streams. Oase is renowned worldwide for its cutting-edge pumps, pond filters, ultraviolet clarifiers and pond vacuums, not to mention fountain technology that caters to the European style of water gardening.

Across the pond, they favored economical pumps on the bottom, pushing solid wastes into sophisticated filters to deliver incredible water quality. Streams and waterfalls were almost irrelevant. A merger would bring the two complementary water feature philosophies together; ponds that combined the best of both worlds would be filtered from the top down and the bottom up.

In the fall of 2018, Oase acquired Atlantic Water Gardens, merging to create Atlantic-Oase here in the U.S. market. We moved into our 180,000 sq. ft. North American headquarters in Aurora, Ohio in January 2020.

Here and Now

Atlantic-Oase is a now proud member of the Oase Group, a global leader in the water-feature industry. Regardless of point of origin, all our products are our own; i.e., we design and develop everything we sell. We offer a continuously growing roster of the most respected products in the world. Our in-house production team in Aurora builds, inspects and packages all products made in the United States.

We handle the sales and distribution of all Oase Group products for the North American market — Atlantic-Oase, biOrb, Oase Indoor Aquatics and more — ensuring the most efficient possible

operation. Our expansion brings the vast array of products we produce in Europe and beyond to the North American market, and we export our American-made goods to countries throughout the global Oase network. Together, we have more than 900 employees, 22 offices and seven production facilities worldwide, making us the largest water-feature equipment company on the planet.

We continue to deliver unparalleled quality, innovative products and unmatched customer support. We are dedicated to our customers' success and delivering value to them every day. With American ingenuity and German engineering, the sky's the limit for Atlantic-Oase.

Finishing our 35th year, Atlantic Water Gardens has grown stronger than ever. I am proud to have been a part of that growth and to have worked with every employee over the years. I'd like to thank everyone, past and present, who helped get us here. We are bringing a new dawn to the water feature and pond industry, and we are very excited about the future! 🌊

About the Author

Jeff Weemhoff has been active in the water garden industry for 33 years. He has spent the last 20 years as owner and president of Atlantic Water Gardens, now known as Atlantic-Oase.



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Seasonal Solutions

Beauty in a Bowl

Micro lotus, a small but mighty flower

by **Larry Nau,**
Bergen Water Gardens

Lotus have been an integral part of Asian culture for thousands of years. Whether grown as a staple food, for their beauty or as part of reli-

gious offering, lotus is imbedded in their lives. Recent decades have seen a general migration from the rural countryside to the urban areas, often into

30-story high-rise apartments. Lotus culture has become much more challenging now. Often balconies are part of these apartments, so this is where plants like lotus are now grown. Full-size, potted lotus is an option, but heavy, awkward pots become a chore. Smaller, petite lotus grown in decorative pots are the answer!

Evolution of Micro Lotus

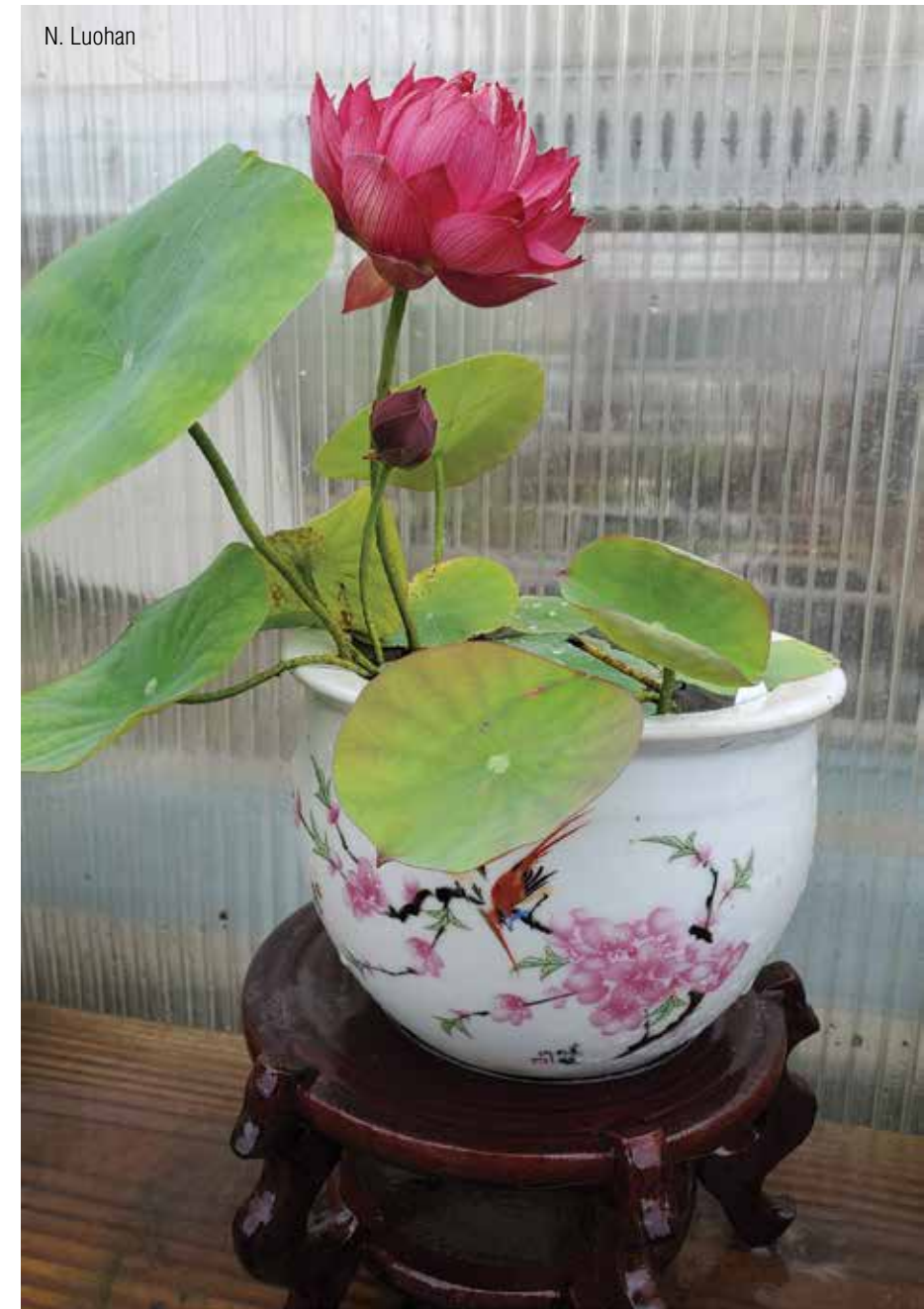
Traditionally, bowl lotus, which are grown in smaller pots about 12 inches in diameter and 6 inches deep, have been popular around the world. Bowl lotus are suitable to be grown on an apartment balcony with limited space. Over the past several decades, there have been a few Chinese lotus hybridizers working to dwarf the overall size of lotus plants.

Their efforts have evolved into the creation of the micro lotus, a lotus that is very small in size. Micro lotus may be grown in pots that are 4 to 6 inches in diameter and only 2 to 3 inches deep. Their overall size is only 8 to 10 inches tall, with leaves about 2 to 4 inches in diameter. The tiniest plants grow in small teacups, with leaves only 4 inches tall and very small flowers.

Micro lotus can be a challenge to grow. First, they are very small and not always vigorous growers. With such a small volume of water covering the soil, the pots quickly dry out. Growers will



gious offering, lotus is imbedded in their lives. Recent decades have seen a general migration from the rural countryside to the urban areas, often into





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often take these small pots and place them in a larger container of water. This helps not only to keep the plant hydrated but also prevents the sun from overheating the small volume pot.

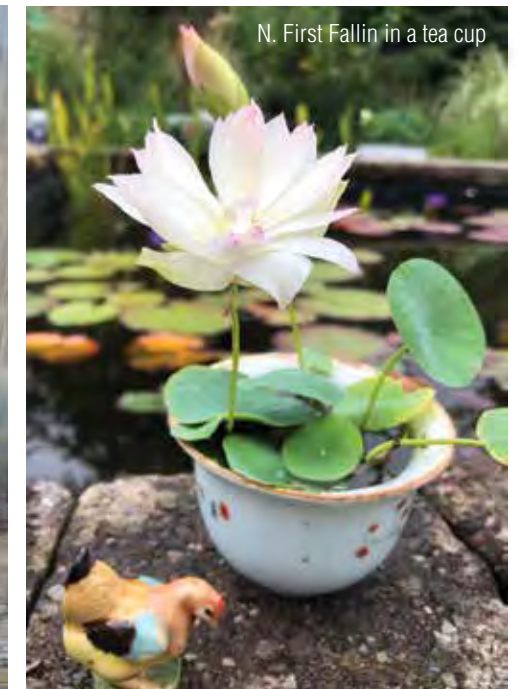
Like their larger cousins, micro lotus needs to be grown outside in full sun with good air movement. At this time, micro lotus is not suitable to be grown in indoor terrariums. As advances are made in the development of LED plant lighting, growing indoors may become an option in the future. Lotus still demands hot and humid growing conditions, so indoor culture will always be a challenge. Lotus also attracts aphids; this is especially an issue in an indoor environment.

Tips for Healthy Flowers

Lotus are heavy feeders, so fertilizing is important. We feed our plants every 10 to 14 days with ¼ tab of Pondtabbs Aquatic Plant fertilizer. We start with the first standing leaf and stop feeding the first of September. Too much fertilizer will burn the leaves. Remember, there is a small volume of soil, so less fertilizer more often is the best course to follow. Some micro lotus do not produce standing leaves, so we start fertilizing by the fourth floating leaf.

Due to their diminutive size, micro lotus may only produce two to five flowers in a season. For most growers this is not an issue, as the leaves and the general aesthetics of the micro lotus plant is reward enough. Most varieties do not produce seed due to their small size. Unfortunately, the internet is riddled with false ads offering micro lotus seed — these are normal lotus! With so few seeds produced, most growers will germinate the seeds themselves to try to increase their offerings in the future.

Like all named lotus varieties, to be true to name, lotus tubers must be purchased to get the correct variety with its particular growing and flower characteristics. Micro lotus tubers are small, often only 2 to 3 inches long and very thin — about the diameter of a pencil.



Some varieties do not produce a defined tuber, but rather thickened runners; these might be 6 inches long. The tiniest micro lotus are started from the side tubers of a main micro tuber, likely only 1 or 2 inches long. These are the tubers suitable for small teacups. However, we experience a 50% failure rate when we start these, as they are just so small!

Micro lotus are grown in topsoil, which is primarily clay. Any soil with added compost or peat becomes a floating mess. We have grown micro lotus in commercial aquatic planting media with satisfactory results, but we still prefer to mix in some topsoil as well. We lay the tuber on the soil and pour a bit more over the top and anchor it down. Care

must be taken when handling these small tubers, as they snap easily.

We start the smallest pots in a larger container of water, with just an inch or two covering the soil. The first floating leaf should be present within 10 days. Some varieties of micro lotus will never produce standing leaves. The pot surface will be covered with floating leaves, and the flower will randomly pop up. Others will grow in a traditional fashion, with a flower accompanying a new standing leaf.

Our Micro Favorites

One of the first micro lotus we imported is still one of our favorites: N. Colorful Lantern in Qinhuai. Colorful

Lantern is red with a yellow center. It is a reliable bloomer, even in the smallest of pots. It is usually the first to bloom and often produces its final flowers of the season in mid-September.

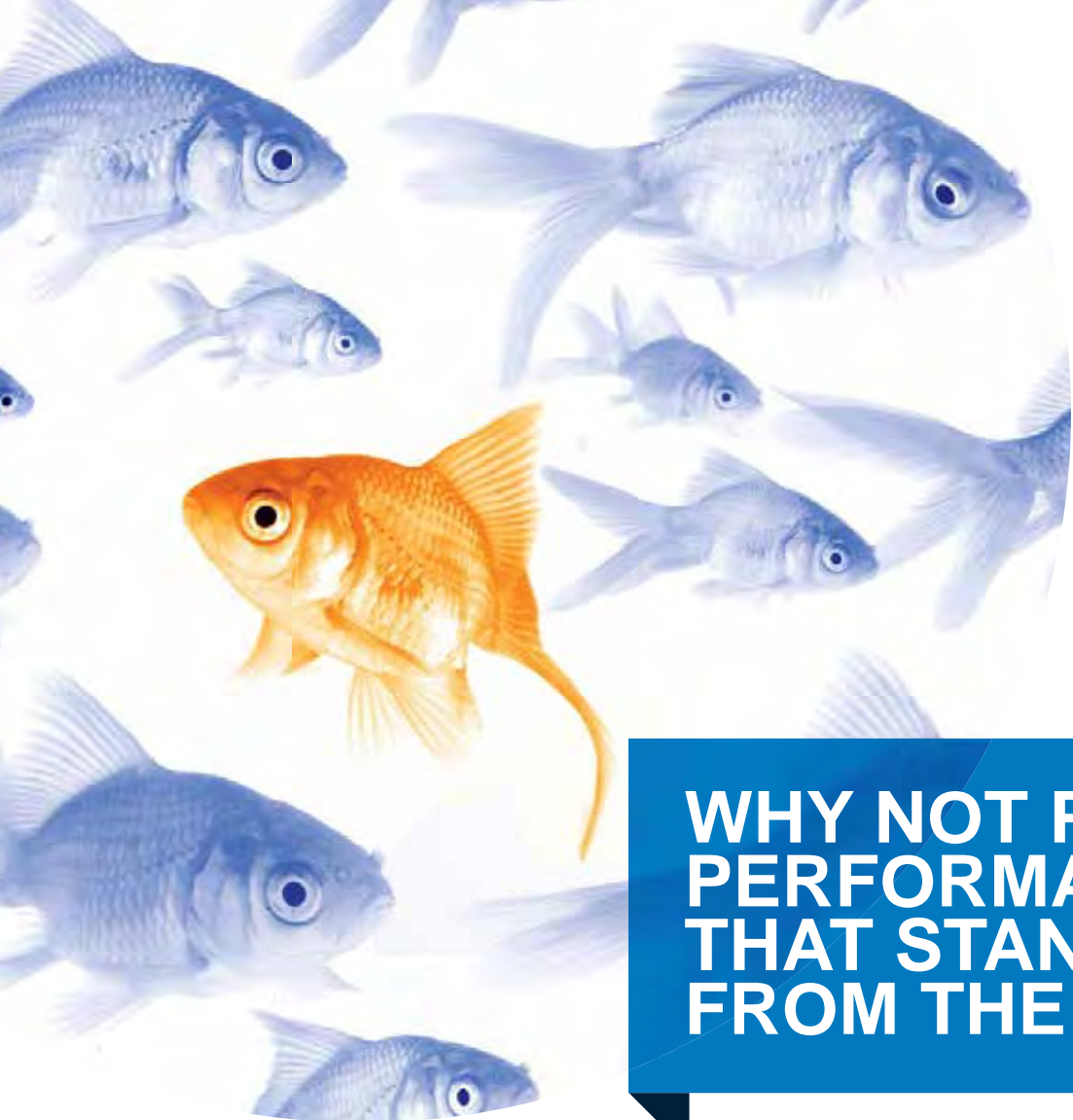
N. Cong Ke is another micro favorite. It features pink tips, with pink fading through the petals. A new offering for 2024 is N. Delicate Hand Lotus. This is a single petal pink micro lotus which generally does not produce standing leaves. Another new introduction for 2024 is N. Qian-Shuimei Lotus. Qian-Shuimei produces an exceptionally large flower for a micro lotus, which is white with purple tips.

As a guide, micro lotus will not grow large when potted in a traditional



N. Cong Ke (left) & N. Feicui (right) grow in micro bowls near N. Feicui lotus planted in a pond.

Micro lotus are grown in topsoil, which is primarily clay. Any soil with added compost or peat becomes a floating mess.



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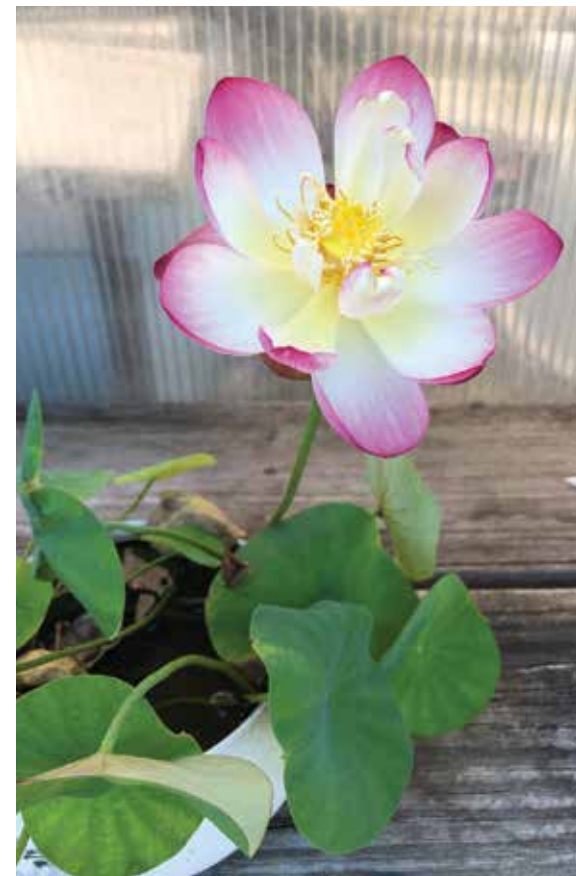
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N. Xiang Lady (top, left), N. Little Pink in Nanyue (bottom, left) and N. Colorful Lantern in Qin-huai (above) all grow in tea cups.

17-inch pot. The plant will run throughout the pot, but the leaves stay small and rarely grow taller than 8 inches. In contrast, there are standard lotus which may be grown as bonsai or dwarfed by limited space. Two commonly dwarfed varieties by us are N. Autumn in Moling and N. Feicui. Both will grow small, but not as petite as a micro lotus. To achieve this feat, the smallest of tubers must be located (a 2 or 3-inch tuber versus a standard 6-to-8-inch tuber). Due to the stress of growing in a micro pot, they only produce one or two flowers during the season. Whereas grown in a standard 17-inch pot, both are

excellent bloomers throughout the season. A true micro lotus is much different from a lotus, which is grown in bonsai conditions.

Micro lotus are an exciting and challenging addition to our aquatic plant community. They offer a small, manageable plant that can be grown in a limited space and does not require a pond. Their beauty is not only limited to their flowers; they also have fascinating leaves and are often grown in ornate pots.

Compared to standard lotus, the micro lotus hobby is still in its infancy. We look forward to creating and introducing many new and exciting varieties in the future! ☘

About the Author

Larry Nau opened Bergen Water Gardens in 2000, focusing on aquatic plants, koi and supplies. New opportunities were created after serving on the International Waterlily and Water Gardening Society's board of directors and as their executive director. Starting in 2013 Larry, along with his soon-to-be wife Lili, imported lotus tubers from China to the U.S. Lotus is now the focus of their business. They have made key introductions, like the China Red series, the first variegated lotus, the Black Lotus and, of course, micro lotus.



Language of **Koi**

Ginrin Kohaku from Torazo Koi Farm, which breeds some of the largest Kohaku in the Niigata region.



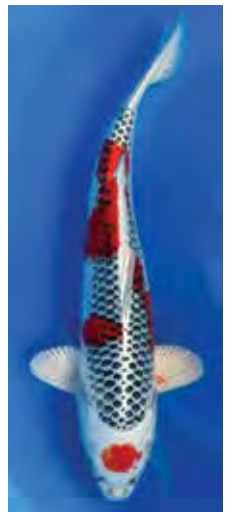
The UPSSELL Factor

Contractors & retailers look to Japanese koi

by **Brian Fitzsimmons,**
Fitz's Fish Ponds

Koi hobbyists throughout the world would attest to Japanese koi as a beautiful addition to any pond. They can provide a stunning visual element while contributing to a peaceful and tranquil atmosphere that is perfect for relaxation and enjoyment. Japanese koi, specifically, are known for their beauty and grace as they are prized for their unique colors

Part ONE of TWO



Masaru Saito (left) of Shintaro Koi Farm examines the growth of his koi during a sansai harvest. A Yamabuki (middle) sourced from Japan by Fitz's Fish Ponds happily swims at a customer's pond in Pennsylvania. A stunning Maruten Kujaku (right) is on display at Yamasan Koi Farm.

and patterns. Koi can grow to be quite large and, when cared for properly, can live up to 20 years, making them a long-term investment for homeowners looking to enhance their outdoor living space.

Therefore, pond contractors who specialize in koi ponds have a unique opportunity to upsell Japanese koi to their customers. By educating customers about the benefits of adding koi to their pond, constructing or reconstructing a pond suitable for larger koi, or even introducing customers to the hobby in general, pond contractors have a unique opportunity to increase sales while simultaneously providing customers with a beautiful outdoor living space and access to the koi hobby.

Size Matters

What some new pond owners may not know is that the size of a pond significantly matters when considering how many koi one may want to accommodate.

It is often said that a pond owner will build three ponds in their life. The first koi pond might take the form of a small pond with basic filtration and aeration systems, where they learn about specific requirements and basic care of koi fish, such as understanding koi behavior, feeding and maintaining water quality.

After gaining experience and knowledge from the first pond, many koi owners may feel the desire to upgrade

What some new pond owners may not know is that the size of a pond significantly matters when considering how many koi one may want to accommodate.

their pond to better accommodate their koi and enhance their overall experience. The second koi pond a hobbyist builds may be larger, with improved filtration, better water circulation and more advanced features such as UV sterilizers or bottom drains. Finally, the third koi pond is a reflection of the hobbyist gathering significant expertise in koi keeping and pond design. This pond may feature a larger and more elaborate setup that optimizes the health and growth of koi. It may include advanced filtration systems, dedicated quarantine areas and specific design elements such as a glass viewing window for showcasing the beauty of their prized koi.

This symbolic process represents that

pond and koi ownership is a hobby that encompasses varying levels of interest and expertise. Each pond built offers an opportunity to refine techniques, address challenges and create an ideal environment for the koi. Pond contractors who recognize this as well as which phase a customer is in have the potential to educate and influence their customers while also capitalizing on sales opportunities to enhance their own business.

When it comes to providing the appropriately sized environment to accommodate koi, the recommended size of a pond depends on a few factors, including size and growth potential of the koi, their age and the desired water quality and conditions for their well-being. Some general guidelines to consider would be to provide at least 250 gallons of water for a single adult koi fish. This estimate assumes that the koi are of average size, but it doesn't account for additional factors like filtration, aeration and other pond inhabitants. This, as well as depth, surface area and filtration, may need to be considered for more elaborate pond setups.

Koi hobbyists love their koi and typically desire an environment that will accommodate them best. Therefore, as a pond contractor looking to utilize koi as an upselling feature, being able to educate the customer on koi health

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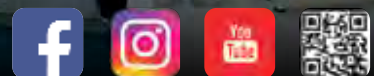
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and care and how the pondscape may better serve the koi, while also providing the services and equipment needed, will set you aside from other pond contractors in the industry.

Koi are also known to eat mosquito larvae, which can help reduce the population of these pesky insects in and around the pond, making a pond owner's outdoor living space that much more enjoyable.

Eco-Enhancement

One of the benefits of adding Japanese koi to a pond is that they can actually help to keep the water clean and, in turn, help to reduce the amount of maintenance required to keep the pond clean. Koi are natural scavengers, and they will eat algae, unwanted plant matter and other debris that can accumulate in a pond, helping to create a balanced ecosystem in the pond.

Koi are also known to eat mosquito larvae, which can help reduce the population of these pesky insects in and around the pond, making a pond owner's outdoor living space that much more enjoyable. In addition, many people find watching koi swimming around in a pond to be a relaxing and soothing experience, which can help reduce stress and anxiety. Koi can also be a great way to teach children about the natural world, including topics such as animal behavior, biology and ecology. Finally, koi have a wonderful aesthetic appeal, as they are known for their beautiful colors and patterns.

Oftentimes koi are referred to as "living art," and for the serious or

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high-end hobbyist, their pond will house their koi collection. At the elite end of the hobby, hobbyists will be in search for a specific koi breed or variety that has specific patterns to add to their overall collection. As a contractor, understanding the benefits of koi as well as the varying levels that the hobby has to offer clients can aid as a way to generate sales with koi. Understanding where a customer is within the hobby — whether they are just starting out by adding koi, or they are at the elite end — will allow you better determine the service or sale that would be most applicable and desirable while also acting as their connection to access beautiful Japanese koi.

Why Japanese?

As opposed to domestic koi, Japanese koi are often considered to be of higher quality and value for a number of reasons. First, koi have a long and rich history in Japanese culture and are highly valued as symbols of good fortune, perseverance and strength. Because of their cultural significance, Japanese koi breeders value the quality of the koi that they are able to produce and are known for their rigorous quality control standards, which ensure that only the healthiest and most beautiful koi are selected for sale. Some of these quality control standards include water-quality management, health monitoring and quarantine, breeding facili-



Japanese koi breeder Chogoro specializes in Platinum Ogons.

ties, selective breeding, bloodline documentation as well as grading and auctions.

For the breeders, the health of their fish is prioritized above all else, and an extreme emphasis is placed on water quality and health protocols. Due to the fact that water quality is crucial in breeding healthy koi, Japanese koi

SUCCESS SPOTLIGHT

Todd Elliott of Ohio Koi embodies the ideal customer partnership that we strive for at Fitz's Fish Ponds. Todd began as a hobbyist about 20 years ago when his first home had a small pond. He has always had an interest in landscaping and loved the idea of learning all he could to make his pond look as interesting as the landscape itself. He soon became interested in what he could also put in his pond to further beautify it. In his early entry into the hobby, he did not know the difference in quality between domestic and Japanese koi, as there were not a lot of options for comparison. He got his first domestic koi for his pond from a small local garden center. Then, as he became more interested in the hobby and learned of the gold standard to the variety and where they came from, it became very clear that there was a significant, visible difference between the quality of the Japanese koi and the domestic koi he currently had in his pond. He wanted to change over his entire collection!



Elliott's interest as a hobbyist then led to him opening up Ohio Koi Ltd., in Columbus, Ohio. He recognized that there were not many local options for buying Japanese koi, as most of his purchases were coming from either the east or west coast. Based on his involvement in koi clubs, he realized there were many others like him looking for high-quality Japanese Koi. Although the business name has been around since 2007, he wasn't ready to become established until 2015. In those years, he learned as much as he could about the hobby and also purchased a 12-acre piece of land, which was more suitable for the vision of incorporating mud ponds that he had for both the hobby and his emerging business.

Once Ohio Koi opened, Todd had about 50% domestic koi and then 50% Japanese koi.

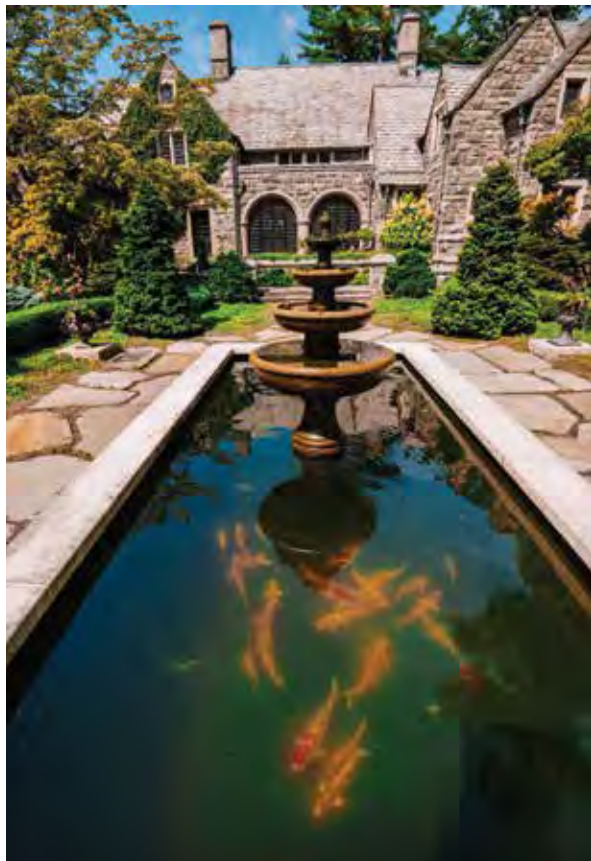
"Including Japanese Koi into our business was an absolute differentiator for our business model," he said. "We had so many more sales that tended to be Japanese koi, despite the higher cost. Our customer base could visually tell the difference between domestic and Japanese koi, and they have really grown in the hobby as our business has grown. Customers that were interested in a 4-inch fish at first are now interested in a 12-inch fish."

Todd explains that educating his customers on the different varieties of koi and introducing them to the higher levels of the hobby is something he is very passionate about. "Our business has grown every year. I now have customers who request koi from specific breeders to add to their collection. Japanese koi are typically our largest sales item that has sold year in and year out. I'm proud to continue educating our customers on the hobby and helping them find the koi they are looking for."

Bringing in Japanese koi to their business model has been a game changer for Ohio Koi. While they still offer domestic koi, Todd hopes that they act as a segue into the Japanese koi hobby, just as it did for him.

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breeders monitor and maintain specific water parameters such as temperature, pH, ammonia levels and oxygen levels to provide a healthy and conducive environment for the koi.

Advanced filtration systems, regular water testing and water change schedules are typically implemented to ensure optimal water quality. In addition, koi breeders in Japan implement strict health monitoring protocols, including regular check-ups, disease prevention measures, and quarantine procedures for new fish. This helps prevent the spread of diseases and maintains the overall well-being of the koi population.

Japanese koi breeders also keep very detailed records of the lineage and pedigree of their koi. The bloodline documentation

ensures traceability and allows breeders to maintain and track the genetic history of their koi strains, which ensures the purity and integrity of the breeding stock. In addition, many breeders practice selective breeding, meaning that they meticulously choose parent koi with desirable traits, such as body shape, pattern, coloration and finnage, to produce offspring with superior qualities.

In addition, koi breeders in Japan maintain specialized facilities designed to provide optimal conditions for koi breeding. These facilities often include multiple ponds with varying water parameters, temperature control systems and advanced filtration to maintain water quality. They also include mud ponds in the mountains of Niigata, where they allow



This homeowner in Bridgewater, New Jersey (left) expanded her pond to house her koi that outgrew her initial pond. The pond (bottom) went through another transformation with two larger waterfalls and an expansion to house more adult koi.



A formal dedicated koi pond (top) with fountain centerpiece dazzles in Kinnelon, New Jersey. A small water garden (bottom) leads to a formal glass window display pond at our Fitz's Fish Ponds Headquarters in Milford, New Jersey.

the koi to grow out over the course of the spring and summer.

Finally, koi breeders often participate in koi shows as well as grading and auction events, such as the famous Niigata Koi Auctions in Japan. During these events, koi are assessed, categorized and evaluated by professional judges. These auctions and grading systems help maintain high standards and provide a platform for showcasing and acquiring top-quality koi.

The dedication to maintaining high standards, meticulous breeding practices and attention to detail contribute to the reputation of Japanese koi as some of the finest in the world. Pond contractors who are interested in adding koi sales to their business should have an understanding of the difference between Japanese and domestic koi and make an educated decision on how they wish to proceed. *✍*

Watch for part two of this article in the Jan/Feb 2024 issue!

About the Author



Brian Fitzsimmons built his first pond at age 13 in his parents' backyard while they were away on vacation. In 2008, he started Fitz's Fish Ponds and has been growing the company ever since. He has a retail store and multiple crews building and servicing water features daily.

They design, build and service ponds, waterfalls and all other water features. The crew is experienced, educated and, most importantly, creative. Brian believes no two ponds or water features should be the same, and no idea is too farfetched. By working closely with their clients and listening to their needs, they aim to create a finished product beyond all expectations.

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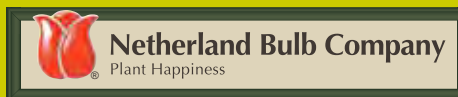
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Turtle ponds need an island — and sometimes a peninsula.

The Turtles' Turf

Reptile resort opens following extended quarantine

by **Kent Wallace,**
Living Water Solutions

After a two-year quarantine period, the turtles finally got their own new habitat! The turtles' owners sold their house, and over the last two years of construction on the new home, their fish and turtles were living in my quarantine facilities. The turtles had always lived in the koi pond at the old house, but this time they got their own special habitat. The fish went into their new home last month, and now a month later, the turtle habitat is ready.

SERIES:
Best Pond Practices

This is an installment of an ongoing, multi-part series. Be sure to watch for further installments in future issues!

The turtle pond is placed to the right of the home's entry, next to a game room with large, sliding-glass doors opening into an atrium. This is

where the turtle habitat is built wall to wall, with a combination of water



The concrete collar and block edge get prepped for Polyurea.



Polyurea coats the pond and up the wall.



The large boulders (above, left) were the most difficult to place. The equipment area (above) has a sand and gravel filter on a shelf for gravity flow. The rock wall (bottom left) is outfitted with spills and planting pockets.

I learned from housing these water turtles for two years that prefiltration is very important. Good prefiltration is a must, because turtle poop is different from fish waste in that the heavy solids are greater and must be flushed more often.



The planting edge is shown at left, while a turtle resident checks out their new digs at right.

plants and surrounding vegetation.

The area is approximately 13 feet by 26 feet, and the pond fills about half of the space. A walkway between the sliding doors and the pond leads around the corner and through a gate to where the filtration is located.

Filtration First

I learned from housing these water

turtles for two years that prefiltration is very important. Good prefiltration is a must, because turtle poop is different from fish waste in that the heavy solids are greater and must be flushed more often. The pond is small, at 2 ft. deep and just over 1,000 gallons, and the 26-foot-wide back wall is a wet, weeping wall with four water entry locations to flow across the back and

return to the pond.

A 3-inch LWS aerated bottom drain with 5-inch diffuser is at the end closest to the filtration, along with a shelf-mounted Aqua-Niche skimmer. The bottom drain flows water to a 55-gallon-drum radial separator with a discharge pump for cleaning. A Wlim Wave 1 1/6 Horsepower pump pulls from the radial separator and directly from the

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A turtle's on the move (left)! Their new pond (right) has filled out nicely with appropriate plantings.

skimmer, with a valve on each line for balancing and maintenance.

The water leaving the pump is split between a 55-gallon-drum aerated biofilter and a 55-gallon-drum up-flow sand and gravel filter. The aerated biofilter is raised slightly above water level — about 12 inches to help facilitate a gravity-flow system. Water

from the aerated biofilter is gravity fed through a 3-inch line, with an air purge to three 1 1/2-inch returns on the left end of the pond that push water toward the drain and skimmer. The up-flow sand and gravel filter is placed higher on a shelf to give it the ability to gravity flow back along the weeping wall waterfalls.

The 55-watt Flo-free UV is mounted as downflow inside the sand and gravel filter with a small bleed hole to prevent air entrapment. One 3-inch line wraps around the back of the pond and along the wall with each of the falls feeding off it with 2-inch lines. I chose 2-inch lines to keep the water moving slowly up into the spills along the wall.

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SOMETHING FISHY IS COMING TO



SPRING 2024



Turtle waterfall!

Warding the Walls

Monte Malloy of M&M masonry constructed the pond edge and rock walls. The wall is a planted wall and was created by inserting six planting pots into the rocks and concrete during construction, with each having its own separate 3/4-inch drainage line leading around to an area near the front gate. Each pot has its own dripper line fed through the 3/4-inch pipe connected to the landscape watering system.

Paul Parszik of Artizan Aquatics came in to shoot the atrium with polyurea. Most of the atrium area, including the flat area between the pond and walls and 4 feet up the walls, are all covered in polyurea. Just a small area on either side of the pond and across the front where the walkway is located was left as original soil. These areas are planted with succulents, ground covers, creeping fig to cover the walls, creeping thyme and a queen palm along with some other varieties to soften the room. The back wall is planted with grasses, succulents, purple heart, coleus and elephant's foot to grow down the wall over time.

The Turtle Den

A flagstone peninsula leading to a small island on the left end

above the return jets and cave was constructed on the right end outside the pond under a large boulder as a place for the turtles to hang out under the weeping water. Two areas about 3 feet in diameter and filled with sand are constructed on either end of the walkway. These are outside the polyurea-sealed section and surrounded by plantings as spaces for the turtles to burrow.

If the pond needs to be heated a little during the winter, heaters can be easily installed in the prefilter. The return water for the water wall can be slowed or shut down with only the underwater returns running if necessary.

It will be fun to see how this system matures over time with all the plantings and additional turtles I know are coming! ☺

About the Author

Kent Wallace was born and raised in Las Vegas. Kent spent most of his adult life in the automobile industry at independent shops and dealerships, including his own shop as a race car fabricator at age 24. Then, in 2001 a neighbor asked Kent if he could build her a koi pond like the one Kent's father had.



From that point on, pond building became his new passion. That first pond he built was submitted to Better Homes & Gardens magazine and won Best Courtyard Nationwide in their special interest publication.

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Seventh annual Water Artisans of the Year contest

4 CATEGORIES:

- Most Naturalistic
- Best Pondless
- Best Water Feature Under \$20,000
- Fountains & Formal Features



Contest opens SEPTEMBER 1, 2023.
Photos will be judged by an independent panel of experts, with a winner and honorable mention named in each category.
The cost for each entry is \$25.
All proceeds will be donated to St. Jude Children's Research Hospital.
Open to professional installers only.

In order to be eligible, projects must be completed between November 1, 2022 – November 1, 2023.

Go to www.pondtrademag.com/entry-form-2023-water-artisans-of-the-year-awards/ for official rules and entry form.

▶ Contest deadline is Nov. 30, 2023



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Evolution Aqua USA, a leading name in aquatic solutions, has unveiled its latest innovation set to revolutionize pond maintenance. Introducing the PURE Pond Sludge Bomb, a powerful remedy designed to tackle the persistent issue of sludge buildup in ponds.

Sludge, a notorious layer of decomposed organic matter comprised of fish waste, surplus fish food, leaves and assorted debris, tends to accumulate at the pond's base over time. This buildup can lead to a multitude of problems within the pond's ecosystem, including unsightly algae blooms, diminished water quality, lowered oxygen levels, unpleasant odors and compromised aesthetics.

The PURE Pond Sludge Bomb is engineered to combat this problem head on. Infused with millions of natural enzymes and beneficial bacteria, this innovative product swiftly degrades and digests sludge and organic waste within the pond environment. Moreover, it aids in the conversion of toxic ammonia and nitrite, contributing to a healthier and more balanced pond ecosystem.

Regular use of the PURE Pond Sludge Bomb is poised to be a game changer for pond enthusiasts. With just one treatment, a single PURE Pond Sludge Bomb can address a substantial 5,380 gallons of water, offering an efficient and cost-effective solution to maintain a pristine pond environment while preventing the undue buildup of sludge. This product will be available to ship in February 2024.

For more information about the PURE Pond Sludge Bomb and other Evolution Aqua USA products, please email info@evolutionaquausa.com or contact Don Schnoor, National Sales Manager, at 888/417-5837.



2024 Water Garden Expo Starts to Take Shape

Pondliner Wholesale's Water Garden Expo moves to the Grand Casino, Hotel and Resort in Shawnee, Oklahoma on Feb. 28, 29, and March 1, 2023. The Water Garden Expo brings together the largest number industry manufacturers in one event.

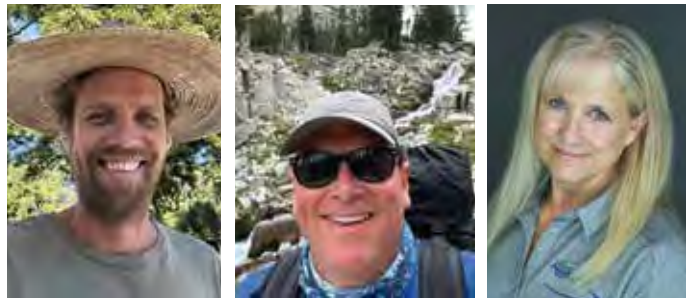
Kevin Dougherty headlines the WGE with four seminars that will be beneficial for all business owners. Topics include Advanced Estimating, Project Communication, Making the Number Work (financial seminar) and Developing Frontline Leadership.

Wednesday afternoon will feature business seminars to improve your organization. A happy hour will follow with a chance to network and visit the manufacturer booths.

The presentation of POND Trade's 2023 Water Artisans of the Year will kick off Thursday morning with 21 seminars following over the next two days. Three educational tracks will provide learning opportunities for all knowledge levels. Attendees can also visit manufacturers exhibiting in the trade show and network with peers from across the country.

For those looking for a hands-on build, Bedrock Nursery will be hosting the Water Garden Expo Memorial Build in Lawton, Oklahoma on Feb. 26 – 27. For more information on this opportunity, join the Facebook group 2024 Water Garden Expo Memorial Build or contact Bedrock Nursery at 580/248-6337.

The Water Garden Expo is open to trade professionals only. Visit www.WGexpo.com or call 866/219-3561 to register or for more information.



Top row, left to right: Landon Malave, Jake Bradley, Jonathan Marston Bottom row, left to right: Eric Arntson, Sean Bell, Jennifer Zuri

Judges Selected for 2023 Water Artisans of the Year Contest

POND Trade magazine has selected an esteemed panel of six industry experts to judge entries in the 2023 Water Artisans of the Year contest. With the Nov 30, 2023 deadline approaching, it's time to select your best photos and projects to enter.

Known informally as the "Supreme Stream Court," this year's judges represent a unique, well rounded cross section of the industry, featuring three past contest winners, several master pond builders, a wholesale distributor and koi farmer.

"Our judges take their roles seriously," says POND Trade publisher, Lora Lee Gelles. "For this year's contest, they will review the blind entries and select a winner and runner-up in each of four categories — Best Pondless, Most Naturalistic, Best Water Feature Under \$20,000, and Fountains and Formal Features."

Landon Malave is the owner of LCM Waterfalls & Ponds, previously known as LCM Landscape & Design. Operating out of Elbert, Colorado, he services the front range and is taking his efforts nationwide. He grew up on a farm in Eastern Colorado, earning his associate's degree in horticulture and a certificate in landscape design. He has been in business for more than 10 years and is excited about the future of building multiple businesses, honing in on his skills in the water feature industry. Landon lives on a tree farm with his wife and three children.

Eric Arntson founded Stonebridge Landscape

in 2003, with the goal of creating breathtaking outdoor spaces that make a lasting impression. His dedication to craftsmanship, simple flowing lines and use of natural material informed his unique organic style of landscape design for many years. He switched his business focus to exclusively water features in 2018, and together with his wife Ana, they have built a successful business, bringing the magic of flowing water to countless families throughout the years.

Sean Bell is the Eastern Regional Sales Manager for Atlantic-Oase. A true fish geek and water feature professional, he has spent the last 20 years training, educating and supporting contractors, distributors, and retailers in the green industry. Sean previously managed one of the largest aquarium stores in the Southeast that specialized in fish from all around the globe, including imported Japanese koi. When Sean is not working, he enjoys studying waterfall design while backpacking and camping.

Jennifer Zuri is the marketing communications manager for Aquascape, Inc. where she began her career in water features in 2002. She authored Pond Builder's Guide to Break Even, serves as editor-in-chief for the Aquascape Lifestyles magazine and has written several water gardening articles for a variety of trade publications. A former president of the International Waterlily and Water Gardening Society (IWGS), Jennifer enjoys choosing waterlilies and aquatic plants for her 11-by-17-foot pond.

Jake Bradley grew up in rural Michigan

learning to appreciate nature from an early age. He worked in landscaping as well in his family's business before finding new challenges at EasyPro in 2006. Jake works on the sales team as the project coordinator, and among other things, is responsible for analyzing landscape plans and blueprints to determine project needs and what equipment and features will give the best possible results for landscape contractors, pond builders and their customers.

Jonathan Marston built his first water feature at the age of 18 for his grandparents in Massachusetts. After high school, he moved to British Columbia for a unique undergraduate opportunity that allowed him to study water features in one of the most scenic parts of North America. Upon graduating, he moved back to Boston and officially opened FallingWater Scapes in 2017, which has since become a Master Certified Aquascape Contractor and an award-winning water-feature company.

A \$25 fee is required with each entry, with all proceeds benefiting St. Jude Children's Research Hospital. Eligible projects must be completed between Nov. 1, 2022, and Nov. 1, 2023. Contractors may submit as many entries as they would like; however, each project may only be submitted in one category. Winners will be featured in the March/April 2024 issue of POND Trade magazine.

For more information or to enter, visit www.pondtrademag.com/entry-form-2023-water-artisans-of-the-year-awards/



Fitz's Fish Ponds Hosts 2nd Annual Koi Fest & Tri State ZNA Koi Show

Koi Fest 2023 blew us at FFP out of the water! This was an all-hands-on-deck event for us, and we couldn't have been happier to host at our farm in Milford, NJ. We had hourly giveaways with a bunch of great prizes.

In addition to the giveaways, we had hourly koi auctions! We brought in an amazing auctioneer, Alfred, who kept the koi auctions vibrant and exciting all day. The koi for the auction were displayed in our formal pond with a glass viewing window so interested participants could view the koi that they wanted to place bids on.

This year, we hosted even more vendors and had a number of sponsors as well. We simultaneously hosted The ZNA Koi Show at Koi Fest. Guests of Koi Fest were able to enter koi they bought from FFP into the ZNA Koi Show if they wished to do so and had the opportunity to win awards. The ZNA Koi Club flies in judges from all over the country to evaluate the quality of the koi based on size, body, color, breed and other qualities. It was a great experience for our FFP customers to see what a koi show actually looks like.

The highlight of the event was our Koi Tent. We featured 25 tanks of koi this year that ranged from Tosai to Yonsai and priced from \$30 to \$4,000. These koi were featured at the best prices of the year, and we were so happy to give them some great new homes.

We are so proud of our amazing team at Fitz's Fish Ponds for helping make this event a success. The team worked tirelessly from planning and setting up to working the event and cleanup. Koi Fest is getting bigger every year, and the support of our friends in the industry helps us make it as great as it is.



Koi Market Celebrates a Year of Remarkable Growth and Expansion

Koi Market Aquatic Nursery & Bonsai celebrates a year of growth and innovation with new partnerships, distribution agreements and experienced leadership on board. The company has made a series of notable achievements in the past year.

Koi Market moved into its new, significantly larger facility in a convenient location in Dix Hills, New York, providing an even better platform to continue helping hobbyists around the country enjoy their passion for koi and aquatic care.



Having established itself as the largest Japanese koi dealer in New York and one of the largest U.S. importers of Japanese koi, the new location boasts a bigger space for the koi, a section for Bonsai trees, a large showroom for pond designs and water features, and much more.

In a significant development last year, Koi Market partnered with Koi Care Kennel to form Koi Care Kennel Wholesale Inc., establishing a strategic East Coast arm of the renowned koi health product manufacturer. The partnership aims to provide quicker delivery of Koi Care Kennel's FDA-approved products, such as its acclaimed flagship product, KoiZyme, and other premiere koi health care products.

More recently, Koi Market became the official Long Island distributor for Aquascape Inc. As a new Aquascape distributor, Koi Market is set to offer Aquascape's products to contractors and Certified Aquascape Contractors (CACs) throughout the New York area.

Lastly, Koi Market has partnered with Al Schule and his team at Sound Shore Ponds, who will take charge of all pond construction and water feature projects. This will allow Koi Market to focus on other vital aspects of the business, continuing its trajectory of growth and innovation.

For more information about Koi Market Aquatic Nursery & Bonsai, visit www.koimarket.com or call 516/809-6771.



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Aquatic Nutrition Inc., manufacturer of Blackwater Premium Koi & Goldfish Foods announces the availability of 20 lb. bags for their award-winning Ornamental Koi & Goldfish foods. This includes Blackwater Gold-N Professional, Blackwater Maximum Growth, Blackwater Color Enhancing and Blackwater Cool Season Diets.

Joe Pawlak VP of Aquatic Nutrition Inc. expressed his optimism about the new offerings "Our customers asked for it and we listened; we believe this will be a great addition to our line of Koi & Goldfish Foods".

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