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A Lotus Love Affair

An ode to the popular,
magical aquatic plant p.36

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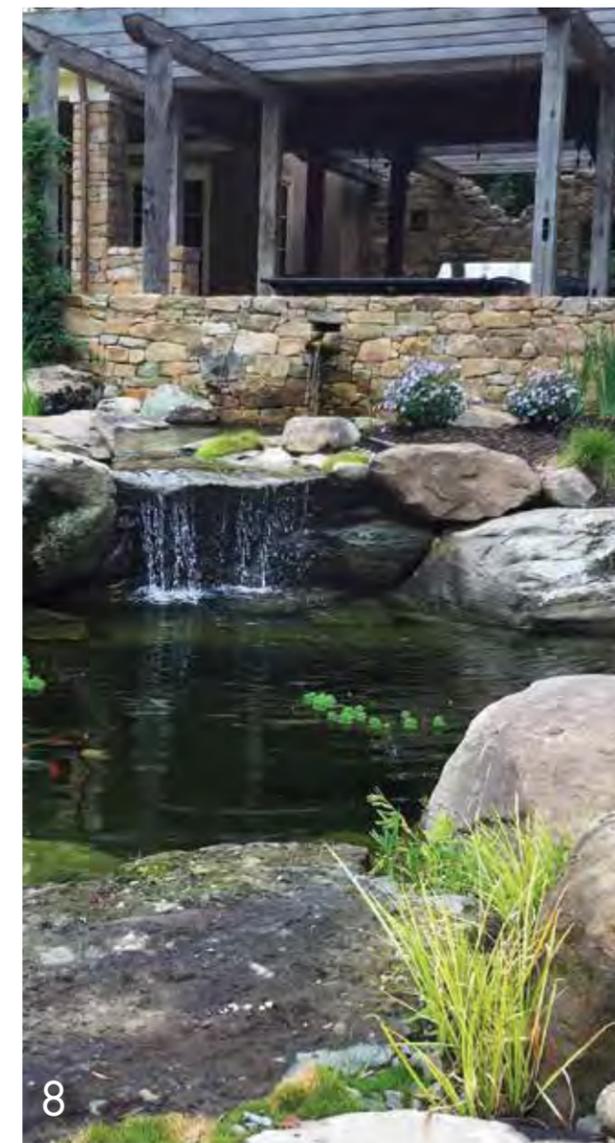
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FEATURES

8 It Takes a Village POND CONSTRUCTION

You've probably heard the phrase "herding cats." We've never literally had to herd any feline friends, but we imagine it's akin to what **Brian Buchholtz** and his team had to do on a large, complex construction project in Chester County, Pennsylvania. Coordination, communication and attention to detail were essential to ensure success as they contended with landscape architects and a wide range of other contractors.

15 Green or Mean?

Call it what you want — slime, sludge, gunk — but avoiding excessive algae growth is a common goal of all pond owners. **Carolyn Weise** of Ecological Laboratories explains the pros and cons of polyquat algacide for algae control. Is it right for you?

20 Pondemonium 2017 Recap

Aquascape's annual conference in Chicago has become a staple of the pond and water-gardening world. **Jennifer Zuri** has a rundown of this year's activities, along with a photo collage. If you missed this year's event, check out her report to see if Pondemonium 2018 belongs on your calendar.

23 Disappearing Water Features

Bubbling urns, vanishing streams and other disappearing water features are all the rage these days. **Shane Stefek** provides a comprehensive look at why these features are so popular, how to install them and what you should do to make a major visual impact without construction and maintenance-related headaches.

30 Functional Framework

Designers often get caught up in the visual aesthetics of pond design, and for good reason. But if you sacrifice function for form, Mother Nature and other factors could turn your masterpiece into misery. **Kent Wallace** is back with a look at some do's and don'ts of functional formal-pond design.

36 Lotus Love Affair COVER STORY

Kelly Billing is a leading industry expert on water gardening, so chances are, if it grows, she can tell you all about it. In this issue, she profiles one of her personal favorites — the lotus. She recounts her history with the popular plant and shares some insider tips on how to get the most enjoyment out of them.

45 Pond Renovation for Accessibility

We all know that regular pond maintenance is important, but — like people — the oldest ponds need a special level of care to ensure functionality and safety. **Demi Fortuna** tells the story of an elderly client's 40-year-old pond and the steps his team took to renovate it and restore its accessibility and beauty.

50 The WOW Factor LANGUAGE OF KOI

Has a unique-looking koi ever stopped you in your tracks, leaving you wondering how on earth it came to be? **Joe Pawlak** calls this the "wow factor," and as president of Blackwater Creek Koi Farms, he's experienced this a time or two. Learn why you might want to jump at the rare chance to own one of these treasures.

56 Budding Blooms

Marc Marrero and **Matt Billing** were two of the youngest attendees at this year's IWGS symposium, representing the next generation of the industry. Marc's captivating words and Matt's stunning photos create a one-of-a-kind recap that can't be missed.

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Upcoming Events

2017

October 29 - November 3
International Pool | Spa | Patio Expo
Orange County Convention Center
Orlando, Florida
www.poolspapatio.com

November 8 - 9
Irrigation Show
Orange County Convention Center
Orlando, Florida
www.irrigationshow.com

2018

January 9 - 11
Landscape Ontario
Toronto Congress Centre
Toronto, Ontario
www.locongress.com

January 10 - 12
MANTS
Baltimore Convention Center
Baltimore, Maryland
www.mants.com

January 15 - 17
MGIX
Greater Columbus Convention Center
Columbus, Ohio
www.mgix18.com

February 20-23
Water Garden Expo
Heart of Oklahoma Expo Center
Shawnee, Oklahoma
www.wgexpo.com

August 14-16
IGC Show
Navy Pier Festival Hall
Chicago, Illinois
www.igcshow.com

August 22-26
Pondemonium
Q Center
St. Charles, Illinois
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Publisher's Perspective

Moving Right Along

It is hard to believe that this is the last issue of 2017. Where has the time gone this year? It seems like we were just wrapping up our overwintering cover story ("Chill Out!" January/February 2017) from last winter. And here we are, bracing for the end of this year's pond season. Before we get ahead of ourselves,



let's take a moment to look back — for it's been quite a year!

One of the highlights for me this year was the big reveal of the 2016 Water Artisans of the Year contest winners at the Water Garden Expo in February. I was thrilled to personally congratulate the winners and kick off the new yearly tradition here at POND Trade. With the deadline for the 2017 contest having just passed, I'm looking forward

to compiling all the entries and presenting the nominees to this year's judging panel. We'll have a full rundown of this year's winners in the March/April 2018 issue.

We touched on a wide range of topics this year, from lighting and lilies to spillways and shopping tips. Our 2018 editorial calendar is filling up, but as always, we love hearing from our readers about how we can maximize the value of POND Trade.

We are pleased to wrap up 2017 with another jam-packed issue for your reflection, reference and relish. You'll definitely want to check out 2016 Water Artisan of the Year winner Demi Fortuna's article about renovating a 40-year-old pond. He had to contend with not only the age of the pond, but also some complex accessibility issues in order to restore its beauty. Also, Kelly Billing is back with a lotus "love story" that might instill in you a greater appreciation for the popular aquatic plant. We were also thrilled to have Kelly's son Matt as a first-time photo contributor for our IWGS symposium wrap-up. Finally, if you are a koi retailer, you won't want to miss Joe Pawlak's piece on rare, extra-special koi varieties. Even if you don't sell koi, you might find yourself adding a few of these to your shopping list.

As the year and pond season come to a close, we are grateful to be a part of such a vibrant and supportive community. Regardless of what else might be going on in the news or our personal lives, it's comforting to know that the pond and water gardening industry is always here, offering us solace and serenity.

Happy PONDering!



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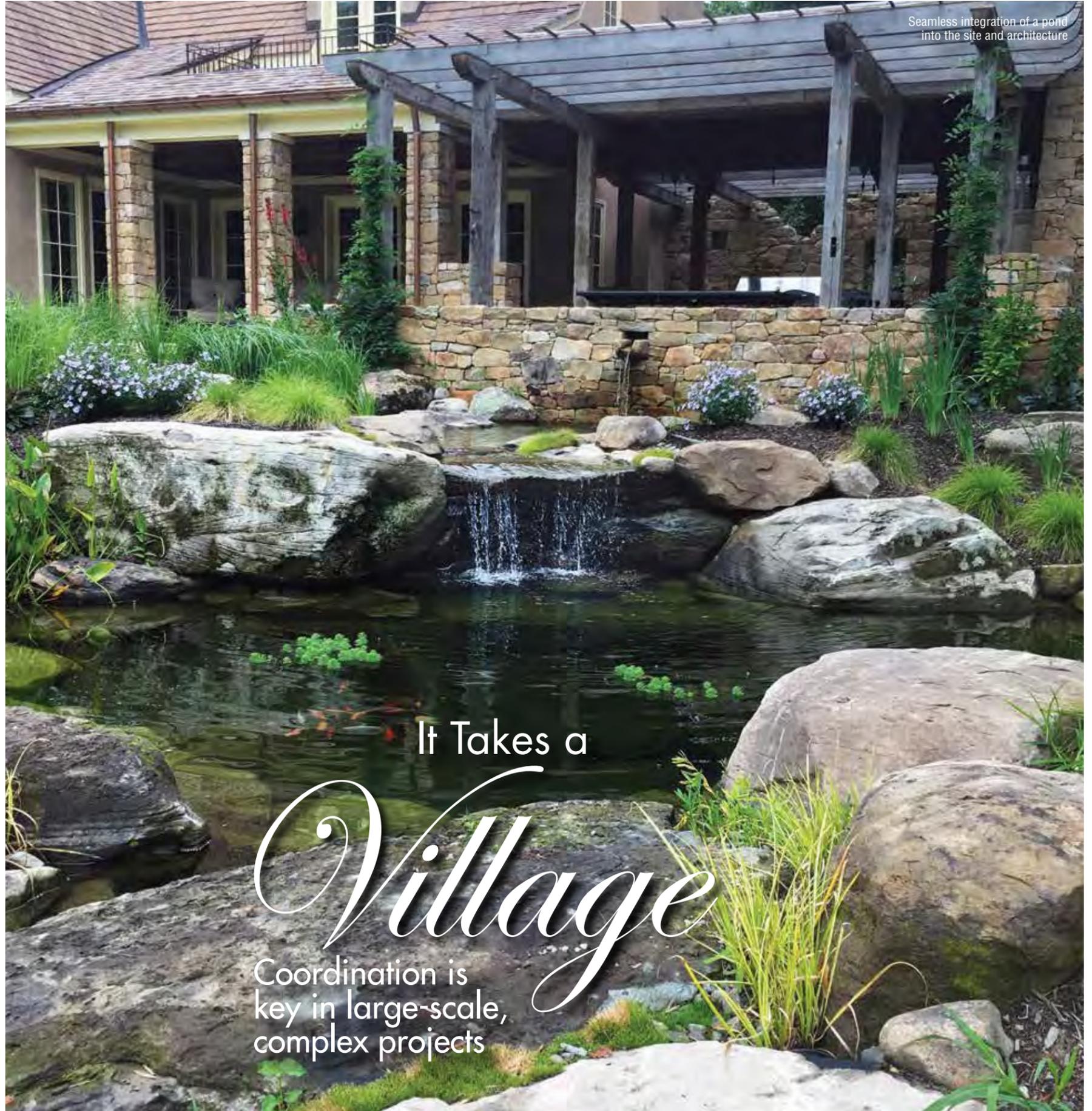
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Aerial view of the multifaceted, complex backyard renovation project



Seamless integration of a pond into the site and architecture

It Takes a
Village

Coordination is key in large-scale, complex projects

Pond Construction

by **Brian Buchholtz**,
PondWorks

As designers and builders of water features, we often encounter complex, challenging tasks requiring the seamless integration of our work into a larger overall project. These challenges can range in scope from unrealistic design concepts or desires to unknown site restrictions, and from budgetary restrictions to bad project management by other contractors and subcontractors. To mitigate these challenges, we feel it is critical to maintain clear communication with fellow designers, consultants, subcontractors and vendors throughout our involvement in order to help the overall project — and ultimately the client.

In conjunction with clear lines of communication, we feel that careful planning and adherence to the plan are essential in making certain that everything is executed in a timely manner and all parties are on the same page. The initial vision of what the final project could be can easily be thwarted by any number of poor decisions, scheduling mistakes and miscommunica-

tions. Being open and clear with the project's team members saves both time and money.

Educating the Team

This begins with educating the client, other professionals, contractors, subcontractors and vendors involved in the project.

Know your company's limitations and the limitations of the materials and products being installed. It is better to under-promise and over-deliver.

Providing ideas, guidance and suggestions is our responsibility as the water feature specialists and will lead to a much more successful end product. Another key that cannot be stressed enough is to know your company's limitations and the limitations of the materials and products being installed. It is better to under-promise and over-deliver.

The water feature plan, whether it

is your company's design or that of the lead designer for the project, sets the stage for all the players involved to be aware of the end goal. Accurate site plans, details and plumbing diagrams — including the specification of the correct equipment — are essential. This stage of planning not only helps to ensure a successful result, but it also aids in overall efficiency, ordering, sourcing of materials and scheduling. Your project team will also benefit from an understanding of the big picture as well as the individual components that make up the project. Having a poorly conceived plan or inadequate equipment included in the feature design can cause headaches before and during construction, leading to callbacks after your company has pulled off-site and eating away at your profits. Do it once. Do it right. As long as your company is communicating with the project team and the client throughout the process and living up to your word, the clarity will be appreciated by all parties.

Ponds and Constructed Wetlands

This year, we were asked to take part in a project that involved constructing a series

of naturalistic ponds, troughs, scuppers and a constructed wetland bog to tie together an extensive backyard renovation. The overall site plan was designed by a landscape architect; the water feature detailing, construction and equipment specification were left to our discretion. The designer, general contractor and client turned to us to create a feature that was substantial and impressive while blending seamlessly among the disparate elements involved with the project and the site.

The landscape architect oversaw the design and development of the site on behalf of the client. There was a general contractor tasked with the architectural components and overall day-to-day operations throughout the site. There was also a pool contractor, two masonry contractors tackling the extensive stone walls and the work scope of the pool deck, an electrical contractor and our staff, which served as the water feature contractor.

The design intent was for us to create a

series of natural ponds that would be integrated into a sloping site between a new outdoor kitchen and living area and the custom pool and pool house. Rustic stone scuppers and a stone trough were integrated into the stone walls that were intended to look as though they were remnants from a structure hundreds of years old and long forgotten. This aesthetic is consistent with the vernacular architecture of the historic farms and barns in this part of Chester County, Pennsylvania. As the water course



We incorporated boulders, stone troughs, scuppers and plumbing (left) into the mason's stone walls. Filtration and circulation equipment (above) is in the final stages of installation.



The water feature (top, left) accompanies people walking from the house to the pool and pool house. An overall view (above, right) of a multifaceted complex backyard renovation project is shown. The bog (bottom, left) finishes the water feature, acts as a filtration component and transitions into the pool deck. A custom stone scupper (bottom, right) penetrates the wall, emptying into a stone trough.



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Coordinating space for equipment, materials and access while maintaining the construction sequence was a constant issue.

flowed from the outdoor living area down to the pool area, it terminated into a sprawling constructed wetland that carefully mingled and integrated with the limestone pool deck.

Planning and Execution

Over the winter, we carefully began planning what became a series of three cascading ponds culminating in a wetland filter. The ponds would have large fieldstone boulders, waterfalls and native aquatic plantings that naturally blended into the surrounding landscape. The stone troughs were to be core-drilled and integrated into the stone walls as rustic scuppers. After specifying the pumping and filtration system equipment, an extensive plumbing diagram was created for the area allotted in the basement of the pool house. We provided the precise layout drawings indicating where pipe penetrations should be cast into the basement's concrete-foundation walls. As the final design and detailing were being completed for the outdoor living area, pool and pool house, we coordinated our water feature components, detailing and pricing in order to integrate the project as a whole.

As construction began on-site, we had a plan in place and knew how much material we needed, where it was going and how long it should take to install. As rough grading activities occurred, our pipe trenching and

installation took place directly alongside the pool contractor's piping, stormwater piping and domestic well-water piping, as well as a gas supply line and myriad electrical conduits.

Rough plumbing can be installed months before the shape of the water feature will even be realized on-site. Our plumbing system utilized a surge tank to make up the hydraulic differences of the systems being utilized and to provide maximum control of each component of the entire water feature. We were careful and intentional in pitching the distribution piping down to the surge tank to allow for proper winterization. Thoughtfulness and attention to detail are critical to a successful installation, from both a construction and operation-and-maintenance standpoint.

After pulling off-site for many weeks, we remobilized to start pond and bog excavation directly adjacent to the pool contractor, wall mason and pool-decking mason. We integrated fieldstone boulders into the mason's stone walls to ensure the finished product looked like it was always there. When rain or inclement temperatures limited work on-site, we tackled the extensive pumping and filtration system in the basement of the pool house. We always make an effort to provide a level of professionalism in all aspects of our work, including the compo-

nents few people see or interact with. A well thought-out and executed plumbing and filtration system can be just as aesthetically pleasing and functional as any other portion of the water feature.

Equipment & Materials Chess

As the weather improved in the spring and summer, with the completion date looming over us, all trades were fully mobilized on this residential property, resulting in extensive daily coordination of equipment, materials and manpower on-site. With each trade having up to six people present along with supporting machines, materials and deliveries, clear communication was essential in order to maximize efficiency while being respectful of others. Thanks to our staff and the fellow contractors on-site, we feel that this complex project and installation went according to plan. We provided a product for the client that feels as though it has been there for many years, evolving from the site naturally.

We all should be so lucky to work on a project like this; we are exceedingly appreciative for the opportunity to take part in this job, and we look forward to our next complexly-coordinated endeavor. ☞

About the Author

Brian Buchholtz

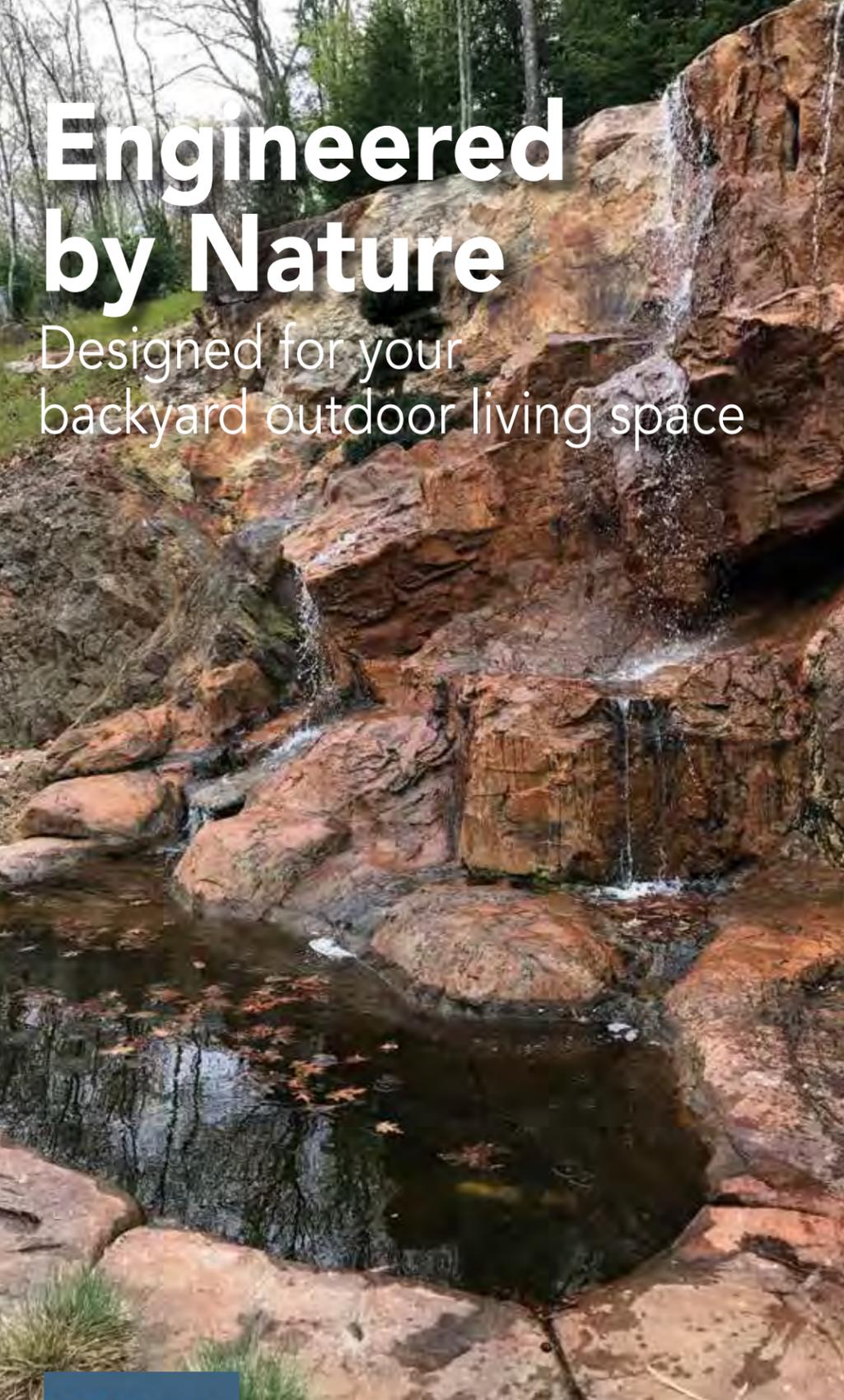
is the owner and founder of PondWorks, which is based in Pottstown, Pennsylvania.

PondWorks designs, builds and maintains ponds and water features throughout the mid-Atlantic region, ranging in scope from residential ponds and pools to large commercial water features and fountains. Brian is a Bio-Nova partner and continues to enhance his expertise in designing and constructing natural swimming pools. He is an active outdoorsman who enjoys hiking and camping, which provide inspiration for his natural-boulder ponds and water-feature designs.



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by **Carolyn Weise,**
Ecological Laboratories Inc.

A common challenge we have all faced is finding a suitable way of removing algae in decorative fish ponds that will be safe for both fish and aquatic plants. For many years, ponds had come to depend upon copper-sulfate to clear green water and string algae in farm ponds. However, we soon learned that carp have a low tolerance level for copper, a heavy metal that can be toxic in low concentrations. Like other heavy

metals, such as mercury, it is a bioaccumulation. This means that once it is ingested by an organism, it remains in that organism for an extended period, and in many cases, for life. Any additional ingestion will increase the level that is already present in the organism, eventually reaching toxic levels.

Interestingly, for terrestrial organisms, this level is determined primarily by the ingestion of food and water (i.e., by pets and other wildlife visiting the pond), but for aquatic organisms, if the copper is in suspension as ions, it may be ingested during the respiration process. This is exactly the case with

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fish, bacteria and other growth within the pond. In the case of fish, it causes increased mucus production on the body and gills, where it eventually interferes with the respiratory process by blocking the absorption of oxygen. The fish seem to die for no apparent reason, unless you examine the gills carefully using a microscope.

Killer Copper

After mercury, copper is the most toxic of the heavy metals. I found it interesting that copper's toxicity level is greatly influenced by water hardness and pH. As hardness and pH increase, the toxicity of copper is actually reduced. Copper is extremely toxic to most invertebrates and the juvenile forms of most amphibians.

This subject was studied in the July 2007 issue of the Journal of Environmental Toxicology and Chemistry. "Northern leopard frogs (*Rana pipiens*) were exposed to environmentally relevant concentrations of copper in water (control and 5, 25 and 100 mcg/L, as CuSO₄) in a static renewal system for 154 days from post-hatch state to metamorphosis. Tadpole survival, swimming performance, percent metamorphosis, time to metamorphosis and survival during and time required for tail resorption were negatively affected in the 100-mcg/L treatment." (Chen, et. al.)

Available toxicity data on amphibians indicate that copper 96 h LC50 values calculated in tadpoles ranged from 0.04 to 5.38 mcg/L. Studies of other aquatic organisms show 96 h LC50 values ranging from 0.06 to 6.68 mcg/L. Representative toxicity levels for most snails is 8 to 41 mcg/L; for Cladocerans (including *Daphnia*) is 5 to 213 mcg/L; and for amphipods 8 to 87 mcg/L.

Although the mayfly is fairly sensitive to copper, the majority of insects that have aquatic larval stages are tolerant — most notably damselflies and dragonflies, which are expected visitors at any aquatic installation. These odonates can store heavy metals in their exoskeletons, where it remains harmless.

The inhibition, reduction or elimination of any member group of the aquatic food chain will have definite, negative effects on the overall health of the ecosystem to a lesser



Algae are oxygen-producing plants. During daylight hours, oxygen is captured by algae masses, which float to the surface (above); at night, photosynthesis reverses itself, taking in oxygen, and these masses sink to the bottom. Blackbirds may contribute to the problem by depositing their waste "sacks" in the pond (top left), while dragonflies (bottom, left) are an integral part of the ecosystem and depend on a non-intrusive chemical solution. (Photos by Carolyn Weise)

algae elimination. The rest of the job rests on the shoulders of the pond maintainer.

It is a chemical, so precautions are necessary. Fish could die from an overdose if too much of the chemical is added to the pond. Either an incorrect measurement of the pond's volume or an incorrect dosage added to the pond at time of application can be fatal. Don't guess.

Polyquat can also be dangerous if there is inadequate circulation at the time of application. Though this generally will not cause fish death, it can cause burns if the application allows hot spots to occur in the pond.

Similarly, hot weather with high fish volume and heavy algae growth can create a precarious situation. The removal of algae would result in increased organic waste that spikes biological oxygen demand to biodegrade the dead algae. This can result in reduced availability of dissolved oxygen for fish. The largest fish usually die in the early hours of the morning, because oxygen levels are lowest due to the lack of photosynthesis and the increase of oxygen consumption by plants and fauna over the course of the night.

What About Bacteria?

According to an April 2016 article in

the Chemical Engineering Journal: "The nitrifying bacteria are of great concern to ponds. The results of studies on the toxic effects of copper are quite surprising. Copper at low levels actually stimulates activity in *Nitrobacter*. At levels up to 0.50 mcg/L, the copper ion has no toxic effect on *Nitrobacter*. Instead, the stimulatory effect is readily apparent. Well, this is not true of *Nitrosomonas*! The growth of *Nitrosomonas* is greatly inhibited (about 60 percent) by copper concentrations of 0.20 ppm." (Skinner & Walker)

Using microscopic observation here at Ecological Laboratories, we found that at normal and double the application rate, bacterial activity was not noticeably impacted by the polyquat algaecide. When applied to the pond, bacteria tend to attach themselves to any surface area and create a biofilm to protect themselves from any harmful changes and conditions in the environment. However, it is recommended to allow time between the bacterial and polyquat applications.

So, we have concluded that at these dosages, the effect on heterotrophic and autotrophic bacteria is minimal to slightly observable and not sufficient to eliminate or damage existing bacteria in a pond. On

the other hand, when polyquat and bacteria are added to the pond simultaneously, the polyquat will, by nature, totally surround each bacterium in the water column.

How Does Polyquat Work?

According to the patent issued for polyquat algaecide, “the polymeric poly-electrolytes as disclosed herein are not only very effective algaecides but, in addition thereto, are substantially nonfoaming and nonirritating. They are particularly useful in such diverse applications as the control of algae in cooling towers, holding ponds, swimming pools and similar applications where an algaecide having such properties is mandatory, or at least desirable.”

It was the natural next step for adaptation and usage of polyquat algaecides in decorative and fish ponds, since algae growth is the top complaint from consumers. As the name implies, it is a polymer-based chemical that is short-lived but enwraps the life forms in the aquatic environment. At a concentration rate of



Use plants in a natural setting to take up excess nutrients. (Photo by Carolyn Weise at Castle Garden in Arcen, Netherlands)

up to 5.4 percent, aquatic plants and fish are not affected, but algae have a different cell structure. The wrap will completely cover the stems and leaves of algae, limiting oxygen and gas exchange and making

it unable to extract nutrients. Generally within 24 to 48 hours, the algae plants will die. Polyquat is 100 percent biodegradable in the application time frame and can be reapplied as per the label.

That’s the good news. The danger of using polyquat algaecide is only in misjudging the dosage or creating hot spots when adding it to the pond. It is important to follow the directions on the label, because too little will not achieve the desired results, and adding too much may create a condition where the fish become targeted by the polyquat. In the absence of sufficient algae, the polymer will wrap the fish’s gills and cut off their ability to breathe properly.

Proportionally, it will attach to whatever is providing the most surface of the correct charge, whether it is algae, bacteria, sediments or something else. It will attach to bacteria at about the same speed at which it attaches to algae. Less of it attaches to bacteria, because if there is a lot of algae and sediment, there is less surface area competing for the polyquat’s attention.

It is not a situation where one is preferred over the other, and the polyquat won’t attach to bacteria until all the algae is gone. It’s like spraying the side of a house with windows. More water will be on the siding than the windows, simply because there is proportionately more surface area of siding, not because the water has any preference for siding over windows.

Read the Label

The active ingredient in two of the most popular polyquat algaecides today is Poly [oxyethylene (dimethylimiunio)-ethylene (dimethyliminio)-ethylenedichloride]. These are EPA-registered products. Any chemical that contributes to the elimination of a living entity (in this case, algae) must be registered with the EPA. The EPA issues the caution not to use polyquat algaecide with crustaceans, including shrimp, crabs and lobsters. The active chemical interferes with the production of chitin, which will weaken their external

defense. Polyquat is not approved for use with fish intended for human consumption. The FDA, not the EPA, must authorize and approve anything intended for human consumption.

There is also a caution on the label not to use the algaecide without adequate aeration. Polyquat algaecide is not an oxygen-grabber. Algae are oxygenating plants. If the pond has sufficient algae growth to warrant treatment, you will be removing the oxygen producers and creating a sudden increase in organic waste. Therefore, there will be an increase of oxygen usage in the pond.

Naturally, there is always an assumed responsibility of the user when any chemical is added to the pond. Directions must be followed, and dosages must be accurate. The pond volume leaves little room for inaccuracies. But, there is no half-life for this chemical, and it contains no heavy metals. It does not eliminate the beneficial bacteria from the pond, and that which may be harmed has shown that it will quickly recover. And, since it

will completely biodegrade in the pond and doesn’t have the toxicity potential shown by copper-based products — causing them to die suspiciously from no apparent cause — polyquat algaecides are cleaner and safer for the pond and our environment, hands down. ☞

About the Author

Carolyn Weise has made

frequent contributions to *Water Gardening* and other pond publications over the years. She has held prominent roles in a number of industry organizations, including the Mid-Atlantic Koi Club. She is a member of Cape Coral Friends of Wildlife, the Southwest Florida Sportsman’s Association and the author of *ABCs of Ponds*, *A Pond Primer*.



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Recap: Pondemonium 2017

Annual industry event explored 'purpose-driven' business

by **Jennifer Zuri**,
Aquascape Inc.

Hundreds of contractors, retailers and distributors ventured to the headquarters of Aquascape Inc., from Aug. 23-27 to attend Pondemonium, the water feature industry's largest training and networking event. The theme, "A Purpose-Driven Business," was chosen to address a variety of situations that business owners and employees face when installing and selling Aquascape ponds, waterfalls and fountains.

The event kicked off Wednesday with a pre-Pondemonium Leadership Boot Camp designed for business owners and managers.

Running concurrently was a DiSC Leadership Workshop for anyone interested in learning how to deal with different personality-based leadership traits. Each participant was given an in-depth personality assessment.

Thursday was all about getting your hands dirty with two separate hands-on learning sessions: a large recreational pond build for Certified Aquascape Contractors and hands-on training for foremen and those new to water-feature installation. A touring trip to Chicago was a third option for those who wanted to keep their hands clean and do a little sightseeing in the Windy City.

Early-morning "Cup of Coffee" sessions started

the day on both Friday and Saturday. These roundtable discussions featured a variety



of topics that were led by industry experts from around the world. Topics included water-feature construction, marketing techniques, human

resource practices, accounting principles and more. Many sessions were moder-

ated by Certified Aquascape Contractors who are experts in their featured topic area.

After the roundtable discussions ended, Greg

Wittstock, the owner and CEO of Aquascape, gave his inspiring annual Pondemonium keynote address to a packed room of attendees who were ready to take their business and installation skills to the next level. Classroom sessions followed and focused on construction, retail and marketing topics.

Saturday awoke to another round of Cup of Coffee sessions, followed by an informative keynote presented by Ed Beaulieu, vice president of field research and contractor development, and Heiko Bleher, a German researcher, author, photographer and filmmaker best known for his contribution to the exploration of fresh and brackish water habitats worldwide and the discovery of many species of fish and aquatic plants. Another round of classroom sessions followed, including a species-specific biotopes seminar led by Bleher.

An awards ceremony and the annual Pondemonium Blow-Out Bash wrapped up an eventful week filled with training and networking opportunities. Aquascape's top 20 contractors and top 20 retailers were awarded the popular "crazy-legs" frog trophy, while four individuals received the coveted annual specialty awards. Certified Aquascape Contractor of the Year was awarded to April and Sean Frost of NatureScapes in Grafton, New Hampshire. Businessman of the Year was awarded to Matt Griffin of PrimeLawn in Porter, Texas. Artist of the Year went to Tussey Landscaping LLC in Hollidaysburg, Pennsylvania, while Conservationist of the Year went to Kathy Smith of Tropical Water Gardens in Deland, Florida.

Pondemonium 2018 is slated for Aug. 22-26. For more information, visit www.pondemonium.com.



Lynn Frisbee (top, right) of Frisbee's Landscaping, Ponds and Patios participates in the Certified Aquascape Contractor advanced pond build. More than 400 water feature professionals (above) attended Pondemonium 2017 to enjoy custom training and networking with peers.



Brian Helfrich (top) and Ed Beaulieu (middle, right) of Aquascape led an advanced recreation pond build for Certified Aquascape Contractors. Greg Wittstock, (middle, left) the owner and CEO of Aquascape, kicks off Pondemonium with his annual keynote address. Water feature business owners and managers (bottom) attend one of two leadership boot camps offered during Pondemonium 2017.

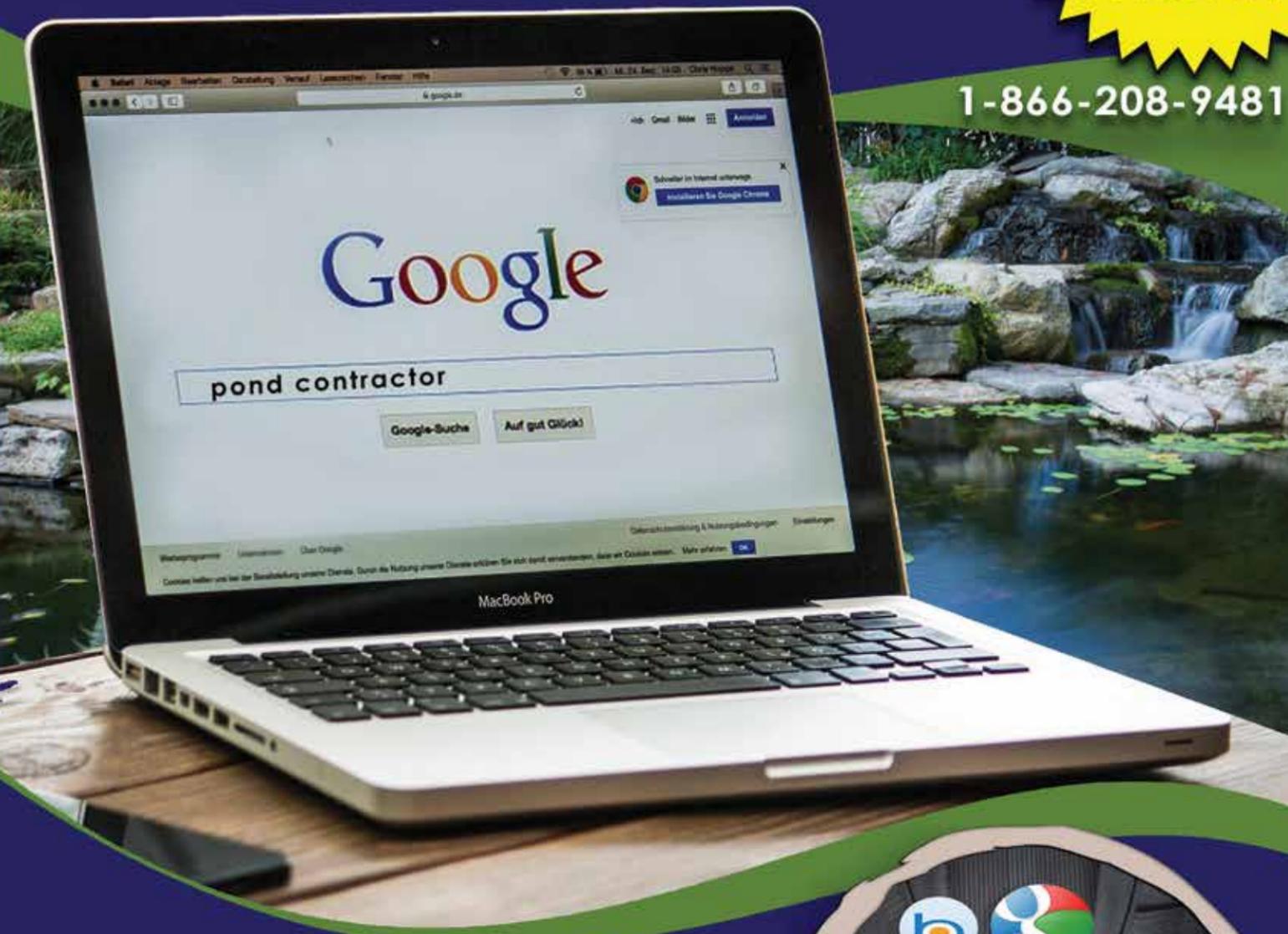
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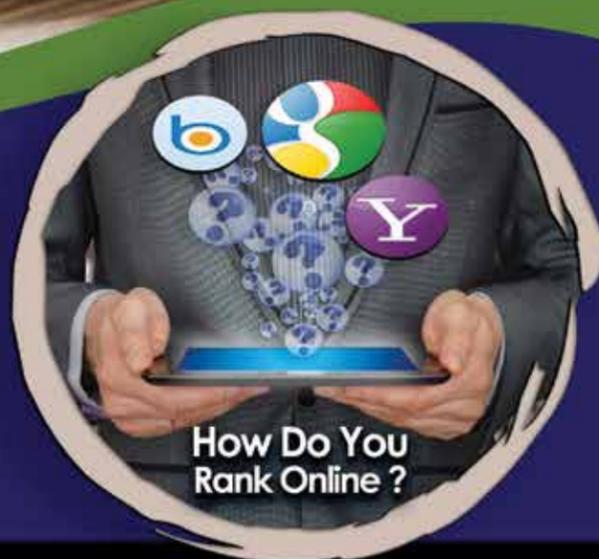
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| Disappearing Features |



Add a splash of color! Glazed urns are a fantastic addition and come in endless sizes, shapes and colors to please your client. Designed and built by Peyton Stefek (14 years old) for Water Garden Gems

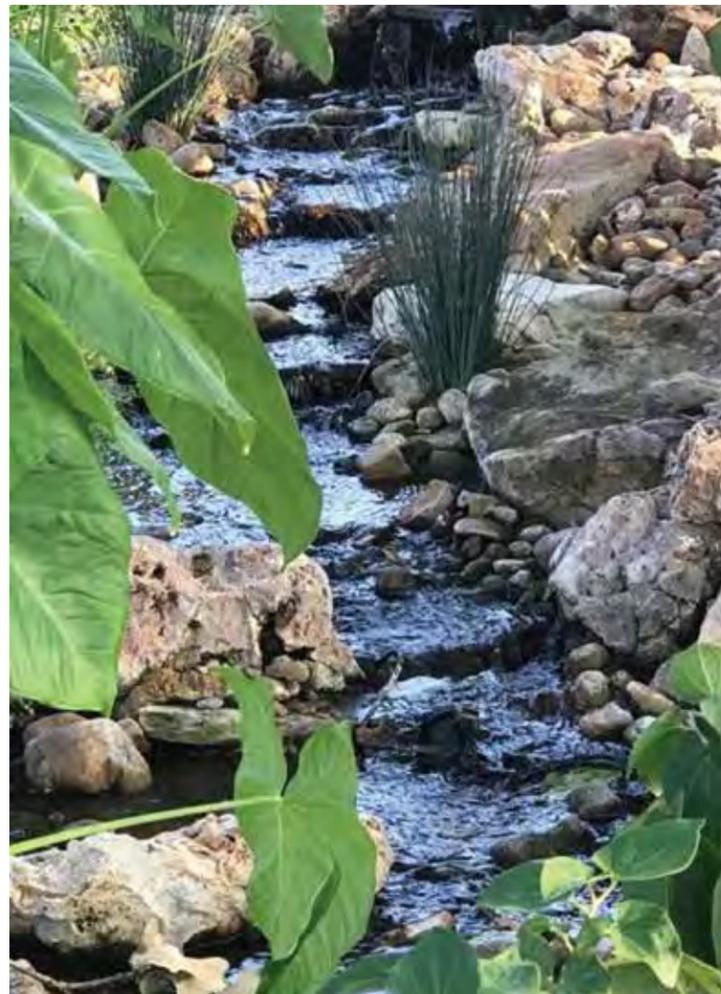
Now You See It, Now You Don't

The wow factor of disappearing water features

by **Shane Stefek,**
Water Garden Gems

We've all seen them, and they continue to grow more popular — the waterfall that disappears into a bed of river rock; the bubbling urn that entertains with a mix of brightly glazed color and dancing, living water;

the soothing stream that flows along a pathway and out of sight below a bridge. The disappearing water feature has a wow factor and intrigue about it that is hard to replicate with other designs. "Where does the water go?" is commonly heard from our customers as they stand amazed in front of one of the many disappearing water features we have on display.



Artistry shines in a variety of ways with disappearing features. A massive copper vase feature uniquely accents this home (left) built by Water Features of Texas. A natural, calming Texas Hill Country stream softened with aquatic plants completes the customer's backyard oasis (right) built by Vivid Outdoor Solutions.

Why Build Them?

These features are common in commercial and public settings and are becoming a favorite choice of homeowners for numerous reasons, from their low maintenance to their small footprint to their uniqueness and ability to integrate a variety of materials. For professionals, they can be the perfect answer to a challenging situation, a great landscaping add-on for existing clients or a simple way to create a wow factor in a very short amount of time. But to truly excel with these features, you must know all your options and when to use what equipment, from what the customer sees on the surface to the workings underneath that should never be seen.

Your first challenge at hand is no different from that of installing any other water feature — to offer the perfect visual that matches the purpose, backdrop and feel of

the area. For example, bubbling urns are great if you are looking for a quiet visual and a splash of color. These fit aesthetically in gardens, commercial settings, contemporary buildings and where sight is more important than sound. Other common water features like basalt columns, drilled rock and concrete fountains plumbed to be disappearing features are similar in that they have locations that are ideal for them, such as circle drives, courtyards and meditation areas. However, if you are working in a turf yard or a grove of trees, these will conflict with their natural surroundings. The waterfall or meandering stream that drops the water into a bed of gravel and disappears right in front of your eyes is more the ticket in natural settings, and your choice of water feature dictates the equipment and hydraulic designs needed. Once you have visualized the proper feature, you must equip it correctly.

The Equipment Makes the Project

There are endless options on the market for disappearing feature basins that come in a variety of shapes, sizes and weight limits. An EPDM liner with a simple reinforced metal grate can be situated above the pond to hold the layer of rocks that hide it — a tried and true, preferred method in large or more complicated features. Then there are Aquablocks and pump vaults that can be added if desired to make accessing the pump easier. With so many options, how do you know what to use?

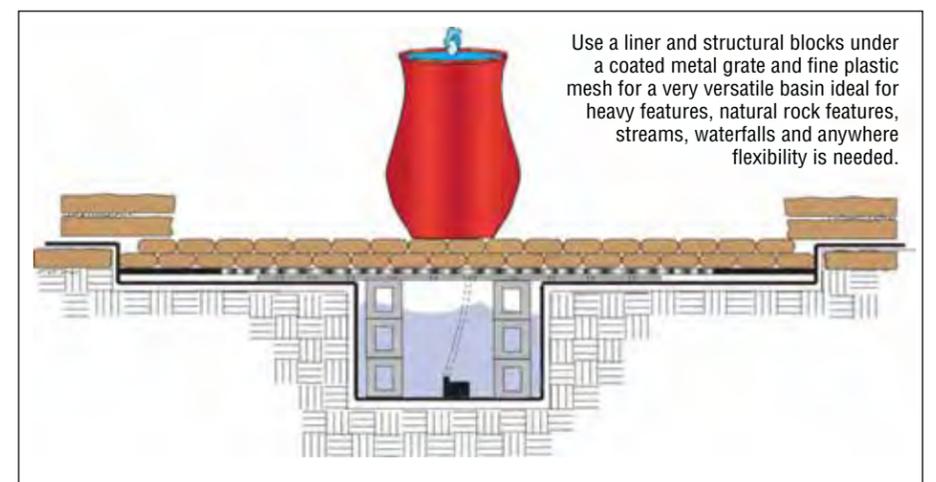
The answer is dependent on the feature. It's part math problem, but the rest is structural common sense. Always err on the side of caution. First, you have to know how much water is going to be displaced when you plug in the pump. Make sure the basin will hold two to three times that amount. For urns, basalt columns and the sort that

are small, lighter weight and do not displace much water, prefabricated basins can work great as long as they are on solid ground that is not subject to common movement that causes them to lose their level state over time.

Alternatively, a liner system that will flex and flow with ground shifting will work. Just use reinforced grating above the water level to hold up the feature. Be sure that your rock or media of choice over the pool is large enough so that it cannot fall into your water basin and cause a potential issue with your pump. For this, we love using ¼-inch heavy plastic mesh that will last the lifetime of the feature to keep pebbles, leaves and anything else from falling through. Regardless of your chosen basin design, always install an automatic float valve to fill the basin back up so you always have plenty of water and your pump never runs dry.

Choose the Right Pump

Next, your choice of pump is not a complicated one, but an important one. You must realize that it is not easy to get to the pump, no matter what your design is. It will



require, at the very least, moving a couple of rocks to uncover the vault or the trapdoor, or, at most, cutting electric cords and possibly dismantling part of the feature to access the pump. We want to install a pump that is going to churn and burn maintenance-free for a long time. When I consult with customers on this, I always recommend that they absolutely do not skimp on this particular item, as you always get what you pay for. Small features can use magnetic drive

pumps, but make sure you choose a brand that can pass particles and has a strong impeller. In my experience, Laguna MaxFlow pumps are great for these features, as they not only have nearly indestructible impellers, but they are housed in a large filtering basket to keep particles from getting to the pump, increasing the surface area of suction. In larger and natural features where some sand and larger particles could get into the basin, I prefer horsepower pumps made by

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Creating a weeping spring limestone wall, this amazing feature looks completely natural and creates a maintenance-free water feature for the client. (Designed and built by Water Features of Texas)

Matala and Performance Pro, which have a strong record of performance and can pass the particles without causing damage to the impeller.

Always use pumps that have heat sensor shutoffs so they will not overheat if the basin runs dry. Regardless of size or design, you need a pump that can push water consistently without needing a prefilter to protect the impeller, as we do not want to put a filter down in the basin that would require routine cleaning.

Filtration Finesse

With disappearing water features, we are not interested in biofiltering the water to keep it healthy. Instead, we are interested in water clarity and algae control. How we accomplish this is again determined by the feature design and the client's desires. Do we need equipment or additives?

With some features, accepting the added cost of equipment to control algae up-front is the right thing to do. Ionizers help control algae growth on rock surfaces and can be very helpful when installed inline to keep your feature looking fresher and decrease the wet-rock algae visual. A UV clarifier can be a nice addition if there is pooling water, where the suspension green-water algae can take away from the beauty of the feature. These provide specific algae control without



A large 30,000-gph water feature provides multiple waterfalls that crash into a beautiful, flowing stream that disappears at your feet. Water Features of Texas brings to life every sight and sound you desire with one disappearing water feature.

maintenance on the client's part.

Most commonly, though, we do not need these filters and can simply use additives to treat algae issues. We at Water Garden Gems love 35-percent hydrogen peroxide. Hydrogen peroxide destroys organics on a cellular level, creating a fantastic option for complete algae control regardless of the feature design. It is also odorless and safe for animals above the surface to drink, as opposed to some algaecides, chlorine, bleach or vinegar. This method, while great for nonliving water features, is not recommended where fish or aquatic plants live. However, it can be an amazing answer for some disappearing water features, and your client will love you for providing them with magic in a bottle! Granular oxi-algaecides can be very

effective and easy to use on larger features and streams that have great surface mass.

Go the Extra Distance

When developing your design and offering for your client, you have to give them the answers to their algae issues before they arise. So, think ahead. In your design, take the plan one step beyond the drawing board and build a clean-out plan. These features inherently can be a problem to clean when the time comes for it, so make that task easy to accomplish.

Pipe in a drainage port and plug in the lower side of the basin that is easy to access to drain as needed. In larger features that have tubing coming out of the basin, install a diverter tee and valve inline so you can turn



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This cross fountain, built by a 15-year-old for his school, exemplifies how specialized disappearing features can be. Features can be perfectly tailored to the environment and the client's unique personality.

the valve and drain the basin without messing with the pump. Think about the leaves; skimmers are not installed in disappearing features. Leaves can be a problem, but there are solutions available if they are included in your design.

Always use sludge pellets. No matter what the feature or design, sludge will accumulate in the basin. This includes dead algae and decomposed biomass from leaves and other materials. The monthly use of sludge-removing pellets will keep the basin and feature cleaner and thereby protect your pump and your system from possible clogs and other issues as well. These can also eliminate the need for periodic cleanouts altogether.

Say Yes with Confidence

Disappearing water features are a great offering for your current and potential clients, and the possibilities for wowing are limitless. To do them

correctly, they require expertise in the design, which is no different from any other water feature. Give your customer something exceptional by choosing the right equipment for the specific job and giving them the extras to make their work easier and enjoyment greater. ☞

About the Author

Shane Stefek is the president of Water Garden Gems, a koi and pond specialty retailer outside San Antonio, Texas. Water Garden Gems has been a leader



in the koi and water garden industry for more than 25 years. Water Garden Gems annually hosts the longest-running koi show in Texas and is a premier supplier of imported Japanese koi and show-quality goldfish.

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Functional Framework

Do's and don'ts of basic formal pond design

by **Kent Wallace,**
Living Water Solutions

When designers don't pay attention to the needs of the system that keeps it healthy, Mother Nature tends to take their designs in a different direction. I'm still being asked to assess formal pond designs that are not optimal for live fish

SERIES:
Best Pond Practices

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

and plants, so I wanted to take an opportunity to go over some functional do's and don'ts of basic formal design and

why. These do's and don'ts also apply to garden designs, but I'd like to focus on the aesthetically formal system. These designs largely come from architects who, when designing chlorinated reflecting pools and formal swimming pools, don't have to consider anything but the visual image in their imagination and how it relates to the surroundings.

Function Over Form

When designing a living-water system, function over form should be the norm. That doesn't mean that an incredible aesthetic form isn't doable, but making it function properly should be taken into consideration. Function is about creating

a healthy home and life support system for the animals that live there. In addition to fish, those "animals" also include the bacterial colonies in the filtration system and the biofilm layers that form over every surface of the system in contact with water. This biofilm layer is comprised of multiple layers of different substances and bacteria, creating a community that serves as the foundation upon which surface algae grows. This is the natural, healthy coating that Mother Nature places over the surface to create the life-support system necessary for a healthy environment.

Because of this biofilm layer, it is pointless to waste a decorative finish on any surface below a few of inches of the water

line. When we talk about a balanced system, what we mean is a balance that we want to live with. Everything in nature is a balance, including the worst poisonous red algae in the ocean, the decomposing anaerobic sludge in a septic system or the sludge buildup in the bottom of a poorly designed pond. The ecosystem we are trying to build should incorporate the functions that push it toward the balance of a clean and healthy system — one based on an aerobic nondecomposition model. The decomposition portion of the system should be stored in the prefilters and biofilters waiting to be flushed out during maintenance.

Layout Determination

The first two considerations that should be applied to your design are how it will be oxygenated and how the system will stay clean. There have been many articles in this magazine and others that focused on oxygenating a pond, so the information is readily available. I'm trying to express the concept of not making it an afterthought in the design. In-pond oxygenation is usually accomplished with diffusers of some sort that create fine bubbles. Diffuser discs on top of bottom drains are common, and with undergravel systems, aeration tubing in specific areas is a good solution. Keep aeration away from the front of a skimmer face, as the bubbles inhibit the smooth flow of surface water and debris into the skimmer mouth. An oxygenated biofilter such as a moving bed, air-driven dilution reactor or shower filter is always a plus because you get real-time, continuous oxygenation without any in-pond disruption. Plus, they don't have to be placed on timers. Filters such as these are usually gravity-flow, and the plumbing design must be taken into consideration when using them.

The next consideration should be maintenance. You must determine how or where the discharge water will leave the filter area. This could be a sewer connection or flooded landscape, for example. If the filter area is in a room underground or inside the walls of a home, this issue must be dealt with in consideration of living space.

Outflow Circulation

Water should be removed from both



From top to bottom: A block for steps takes up most of the space. Return piping is located in the center of the wall instead of a corner or near the floor. Hard, right-angle corners leave small spaces for the fish to pass through. A small dead space is seen in one corner with no circulation.

the top surface and the bottom of the pond. Systems designed without skimmers allow surface debris to saturate and fall to the bottom where they are harder to deal with. Ponds also create a very thin, oily film on the surface. This film comes from fish waste and some of the ingredients in food, along with oils from plant material. If the surface is not skimmed properly, the water will always look a little dingy and never sparkle. One standard skimmer flowing 2,000 to 3,000 gph is more than enough for most average-sized ponds, but if the surface is broken up by steps, an island or a fountain, you may need two or more to keep the surface properly serviced, regardless of its size.

Designing a disappearing edge as a skimmer is very popular in formal designs for pools. This is always a maintenance problem with a pond, because the biofilm growth disturbs the clean edge and must be scrubbed clean regularly to keep the edge flowing properly. A disappearing edge also requires much more flow than the pond requires and is a waste of energy on a living system. Never tee skimmer piping together at the pond to bring water out to filtration as one pipe. Instead, run separate pipes for each skimmer and tee them together in the filter pit, so each line can be flushed and balanced separately. This is different from pool plumbing, where the common practice is always to tee multiple lines together under the pool.

Remove water from the bottom of a pond with bottom drains or an undergravel grid. An undergravel grid is already VGB (Virginia Graham Baker) compliant, so to speak, because it is a series of inlet pipes teed together and covered with a layer of medium-sized river pebble. Bottom drains are often treated like swimming pool drains, where they are teed together under the pond, and one line is piped to filtration. This is always a huge mistake in a pond. Unlike a pool, ponds move waste products created by the fish and plants. These waste products can settle on the bottom of piping and build up around debris like

pine needles and leaf stems, or on the biofilm growing inside the piping. Pond drains have an open outer edge, unlike screened or grated drain covers in a pool. Pool drain covers are designed to keep the big stuff out, whereas pond drains are designed to pull everything through and allow trapping later in prefiltration. Each drain line should be separate and joined together in the pump pit before prefiltration. When the pipes are teed together under the pond, one line will always be favored over the other. This can be created by the plumbing layout, or as one line before the tee gets slowly restricted, the water simply will be pulled from the other drain with no way to tell it's happening. If one skimmer is flowing more than another, it's easy to see as a difference in surface flow. If one drain is clogged or restricted, it is difficult if not impossible to notice it below the surface. By running separate piping, each drain can be shut off temporarily during maintenance at the filter or pump. This allows you to pull water directly from each line, cleaning the pipe with the increased flow demand. If one drain or pipe is clogged, flow will be restricted and noticed during routine maintenance. The restriction is usually flushed through by the increased flow. Keep the drain piping at 3 or 4 inches, and not smaller. Don't use any hard 90-degree fittings; plumb with DWV-style sweep fittings so the lines can be cleaned. Place a cleanout on each line just before the valves in the filter area.

Return Lines

Returns are best accomplished with a manifold in the filter area with separate valved lines back to the pond. When this isn't possible, a large diameter loop or plenum manifold can be used, with the smaller return lines teed off it. Returns on a loop or plenum manifold can be easily adjusted or balanced by slightly restricting the outlets that flow the most, forcing water to the outlets that flow less. Place the returns in positions that allow a slow current to be created in a rotating

pattern. Make sure there aren't any dead spaces, and keep in mind that sweeping the floor and corners is more important than returning the water higher. The motion created at the floor will transfer through the water column to the surface, but in most cases, a couple of surface returns can also help, depending on the shape.

Next, seal the shell. As a designer, you must consider the sealing surface. All types of concrete crack and must be sealed. In a living system, a flexible, plasticized coating is always best because the biofilm and algae layer will spend all its lifetime etching away at the surface. A quality flexible or plasticized coating will not crack over time as the concrete cracks and moves. This is especially important in shells that are not one monolithic pour or shoot. Many times, the feature has a floor and walls that are part of the foundation of the home or a planter box. These are created separately, creating cold joints that will move over time. A flexible coating will allow for this and not crack or separate as the concrete sections move. Of course, my favorite sealing surface is polyurea, but there are other types in the market also. All flexible coating must be applied over

a smooth surface for quality control. Specify a bond coat of some type over the concrete and the seal coating over that.

Manage Obstructions

When creating a floating-stone look as steps across the feature, don't place the steps on large blocks. Large blocks restrict circulation and make sealing the surface more difficult. Use rounded pillars whenever possible. Smooth, rounded pillars are safer for the fish and are easier for the fish to swim between. I have seen designs with only 4 to 6 inches between pillars, leaving little room for fish to swim between them safely. The fish are less likely to scrape themselves when more space and rounded surfaces are present. A scrape on the side of a fish is an invitation for a bacterial infection.

A poorly designed or laid-out shell creates a multitude of problems for the life-support system and the residents that must live with it. A good designer will do everything within his or her power to make the shell workable for everyone else involved in the project. 

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 racecar 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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by Kelly Billing,
Maryland Aquatic Nurseries

Lotus (*Nelumbo*) and I began a relationship some 30 years ago. Having had a childhood infused with growing things, I have always been intrigued by plants — but lotus is special. It is full of rich history, and for those with an inquisitive nature, there is boundless information, since it is one of the most researched plants in the world. It is by far one of the most attractive plants I have ever had the pleasure of growing.

And So, it Begins

My first encounter with Lotus was in a 20-by-40-foot natural earth-bottom pond at Kurt Bluemel's ornamental grass and perennial nursery. The plants were without boundaries, and they had been allowed to take over the entire area. It was magnificent. The exquisite flowers were at least 12 inches wide; the immense foliage was 24 to 36 inches across. I recall a rain shower had come through, and we were given leaves for cover as we ran for shelter. They were

much larger on top of you than in front of you. It was an extraordinary and memorable introduction.

Few people are willing to dedicate that much space or sacrifice the view of open water to allow a plant that much freedom. However, when they



Nelumbo lutea is America's largest wildflower and one of two species worldwide.

do, the outcome is magical. One of my customers many years back had a lakefront property. He wanted to plant lotus and let it be free. I warned him that since the lake was part of the community, he might get in trouble at some point. But he was unfazed. The lake had chronic weed, water-quality

Nelumbo 'Mrs. Perry D. Slocum' is one of the most photogenic cultivars I know. The intricacy of color variation and assorted petal sizes make her beautiful up close and from a distance. She is a consistent performer and great for a first-time lotus owner.



Unfurled leaves (top, left) resemble a heart shape. Lotus buds (top, right) have their own unique beauty. Dew (middle, left) is particularly striking on all lotus parts. Lotus pods (above) are often used in cut-and-dried flower arrangements. Backlit leaves (left) reveal an intricate and detailed pattern not as visible from the surface.



A cold frame offers added protection to assorted *Nelumbo* cultivars in raised beds, allowing for an earlier harvest.

and clarity issues, and he didn't want to look at it any more. He planted, and they grew. Water quality improved, and the weeds were shaded out. He did get in a bit of trouble with the community, and they have to keep it confined to the cove once annually (in the spring) with herbicide, but he couldn't be happier. He ended up digging multiple large ponds on his property adjacent to the lake. Each has its own lotus variety. He added roadways for his golf cart and solar night-lighting so he can enjoy the night sounds and entertain among the lotus patches.

Planting the Seed

We began growing lotus in the nursery in raised beds. Some were sectioned-off basins that collectively created a 70-by-18-foot basin within a cold frame. Others were 4-by-15-foot narrow stretches that we snuck in to small spaces around the nursery. At one point, I had a client that was working

on a project that required a flowering privacy screen during August. It was the only four weeks of the year that they called their estate home. A 4-foot-wide, 100-foot-long, 2-foot-deep area was dug, tiered and lined. The surrounding soil was graded to direct rainwater toward the elongated basin to assist with maintaining the water level. A potted Mrs. Perry D. Slocum Lotus was planted every 5 feet, and within one growing season, the massive, flowering hedge row was born!

In my own backyard, I buried a landscape display container that was 36 inches in diameter and 12 inches deep without holes. I only added 3 to 4 inches of soil, which allowed for 8 inches of water above the soil line. Lotus can be tricky to get started, but once it's growing, it is the easiest plant in my garden to care for — and you don't need a pond to have one.

I do find that it is easier to maintain lotus in a pond because it is more

accessible. The only requirement is that they don't dry out. Since I don't have to push the fertilizer into the soil to prevent leaching into the pond, the application is simplified. Just toss them in. The foliage covers the surface water, so algae aren't present, either. I am rewarded with as many as 25 blooms over a period of several months, and the old flower pods make a wonderful addition to indoor arrangements.

Getting Creative

When I was in Denver at an International Waterlily and Water Gardening Symposium, there was an obvious slant to the creative use of aquatic plants in the garden and landscape. The Mile-High City presents challenges for growers of traditional annual planters. Things like geraniums and impatiens that would typically be used in planters are avoided due to the dry climate and high evaporation rates. Aquatic plants could



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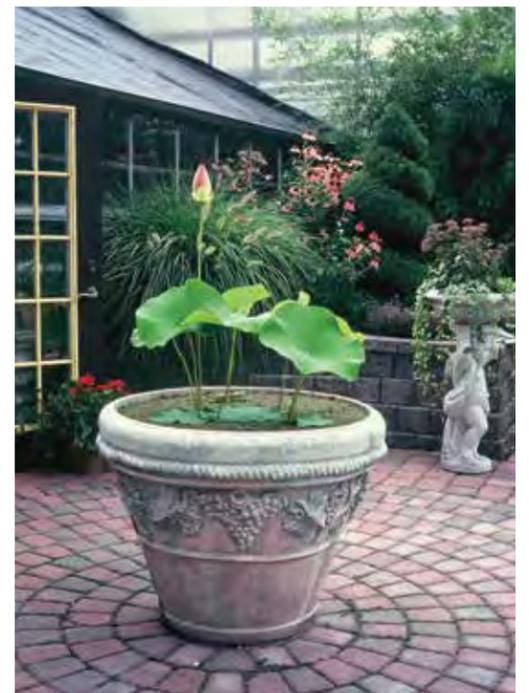
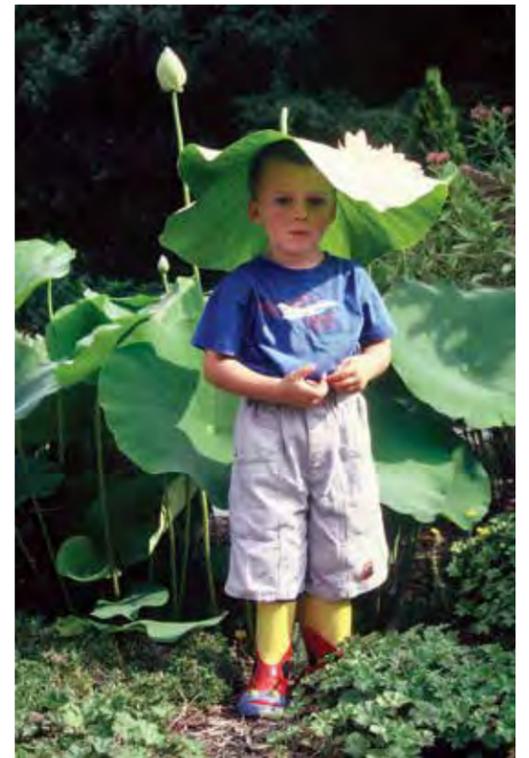
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have a self-contained reservoir that only require weekly topping off. Lotus was among the plants they chose to add to the garden in buried whiskey-barrel liners. The 15 inches of depth allowed them to winter without incident and gave them added inches to reduce the frequency for adding water. What a novel solution!

Along those same lines, I have convinced many contractors to repurpose old preformed ponds into lotus pools. They can be placed adjacent to the new pond to appear as if they were part of the pond. The diminishing edge makes the pond look larger than it is, creates a bold background and provides something of interest for reflection on the water's surface. If planned correctly, the lotus pool can serve as a large vegeta-

tive filter for the pond simply by allowing water to trickle through it. They are heavy feeders, so even a small flow will encourage high-nutrient uptake — and they love moving water!

Lotus are quite adaptable, so raised planters are also ideal for growing them. In northern climates, dormant plants can be moved to a garage for winter protection, or straw bales can surround the container in a protected area. In warmer climates, the container choices can be more decorative. Since the range of plant sizes available covers such a broad range, the options are somewhat limitless.

An Appetizing Addition

Moreover, every part of the plant is edible and delicious. The leaves can be

Lotus love an open area (top, left). The bigger, the better. En masse, the fragrance from the foliage and flowers is exquisite. Children (top, right) are one of the many things attracted to lotus and the aquatic environment they grow in, along with frogs, toads, bees, butterflies, beetles and dragonflies, among other things. A lotus-growing bed (bottom, left) serves as inspiration for a flowering hedge row. Lotus also make spectacular container plants (bottom right). The planter size needs to be appropriate to the cultivar size. Lotus come in all sizes. Both depth and diameter should be considered. A pot in a pot can compensate for too much depth.



Tea Cup lotus fall under the category of bowl or micro varieties that remain less than 13 inches tall. Very small lotus may require daily watering.



filled with rice and peeled seeds, folded like a wax paper sandwich and steamed, adding flavor to both. Ripe seeds can be peeled and eaten raw. Young seeds have the flavor of sweet corn crossed with fresh sweet peas. The more mature seeds have just started to change to burgundy on the tips and taste exactly like a chestnut. The tubers can be harvested in the early spring, peeled, sliced and added to stir-fry and soups. An added benefit is the thickening agent they contain. Sliced thin to ¼ inch thick, they can

be placed on a baking sheet in a medium-hot oven and baked until they start to curl. Season to taste and eat like chips. The intricate pattern of the sliced tubers adds to their interest as a food.

If it holds water, it is likely you can find a lotus that is a suitable size and color that will work to add a creative touch to the landscape, yard or table top; in or out of the pond. The visual interest they add is neverending. Truth is, they are magical no matter how you do it. ☘



All parts of the lotus are edible (top) and used for food and medicine. Lotus root chips are not only delicious, but they are also beautiful. Landscape containers without holes (middle) or preformed ponds make excellent lotus gardens outside the pond. The soil level is kept low to allow for an adequate water reservoir. This little beauty (bottom) is less than 2 feet tall and is suitable for a tabletop lotus garden.

About the Author

Kelly Billing has over 30 years' experience in the water gardening industry wholesale trade working for Maryland Aquatic Nurseries Inc. She compiled and maintains the Aquatic Plant Invasive Species List for the nursery trade in the United States. She writes regularly for various trade magazines and other water gardening publications. A gardener since childhood, Kelly enthusiastically shares her knowledge and experience with organizations, garden centers and garden clubs.



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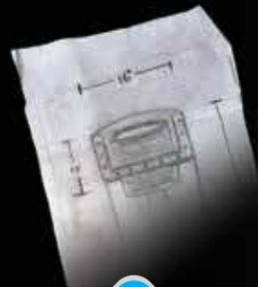
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by **Demi Fortuna,**
August Moon Designs

My dentist told me about Lily. She had a great relationship with Dr. K — we all do — and had been chatting during a checkup about a problem with her pond. A widow, she was at an impasse over what to do about her backyard koi pond, which was leaking badly. For many years since she was widowed, she had kept up the pond herself. It was her husband's pride and joy. He had built it himself some 40 years earlier, and they had tended it lovingly together until he passed away. She was still tending the pond every week, just the way they used to together, but now she was alone — and pushing 80. It was no easy task.

Lily's Pond: Before

The pond measured 20 feet across and nearly 40 feet long with a dozen waterlilies and tons of floating plants. There was a tiny waterfall at one end and three frog spitters at the other, each powered by its own little magdrive pump, which clogged up like clockwork. Every Saturday she would sit down at the edge of the pond, slide in ever so carefully and make her way across the sloped, slippery bottom to clean each of the pumps. Then, she pruned and deadheaded every waterlily. The task got harder for Lily every year, and not just because of her age. Stones along the edge had loosened; some had fallen in. The bare liner was slicker than a New York City con man. The pond bottom had settled over the years. Living roots had pushed up ridges across the bottom of the pond,



Here's one of three pumps at the bottom of the pond that clogged constantly.



Steps and an impromptu handrail allow Lily safe access in and out. The skimmer set high makes maintenance easier.

which was almost 3 feet deep in the middle. Dead roots had rotted away and left deep pockets. Through it all, the pond endured — a tribute to her beloved.

Now, she faced a terrible choice. At 80 years young, she was still willing and able to continue to maintain the pond, dismissing the risk of injury with a chuckle, but time had caught up to the pond itself. After 40 years in the ground — an amazing testament to the quality of both the installation and the material — the pond had started to leak, basically everywhere. The dilemma she shared with her dentist was simple, but it was more painful to her than pulling teeth. She could fill in the pond and be left with only the memory of it intact, or she could renovate it, knowing that it would require the removal of every stone her husband had so carefully laid.

Dr. K asked me to call her, and we arranged to meet. My son Edwin found the problem almost instantly. “Dad, there are so many tiny holes that I can see through this liner.”

After four decades in the ground, the liner was finally and literally falling apart. I gave her a price to fill it in, which was no bargain, because there was no way to get a machine into the area. However,

I asked her to trust me to rebuild the pond instead, even though it was more expensive of a proposition. I had taken to her instantly and wanted the chance to make her pond into something she could continue to love — safely.

Lily is not alone. The baby boomers who built so many of their own water features are aging, and the maintenance that they willingly accepted, and even enjoyed, is becoming more difficult. As features age, they eventually require renovating to deal with erosion and settling, to replace liner and failing equipment and even to modernize outdated styling. The trend that we see is that renovations now make up almost as much of our work as new installations, and as the market becomes more saturated, that trend will continue. It’s becoming clear that we should be addressing the need to make access and maintenance easier on every install, for every customer.

Edge Profile

The most critical area for easy accessibility is, of course, the edge of the pond. Getting in and out is when most accidents happen. Although it might seem a little counterintuitive, a sloped beach or ramp is not safe. Whether the bottom

is graveled or bare, the biofilm that will grow on every surface will make any slope extremely hazardous. For safest access, the side wall of the pond should have a vertical drop from the rocks that make up the coping straight down about 18 inches to a flat, level shelf all the way around. This allows for entering the pond with a single step onto a flat surface, while sitting on or holding onto the rocks along the edge. While creating simple steps down into the pond is common practice, having a first step that’s around knee-deep offers other benefits, also. It’s a good depth for waterlilies, adds additional volume and keeps out wading predators like raccoons and herons. Unlike this deeper plant shelf, shallows around the perimeter allow predators in and provide areas where algae and mosquitoes can thrive.

Easy Access to Filtration

Having the pump or, in Lily’s case, pumps in the bottom of the pond certainly works but makes servicing more complicated and sometimes even dangerous. The first innovation we recommended was a skimmer with a single, larger high-efficiency pump plumbed to the waterfall and the spitters. This put all the pump mainte-



Setting the skimmer (left) as high as possible under a lightweight fiberglass rock lid makes access easier, as do the steps in the background. A paver set low next to the skimmer (right) allows for safe footing and access. The taller rock behind it aids in getting out of the pond.

nance outside the pond, and it provided a net and mat to trap floating debris before it could sink to the bottom.

In another case, where the client already had a skimmer, it had been set so low that the customer literally risked falling into the pond headfirst every time the net needed cleaning. The solution there was to raise the water level when we renovated the pond.

Then, we created a subtle berm around the pond that kept rain from washing dirt and mulch in. Once we had set the levels, we pulled the skimmer way back from the edge, lowered the soil around the back of the skimmer and set a flagstone there for secure footing. When we were done, the top of the skimmer net was easily accessible well above soil level instead of a foot below

the surrounding grade, and our customer could then maintain the pond safely.

Low-Maintenance Design

Renovation offers the ideal opportunity to reduce both maintenance and operating costs, benefiting every client. The less effort it takes, the better a pond or water feature is maintained, and the happier your



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customer is — and that leads to referral business. Better equipment these days is easier to keep clean while at the same time keeping the pond cleaner. Use an edge and bottom profile designed to be safer. We like to make pockets with bottom drains that collect and filter wastes automatically, delivering them to biological filters that need to be cleaned only twice a season, or to active bogs that can go for years without cleaning. Use high-efficiency,

asynchronous pumps in skimmers to cut both maintenance time and operating costs.

Lily's Pond: After

What we did for Lily is a good example. She still wants to get into her pond to maintain her waterlilies, so we carefully took pictures of where all the rocks were, pulled the old liner out and graded out the bottom perfectly flat. We reset the stones at the edge



When Lily's happy, everyone is happy!

of the pond on a solid rock shelf and then created a vertical drop down to a plant shelf. This RSVP profile keeps algae, mosquitoes and predators at bay, but most importantly for Lily, it makes it easy to get in and out of her pond. We installed the columnar base of a bird bath as a newel post for her to hold onto as she steps down into the pond, and the waterlilies are all set just one step apart, so she can hold onto them as she walks across the smooth, level bottom. She no longer needs to clean multiple clogged pumps in the ponds — only the net in the skimmer once a week, and occasionally the mat. The pump technology has progressed to the point that the single larger pump actually costs less to run now, too — a prime consideration for those on a fixed income. Best of all, she tells me that we recreated the pond the way her husband had envisioned it, using the same stones in the same places. Now she feels safe again, doing what she loves. For us, that's what it's all about. ☺

About the Author

Whether building waterfalls in the Yucatan, working with his sons on Long Island, or serving as the director of product information for industry leader Atlantic Water Gardens, **Demi Fortuna** still loves water gardening even after 30 years in the field.



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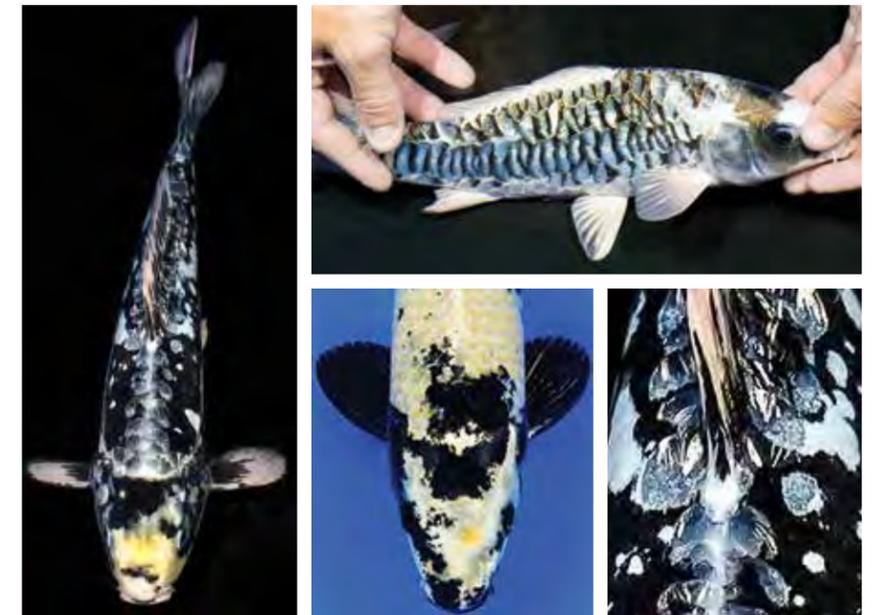
Seeking those extra-special koi varieties

by Joe Pawlak,

Blackwater Creek Koi Farms, Inc.

I have seen tens of millions of koi and goldfish and have sold many of them. I've been present when a fish sold for \$125,000. I've also been present when 10,000 fish sold for \$1 each. All these experiences can be exciting the first time they happen, but the real excitement for koi breeders, shops and hobbyists lies in what I like to call "the wow factor."

Perfection in koi breeding is an ongoing quest. We strive for better colors, shapes and patterns, not to mention bigger sizes. At Blackwater Creek Koi Farms, we have achieved these goals in many instances. But now what? Well, some of the most exciting things happen when we harvest a grow-



Sharp, contrasting black and white colors sometimes appear in unreal-looking designs.



Butterfly koi (three photos at left) add even more ability to show uniqueness. My favorite (center) is this butterfly koi, Goldie. She caught my eye when she was only 6 inches long. She's now 20 inches long and still looks great!

out pond and that one fish catches your eye. It's a fish that stands out among its siblings. It stands out not because it fits a typically mandated koi-show mold, but because it possesses the wow factor.

The wow factor can arise from a wide range of characteristics. The fish may have a set of scales with many different sizes.

The wow might stem from unusual patterns of colors or the shape and size of the fins.

The wow factor is what makes us stop and stare.

Koi Dealers

Wow-factor fish allow you to offer your special customers a fish that no one else has — a fish that is truly unique and one of a kind.

Around the world, these fish pop up for sale on a sporadic and limited basis. Dealers compete for the chance to see them — and hopefully buy them for their customers.

Hobbyists

The joy of owning a fish that cannot be

uplicated is a proud accomplishment. Each person's taste may be a little different, and what catches the eye is truly personal. With wow-factor fish, there are no rules to judge by.

Simply unique, attractive qualities are not seen at a koi competition. In fact, many of these fish are kept in private collections, similar to famous paintings where only the lucky are invited to view them.

Koi Producers

Wow-factor fish appear at random and are a welcome addition to sales. For Blackwater Creek

Koi Farms staff, it is a passion bordering on an addiction. We maintain an enormous line of cataloged bloodline breeder fish. Those breeders are actively cross-bred to produce the coveted "wow" offspring.

This technique is not without cost, as most offspring do not possess characteristics that are marketable. But when these

This koi (above, right) has a very unique head pattern with red barbel. The hi utsuri koi (bottom, right) looks like you're watching lava bubble or a sun flare swirl. Use your own imagination — it's lots of fun!



Traditional varieties require strict adherence to judging rules, such as this award-winning sanke produced at Blackwater Creek Koi Farms.

The joy of owning a fish that cannot be duplicated is a proud accomplishment. Each person's taste may be a little different, and what catches the eye is truly personal.

few fish do appear, the high-fives and bragging rights begin.

What About the Price Tag?

So, what do I charge or pay for a wow-factor fish? Wow-factor fish that can be found on rare occasions typically do not factor price as the biggest constraint to the sale. The real constraint is whether or not the fish will be sold at all. Most breeders realize what a rare find these fish actually are and price them based on odd factors that may include time of year (cash flow), size of fish (the bigger, the higher price for some) and the chance that something similar may be produced again.

Another factor that many may not realize is the purchaser's credibility. What I mean by this is

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whether or not the purchaser can take care of the fish and give it the conditions needed to achieve the fish's maximum potential. Some of these fish are so special that the producer considers them family and wants the best for them. So, if the situation arises where you are offered the chance to own a wow-factor fish that truly appeals to you — jump on it! Care for it and create a collec-

tion of truly rare and unique fish. Add it to your pond and show your customers and close friends the mystique that attracts so many to koi keeping.

Many times, I see people get caught up in the worry of what someone else thinks of their fish. They worry about how it conforms to a set of rules. They worry about how it grades in comparison to



The fish may have a set of different sized scales. The wow factor might be an unusual pattern of colors, or it could be the shape and size of the fins. The wow factor is what makes us stop and stare.

someone else's fish. I tell them that the pond belongs to them. The fish are theirs, and what they like is a decision only to be made by them.

The enjoyment that a pond brings and the excitement of finding that wow factor is truly a personal experi-

ence. The chance of that next addition to your collection is right around the corner. Treat your fish (and your koi dealer) well and visit often. You never know when an opportunity will knock. Enjoy your fish and this wonderful hobby and business! ☺

About the Author

Joe Pawlak



has spent his entire life in the fish industry. He met his wife Cheryl at the World Aquaculture Conference. Currently he is the vice president of Aquatic Nutrition Inc., where fish food and fishing baits are manufactured. He is also president of Blackwater Creek Koi Farms Inc., a series of koi and goldfish farms in central and northwestern Florida. Blackwater started with just \$300 in the bank and has since risen to international acclaim in a very short period. Joe has assembled a team of talent that includes a dedicated staff composed of a wide range of professionals. He continues to grow his business while balancing time to spend with his growing family. His passions include his family, the koi business and continuous learning.

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Tim Jennings gave us a fantastic tour on-site at Longwood Gardens, providing us with fascinating facts throughout the day.



| **IWGS** Recap |



Budding Blooms

IWGS 2017: a youth's perspective

Publisher's Note: We were excited to see Marc Marrero and Matt Billing, two young pond enthusiasts, at this year's IWGS symposium. In the spirit of supporting the next generation of our industry, we asked them to put together a review of the event. We appreciate their enthusiasm, and we hope you enjoy their perspective! — Lora Lee Gelles

**by Marc Marrero,
photos by Matt Billing**

The 2017 International Waterlily and Water Gardening Society (IWGS)'s Annual Symposium started off with a warm welcoming reception held by Danner Manufacturing. It was my first-ever symposium, and I was not too sure what to expect. However, being treated to delicious food in a room full of friendly faces was a wonderful first impression.

Day One Excursions

The next morning, we started off our day with a visit to Terrain. I've been to many gardening centers before, but none quite like Terrain. Once you enter their compound, it's almost as if you enter an entirely different world. Their gardening displays ranged from

cute and simple to intricate and beautiful. Walking through and seeing all their displays inspired so many creative ideas and gave me a new perspective on how gardens can completely transform a space and make it something truly magical.

Following our visit to Terrain, we were treated to a mini pond tour hosted by Turpin Landscaping, which included some of their most impressive water features. One of my favorite characteristics that Turpin incorporated in all their water features was the use of many unique and vibrant plants. One example of this is their use of banana trees as a water filtration system. These trees immediately caught my eye when we first arrived, and I was in complete awe when I learned that they could not only grow inside water, but also filter the water itself. Turpin Landscaping demonstrated that water features can be completely functional and unique, all with the creative use of plants.

Later that evening, we were treated to a delightful dinner generously provided by Chanticleer. Chanticleer is one of the great gardens of this region. Once the Rosengarten estate, Chanticleer today is an eclectic, conversational and overall enthralling contemporary garden within a historic setting. No matter where you are in the garden, there's always

something to gaze your eyes upon that strikes conversation and wonder. One of my favorite moments of the entire symposium was visiting the ruin garden. Being in that area of Chanticleer made me feel like I was a part in an Indiana Jones movie. The overall experience that Chanticleer provided was one that was unique and unforgettable. Their garden displays were some of the most beautiful I have ever seen, and it was truly a pleasure to experience such a wonderful place.

Day Two Excursions

The next morning was undoubtedly something special. We began our day at Longwood Gardens, one of the greatest gardens in the world, where we were given special access to witness their aquatic plants display at an hour few ever get to witness. As dawn broke the morning sky, the tropical night bloomers were in full bloom, emitting their beauty for all of us to see. It was an incredible sight. Admittedly, I am no morning person by default (especially at 6 a.m.), but seeing those waterlilies bloom was well worth it.

Soon after visiting the aquatic pools, we were escorted to the New Waterlily Competition, which was temporarily being held in a behind-the-scenes area below the conservatory. The competition lilies were captivating. Many had unique flower and foliage colors uncommon to the industry. It was exciting to get a sneak peek and an opportunity to cast votes and comment in advance of the formal judging. The amount of science and intricacy that goes into creating a plant is mind-boggling to me. To have the vision to integrate the character traits of two individual species in a calculated process to create a new hybrid is fascinating. I have more respect for the hybridizers than the outcome. The amount of patience, diligence and anticipation of the creation involved is admirable. Tim Jennings was clearly proud of hosting the competition.

The entrance fountain at Chanticleer (top, left) was one of many gardens within a garden, with soft hues and a distinctive plant selection. Chanticleer's Ruin Garden (top, right) was dark, exquisite and unlike any other garden I've ever seen. A tropical night bloomer, *Nymphaea* 'James Gurney' (bottom, right) was striking at dawn in the pools. A stop at Turpin Landscape (bottom, left) provided inspiration for designing a backyard paradise.

The Lectures Begin

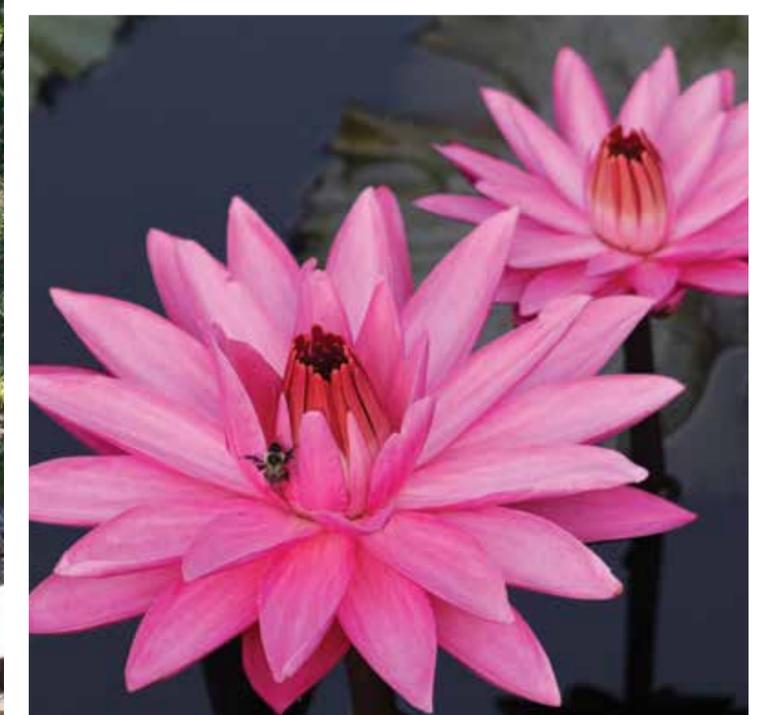
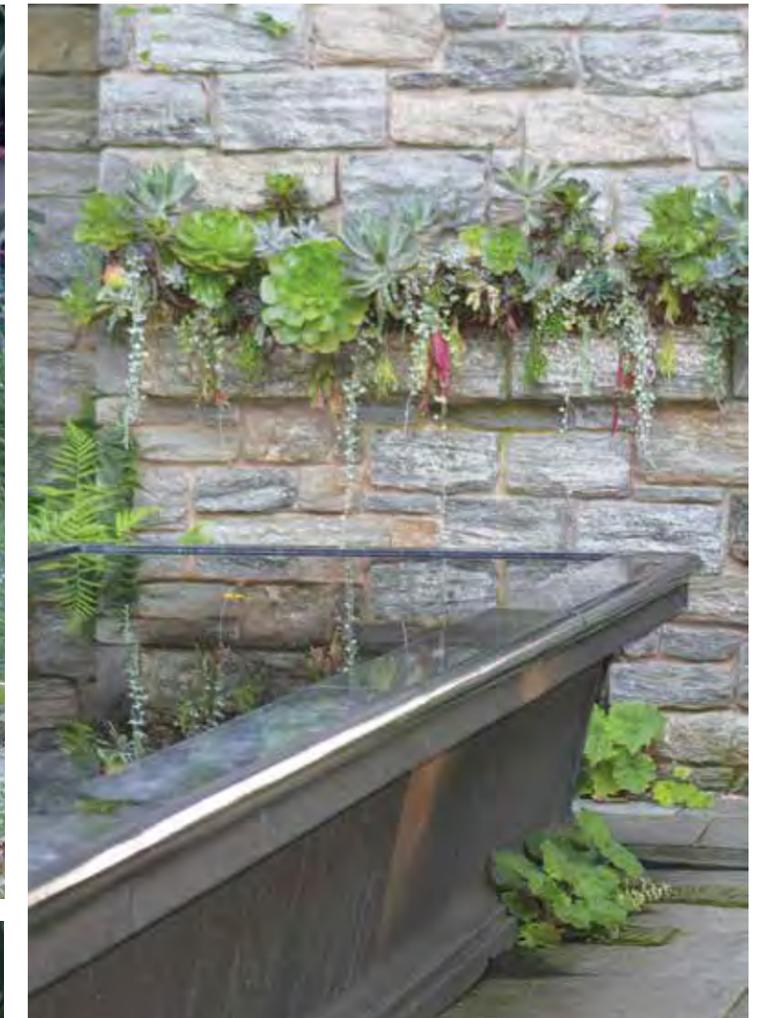
The morning lectures included speakers from all around the world who shared their knowledge with us. Yu Cuiwei came all the way from China to discuss cold-stress gene tolerance among waterlilies. Kathy



Jentz spoke on how horticulturists can use social media to not only promote themselves and their products, but to also engage and attract a more youthful clientele. Laura Bancroft, a nine-year experienced lotus grower with more than 200 different varieties, shared what she has learned through her experiences. Next up was Stanton Gil, who works for the University of Maryland's Cooperative Extension as

an entomologist. He reviewed aquatic-plant pest research and explained how to identify the signs of different aquatic pests and how to get rid of them. After Stanton, Zijun Li gave a presentation on his work hybridizing waterlilies on his small rooftop garden in China. It was very inspiring for me to see someone my own age who has accomplished so much. He has already created numerous hybrids and won the Best New Waterlily Competition last year. He is setting a precedent for many young people behind him. His drive was unmistakable, but he was also humble in his limitations. Without fancy facilities on the top of his home, he has followed his passion and succeeded.

Then, Anthony Archer-Wills gave his presentation, and it was truly remarkable. Anthony's water features are world-renowned and legitimately astonishing to look at. He credits Patrick Nutt and Longwood Gardens for "moving his love for waterlilies forward in a quantum leap!" His work is above and beyond anything I have ever seen. His passion and creativity make him a leader and inspiration, raising the industry standard. He made possible what once had been deemed impossible.





A white night-bloomer (first, left) is up before dawn. The expert panel (second, left) featured John Sou, Danny Cox, Tim Jennings and Tamara Kilbane. The Fountains at Longwood (third, left) come alive at night. The native plant garden at Mount Cuba (fourth, left) has a stunning pond and reflection pool. Anthony Archer-Wills (above) spoke about Patrick Nutt's influence on his life and career.

The expert panel and question-and-answer session was next, which included Tim Jennings, John Sou, Tamara Kilbane and Danny Cox. Each member in the panel was extremely knowledgeable and very kind. They answered any questions the group had very eloquently. We were also given a tour of Longwood Gardens' main fountain pool, which has recently undergone a \$90 million renovation! The largest project Longwood has ever done in the gardens, it contains more than 1,700 fountains and jet streams that some can reach up to 90 feet in the air!

Later in the evening, we went back to the lily pools to enjoy the night-bloomers and hear Tim Jennings give a presentation on Victoria. To close out the day, we saw Longwood Gardens' evening fountain show, and it was breathtaking. Watching the fountains colorfully shoot high in the night sky in perfect sync with some of our favorite songs from classic movies was truly something special.

Day Three

The last day of the symposium started off with a visit to Mount Cuba Center. Mount Cuba Center inspires an appreciation for the beauty and value of native plants and a commitment to protect the habitats that sustain them. Following

Mount Cuba was a trip to Winterthur. Like its name probably suggests, Winterthur was a majestic place. The estate is set amid a 1,000-acre preserve of rolling meadows and woodlands. Designed by du Pont, its 60-acre naturalistic garden is among America's best, with magnificent specimen plantings and massed displays of color. He selected the choicest plants from around the world to enhance the natural setting, arranging them in lyrical color combinations and carefully orchestrating a succession of blooms from late-January to November. Du Pont translated his love of the land into a unified work of art that embodies a romantic vision of nature's beauty.

North Creek Nurseries then welcomed us to happy hour and a tour of their growing operation. They had some of the most advanced technology I had ever seen in a nursery — and some of the nicest workers as well. I felt like I was a part of their family. Their mission is to be a leader in the development and practice of sustainable horticultural systems and to produce world-class plant material. Some of the flowers of their new hybrids they were growing were bigger than my head. It was incredible!

Sadly, all good things have to come to an end. It was soon time for the

closing banquet dinner and auction. Paula Biles spoke about the profound impact Patrick Nutt had on the industry and how his passion embraced many in the room the same way it had inspired Anthony. His memory will be celebrated eternally with the Patrick Nutt Scholarship fund for the future students of Longwood. Dinner was in line with all the delicious meals we had throughout the symposium and was followed by both a live and silent auction to raise funds for the IWGS. Gary Jones was the auction master of ceremonies. He was animated, loud (in a good way) and knew how to get a room full of smiles. He radiated energy-making jokes and raised bids with a warm and genuine personality. It seemed a fitting note to end on — a happy one.

Final Thoughts

It was amazing to watch the interaction among the attendees. I felt as though everyone speaks daily, even though through conversation I learned that many had not spoken for years. There was a collective passion, love of the industry and willingness to share that clearly brought everyone

together for a common goal. Each day I engaged in conversations that were focused on learning. People openly shared their knowledge. It was less about competition and more about collective information directed toward building industry growth.

I was also impressed by the diversity of countries in attendance — France, China, Australia, England and Mexico, just to name a few. In this sometimes divided world, there was unity driven by a shared passion. It was unlike anything I've been to in the past. I look forward to going again, renewing and building on these relationships.

As a newbie entering this industry, it can be quite overwhelming with so many questions. It is almost impossible to answer them all on my own without some sort of guidance. For that and so much more, I owe Kelly Billing. Because of Kelly, I was introduced to this wonderful industry and have learned an immeasurable amount about the natural world around me. One conversation with Kelly had me convinced that this industry and everything it represents is something that I must learn more about. She has the ability to captivate anyone who encounters

her through her passion and kindness. I've been fortunate enough to have been taken under her wing, and she has shared much of her knowledge with me. For that, my gratitude cannot be expressed in words alone. Because of Kelly, I have caught the water-gardening fever. I can write books about how much Kelly has influenced my life and what she means to me. Because of her, I look forward to the future and what it has to offer me and everyone I care about. ☺

About the Authors

Marc Marrero

is a college student and youth baseball trainer with a developing passion for the water garden industry.



Matt Billing

is a high school senior and volunteer firefighter with a passion for photography since he was a young boy.



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Trade News



WaterWall Spillways

Atlantic Water Gardens has finally simplified the design and installation of water walls and water curtains. The WaterWall Spillway is an attractive, enclosed weir that distributes water onto any vertical fascia. Set the WaterWall on top of any masonry or wood-framed wall and plumb it to a pipe hidden inside the wall. With enough clearance between the inlet and outlet to handle any fascia up to 2 inches thick, the WaterWall Spillway delivers a smooth, evenly distributed sheet of water across 24 inches of sloped or vertical wall. Set multiple units end-to-end to create water walls of any width in 2-foot increments.

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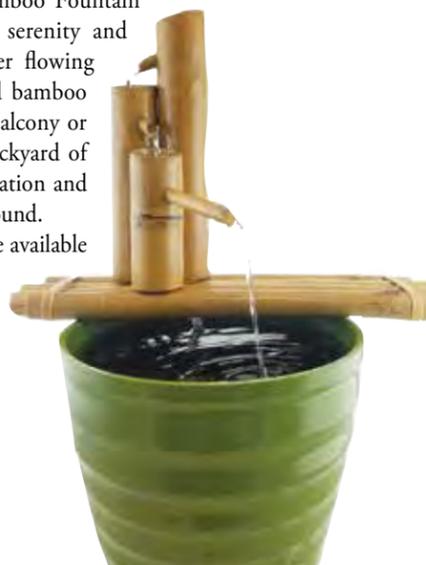


Lifegard Introduces Bamboo Fountain Kits

Lifegard Aquatics of Cerritos, California, is pleased to announce their introduction of Bamboo Fountain Kits. Each is designed to provide serenity and tranquility with the sound of water flowing gently over the natural, handcrafted bamboo water feature. Install indoors, on a balcony or porch or outside in a landscaped backyard of any design. Choose your favorite location and decorative pot to create any look or sound.

Lifegard Bamboo Fountain Kits are available in many combinations of 100 percent natural bamboo, complete with submersible pump, tubing and instructions.

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Blue Ridge Unveils New Name, Logo

Blue Ridge Fish Hatchery has recently announced an updated image for the company, including an updated name and logo.

Beginning in spring 2018, the Blue Ridge Fish Hatchery name, synonymous with koi and goldfish for nearly 60 years, will be changed to Blue Ridge Koi and Goldfish. An updated logo has already been released, including new artwork with the updated name.

"It's really exciting," said Casey LeFever, head of sales, marketing and customer service for Blue Ridge. "My grandparents started this company nearly 60 years ago, and we have been a leader in koi, butterfly koi and goldfish ever since. This new name and logo more clearly indicate what is at the heart of our business, and I'm excited for everyone to see the new look."

Blue Ridge Koi and Goldfish, founded in 1958, was one of the first United States companies to import and breed Japanese koi. In the 1980s, then-owner Wyatt LeFever, with the help of his son Randy LeFever and nephew Rick Brown, cross-bred long-finned Indonesian carp into their koi stock to create many bloodlines of butterfly koi still seen in the hobby today. The name "butterfly koi" originated in the mind of Randy LeFever while the company was brainstorming a name for their new product.

Blue Ridge remains a leader in the koi and goldfish industry, offering high quality koi, butterfly koi, goldfish, fish food and other cold-water ornamentals to dealers across the United States. Blue Ridge also offers their own line of koi and goldfish food.

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EasyPro introduces new 2018 catalog

EasyPro Pond Products of Grant, Michigan, will have a new catalog available in January 2018. They have developed their product line to offer a large catalog packed with professional and do-it-yourself pond products. EasyPro is featuring a widely-expanded line of tranquil decor basalt and statuary in 2018 along with new lighting, pumps and aeration.

For more information or to request a new 2018 full-color catalog, call 800/448-3873 or visit www.easypromo.com



Pondtent Provides Solutions for Marketing Communications

Want to communicate more with your customers? Do you intend to write a monthly but haven't written one since last year? Do you know what you need to do but never have the time to do it?

If you answered "yes" to any of these questions, Pondtent is for you. Our mission at Pondtent is simple: to help fellow contractors with their marketing communications.

We do this by offering three services: Less Annoying CRM Setup, MailChimp automation campaigns and a monthly service where we do weekly tips, a monthly newsletter and twice weekly Facebook posts with an option to add blog writing.

"Being a pond company owner myself makes all the difference," says Pondtent President Laura Reale. "We know what works for our clients and what will work for yours. We give information customers really want to know."

For more information, or to see how Pondtent can help your company achieve its financial goals, visit our www.mypontent.com or call Laura at 215/805-8257.

Atlantic Announces Professional Contractor of the Year for 2017

Congratulations to Gerard Touhey, the 2017 Atlantic Professional Contractor of the Year! Gerard was honored at the First Annual Atlantic Professional Conference September 6-7, 2017 in Mantua, Ohio. Located in Easton, Pennsylvania, Water Features by Gerard has created hundreds of beautiful water features in this country and abroad for over twenty years. Gerard's own back yard has been the inspiration for many customers who, captivated by its charm and whimsy, have joined the ranks of many happy pond owners who revere him. Gerard received the accolade from Rex McCaskill of Pond Professors, Inc., the 2016 recipient, at the closing banquet in Cleveland.

Atlantic Water Gardens would like to extend our sincerest gratitude to all who attended the First Annual Atlantic Professional Conference September 6-7, 2017 in Mantua, Ohio. With multiple hands-on and classroom presentations covering installation, product development, sales and marketing, and round table discussions with some of the industry's finest designers and installers, the event was hailed as an outstanding learning experience by all.



OASE's A-B-C Concept for a Clean, Clear Pond: AquaActiv Water Treatments

OASE, a global leader in water gardening technology, introduces an environmentally-friendly line of water treatments to their extensive North American line of pond and water garden products. The complete AquaActiv line of treatments works as a team to help combat common water issues by following a simple A-B-C concept. This AquaActiv A-B-C concept is designed to condition, clear and control algae by working together to maintain and restore the balance in your pond.

Each treatment in this line is made in the USA and is marked with an A, B or C to support the concept. These 18-ounce bottles include an easy-to-use dosage cup, resulting in a user-friendly experience with less frustration, fewer mistakes and more time to enjoy your pond while discovering the pure joy of nature.

Learn more about the AquaActiv line at www.oase-livingwater.com, or ask your representative for more information.



New Operations Manager at Your Pond Farm

Your Pond Farm is pleased to announce that Mark Fronheiser has joined the company in the role of operations manager. Mark brings years of experience working with some of the nation's foremost companies including American Water Works, Sara Lee and National Envelope/CENVEO. Mark has previously served in a variety of leadership roles, including plant controller, operations manager and director of finance. Mark is excited to join the team and says he is looking forward to driving growth and innovation.

"I'm especially interested in working with our team to enhance our internal processes to create a great customer service experience," he added



Volt Lighting Receives the Prestigious Product Innovation Award

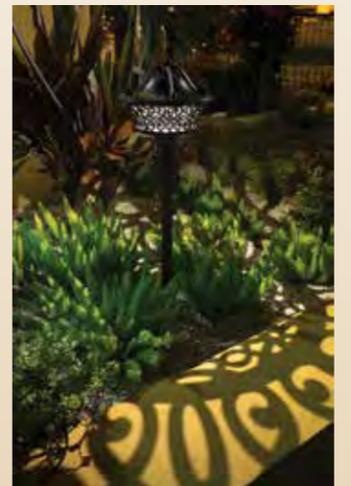
Volt Lighting, a leading manufacturer and distributor of lighting products, is recognized with a prestigious Product Innovation Award (PIA) for its Volt ShadowMaster LED Path & Area Light. The awarding organization, Architectural SSL (Solid-State Lighting), honors the most innovative lights on the market. They also acknowledge leaders in the field working to advance the technology.

"Receiving the Product Innovation Award confirms that our development team is on the right track," said Alan Brynjolfsson, the founder and president of Volt Lighting. "They are a creative and talented group that work hard every day to make the new products our customers want."

The awarded product, the patent-pending ShadowMaster, has several distinctive features. Unlike most path and area lights, the ShadowMaster is large, standing 35 inches tall — nearly twice the height of most other similar products. It also has a distinct, ornate filigree style. Both the size and ornate appearance complement larger estates, especially those with wrought iron embellishments.

Volt Lighting is known for its prolific product development program. This aggressive pace is largely due to the company's investment in their Innovations Lab, a state-of-the-art facility with CAD-driven 3D prototype printing and an array of photometric test equipment. Unlike many other manufacturers that outsource their new product development, Volt keeps it in-house.

For more information, visit www.voltlighting.com.





ACQUISITION BRINGS
NEW POSSIBILITIES



Blue Thumb Acquires LiquidArt Fountains

Blue Thumb proudly announces the acquisition of LiquidArt Fountains. LiquidArt is a manufacturer of custom, one-of-a-kind fountain boulders supplying the water garden and lawn and garden marketplaces. The addition of LiquidArt to Blue Thumb's complementary brands will enable Blue Thumb to offer all markets the most comprehensive lineup of professional-grade fountains in the industry from a single source.

Blue Thumb is widely known in the water feature industry for their extensive line of professional PondBuilder equipment and other products focused on helping the landscape installer and retailer be more successful promoting and selling water features.

"The synergies between the two longtime leaders in the industry open a wide range of new possibilities for the growth of Blue Thumb and offers our customer base a larger, more diversified product offering," said Kip Northrup, president of Blue Thumb. "Our seasoned team at Blue Thumb, combined with years of market experience, translate to a better customer experience, stronger product offerings and increased quality, and we are very excited about that."

LiquidArt pioneered the manufacturing of bubbling boulder fountains when it first introduced its products in 2004 and has long been revered as one of the most installation-friendly, highest-quality fountain brands in the water garden market today.

Blue Thumb is committed to a seamless transition. Holding true to their core principles of performance, simplicity and value, Blue Thumb is in the process of moving all production and inventories from LiquidArt to their corporate headquarters in Saginaw, Michigan. The ability to ship LiquidArt fountains together with pond kits, pondless waterfall kits and other fountain equipment will provide an overall lower delivered cost for customers and an expedited and efficient ordering process.

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