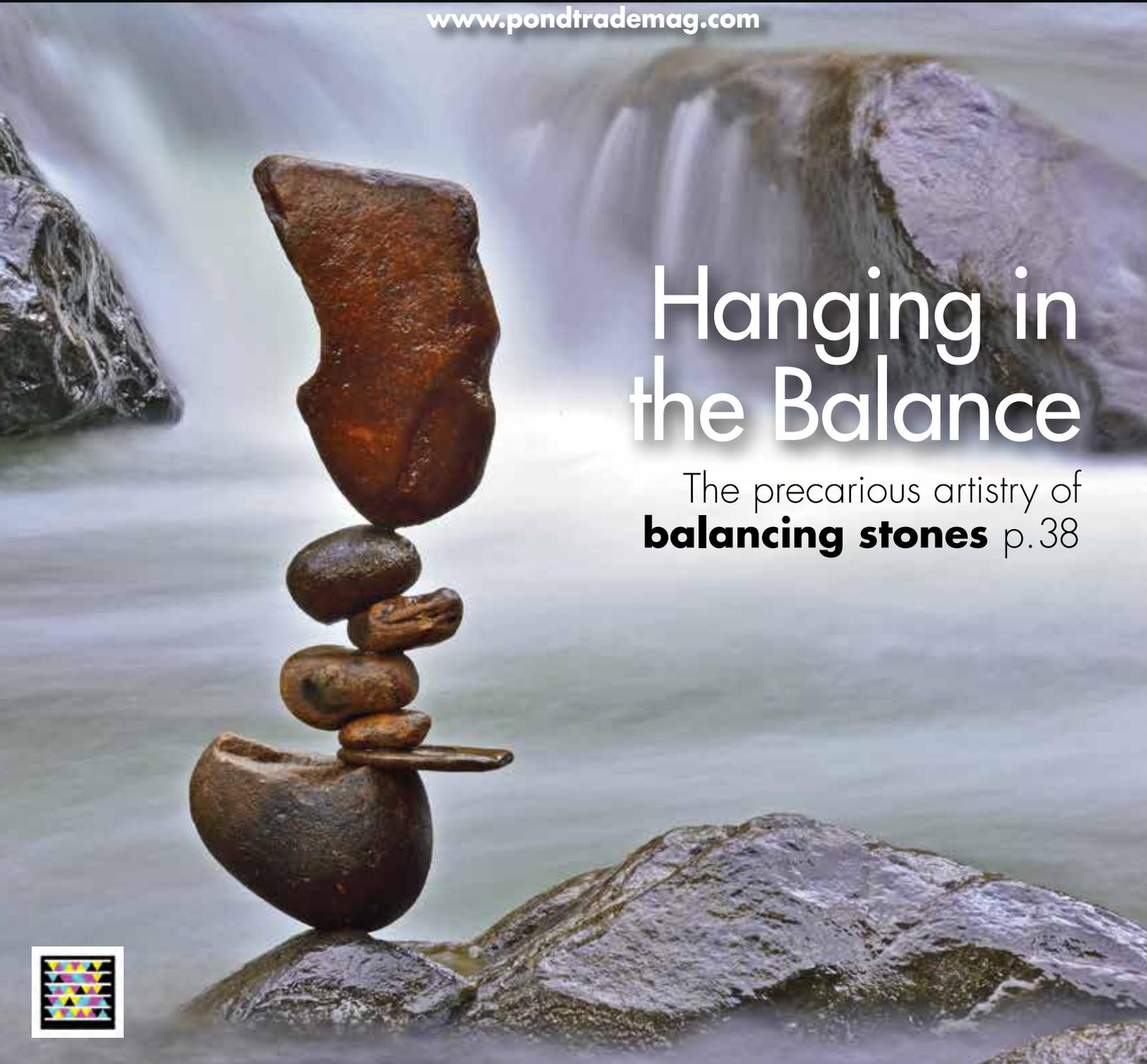


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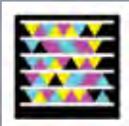
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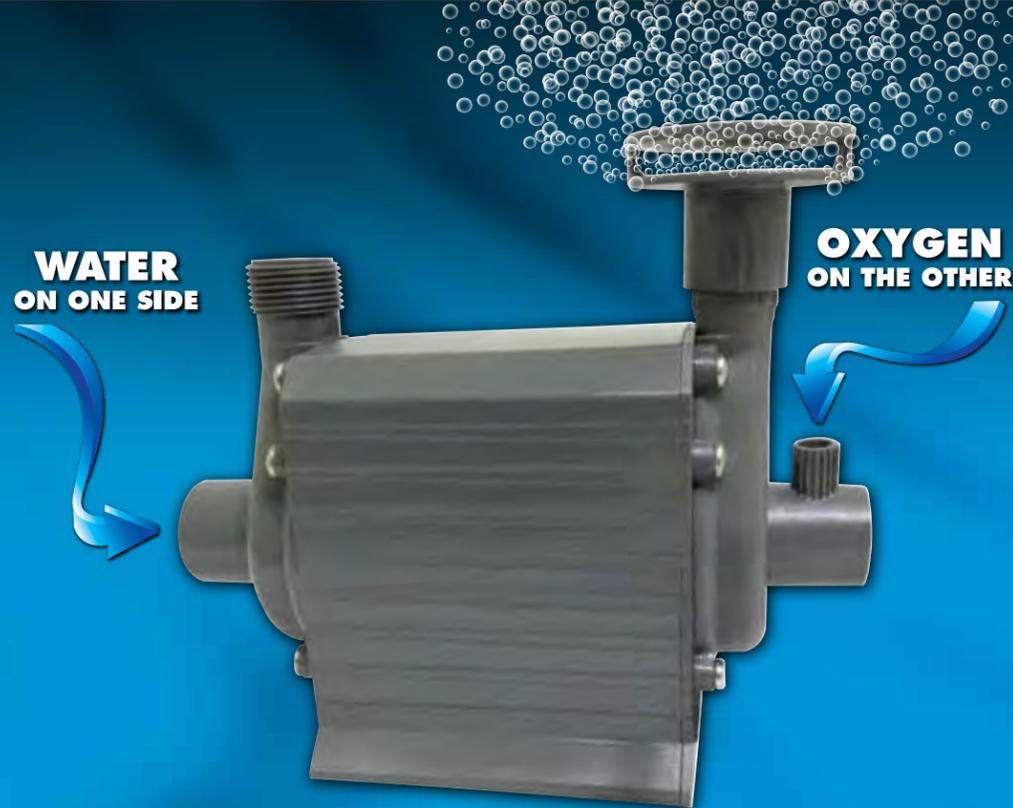


Hanging in the Balance

The precarious artistry of **balancing stones** p.38



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FEATURES

8 Uncharted Waters POND CONSTRUCTION

Multiple designers, discerning clients, massive budget and a theme unlike any other: "Spice of Asia meets Tennessee Hills." Easy build, right? Wrong. **John Magyar** shares the story of how his Universal Aquatics team navigated a variety of obstacles to bring a totally unique pond project to life.

15 A Pond's Patina

Are you eager to eliminate every ounce of film from your pond? Stop and read this story! Biofilm, or "A Pond's Patina," is crucial to your ecosystem, and caring for it is high on the list of your most important responsibilities. **Jamie Beyer** explains the importance of "APP" and why a healthy biofilm is the heart of proper pond management.

19 Swimming Ponds vs. Natural Swimming Pools

Swimming in manmade bodies of water is not a new topic to our readership. Indeed, many of you have written in to voice your love or dislike for the practice. The crucial question at the center of the debate: what, exactly, are we swimming in? Here, **James Robyn** of BioNova Natural Pools offers his perspective on the issue, highlighting and explaining the key terms that make all the difference.



8

24 Oh Baby, Baby! LANGUAGE OF KOI

You don't often think of koi lovers as gamblers, but it can be a bit of a gamble to pick out new koi for your collection — especially when they're babies! **Shane Stefek** of Water Garden Gems walks you through the traits to look for when assessing Tosai, or young koi. Follow his steps to buy Tosai that will grow into award-winning adults!

28 Oh, Mama Mia!

The best pond projects are catered to the needs of their wild inhabitants. So when the occupant of a project-in-progress is a Serval — a large cat native to sub-Saharan Africa — no cookie-cutter design will do! **Aaron Burchett** showcases the extra effort required to create a manmade home fit for a wild animal.

32 Stop the Seepage!

So you've marked off your pond's dimensions and dug a hole. Time to throw down some plastic and turn on the hose? Hardly. Picking the proper liner for your project is a vital step that's dictated by a variety of factors. **Paul Amos** outlines the key details you must address to ensure that the water you put in your pond actually stays there!

38 Hanging in the Balance

Tim Anderson is used to answering a lot of questions, and it only takes one look at his artwork to understand why. His magnificent balanced stone creations defy explanation! Anderson reveals the top three questions people ask him on his worksites and shares the secrets to making art that looks like magic.

43 Hidden in Plain Sight

Ah, the beauty of a naturalistic pond. Swimming fish, glistening rocks, green plants — and white PVC pipe? Every pond needs a working filtration system, but that doesn't mean you want to see or hear it! **Kent Wallace** shares his techniques for hiding filtration technology to keep the functionality without seeing the hardware.



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49 Cooking with Quickbooks

Accounting is a necessary evil for any pond business, but some companies handle it more efficiently than others. Are you neck-deep in paperwork and unsure of your bottom line? **Barbi Holdeman's** introduction to QuickBooks will help you get your numbers crunched, your employees paid and your business running as smoothly as your filters!

53 Winning Waterlilies

Beautiful blossoms were in full bloom in October at the International Waterlily & Water Gardening Society's annual New Waterlily Competition. Expert growers and hybridizers from around the world presented their award-winning submissions to Denver Botanic Gardens, all vying for the top prize: Best New Waterlily of 2015. **Tamara Kilbane's** synopsis and colorful photos are not to be missed!



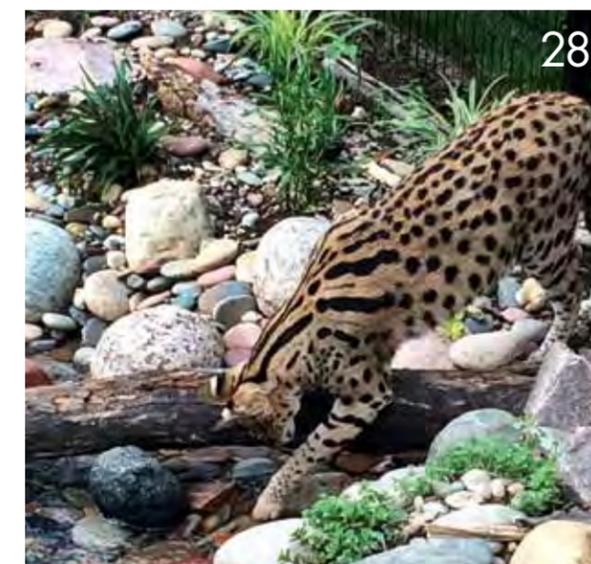
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Upcoming Events

2016

January 6 - 8

MANTS

Baltimore Convention Center
Baltimore, Maryland
www.mants.com

January 11 - 13

CENTS

Greater Columbus Convention Center
Columbus, Ohio
www.centsmarketplace.com

January 12 - 14

Landscape Ontario

Toronto Congress Centre
Toronto, Canada
www.locongress.com

February 24 - 26

Water Garden Expo

Heart of Oklahoma Exposition Center
Shawnee, Oklahoma
www.wgexpo.com

March 5 - 6

Koi Club of San Diego

29th Annual Koi Show

Del Mar Fairgrounds
Del Mar, California
www.koiclubofsandiego.org

March 13 - 15

Central Florida Koi Show

International Palms Resort
Orlando, Florida
www.orlandokoishow.org

August 2 - 4

SuperZoo 2016

Mandalay Bay Convention Center
Las Vegas, Nevada
www.superzoo.org

August 2 - 4

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King of Prussia, Pennsylvania
www.igcshow.com

August 16 - 18

IGC Chicago

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Chicago, Illinois
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Publisher's Perspective

Paper or Plastic? Print or Digital?

New year ... same format. Call me old-fashioned, but POND Trade is diving into 2016 via the same platform we employed last year: bright, glossy paper and brilliantly colored ink.



Don't get me wrong: POND Trade has a strong digital presence that puts our awesome content in front of more visitors every month. Each issue is available via the ISSUU digital publishing platform and PDF, and analytics show that our readership is growing by leaps and bounds. The Internet is a key avenue for that growth. As our tech-savvy industry writers have demonstrated, websites and apps are vital tools that can't be ignored.

But there's just something special about the printed page, isn't there? The joy of opening the mailbox to find a shiny new issue inside. That first taste of delicious eye-candy jumping off the cover. Leafing through beautiful paper pages is a visceral, authentic experience that no mouse click can match. It's an experience our readers enjoy ... and demand!

But don't take my word for it; check out the numbers! When subscription requests come in via the website's Subscribe button, the majority of people want either the print version or both print and digital. When I have a booth at a trade show, approximately 80 percent of people want print only, while the other 20 percent want digital or a combination of both. So for now, we'll keep sending our world-class stories and mind-blowing images to your (physical) mailbox.

Speaking of mind-blowing images ... how about that cover! We're dedicated to bringing you fresh and exciting stories from the water feature world, and Tim Anderson's magnificent creations certainly fit the bill. Tim has spent the last few years honing a truly ephemeral art form: stones precariously balanced atop one another! Turn to Page 38 to see just how exciting a few rocks can be.

Rocks are also a key part of Kent Wallace's keys to concealing equipment. A well-designed filtration system is a vital part of any pond, but that doesn't mean you want to see it! On Page 43 Kent shares how to hide the technology to boost the naturalistic charm.

Animal lovers will find plenty to love in this issue, both on land and underwater. Aaron Burchett highlights the unique requirements of a pond built for a wild animal — an African serval, to be exact — on Page 28. And you'll find some adorable baby pictures no koi lover could resist in Shane Stefek's story on Tosai on Page 24.

Whether in pixels or on paper, the POND Trade mission remains the same: bringing you the best information, ideas and images about this wet and wonderful industry we all love so much.

Happy PONDering!



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A splash of Asia in Atlanta. Creating a zen-like experience with both formal and natural elements.

Uncharted Waters

Spice of Asia meets Tennessee Hills in Atlanta

by **John Magyar,**
Universal Aquatics

It's not every day that Universal Aquatics of Atlanta, Georgia gets an opportunity to create something we have never created before. "Asian spice meets the Tennessee Hills with a mix of formal simplicity and a touch of rustic flair, in a nutshell" is what our team was tasked with developing and constructing.

In April of 2015, we were approached by a local contractor with the possibility of designing and building a one-of-a-kind water feature in an exclusive neighborhood in Atlanta. After speaking with the contractor on the phone, we were eager to view the property and jumped at the chance to get on board. When we arrived to view the property, we were surprised to see that the plan for the new water feature was already designed — on paper, that is. The only downside to this was that it was on paper. It was simply a concept designed by an architect. As the meeting continued, we discovered that there were many parties involved in the design process and that each and every one of them had a slightly different vision of where they wanted to go with the project.

The original design for the project consisted of a 32-foot waterfall with massive boulders that fed into a large bog filtration pond. From the bog, the water would spill through a retaining wall into a pond that measured 20



by 22 feet in diameter with an approximate depth of 2 feet. The plan for the new water feature was also accompanied by a large laundry list of must-haves, to-dos and general thoughts and ideas, as well as a detailed list of what the filtration should consist of. There were also several pages of printed photos of potential ideas for the

rienced taking on a project of this magnitude before. As it turned out, the client wasn't just having a new pond installed; they were having the entire backyard, as well as part of their house, designed and remodeled. The total plan for the shotgun-style backyard consisted of a large pavilion with a retaining wall patio front, several

Every aspect of the design had to be installed with laserlike precision and accuracy. Even the waterfall filter was a bit more precisely positioned because it was going to be hidden underneath a bridge in the middle of a landscape pathway that led to the pavilion.

new design. All of these items were given to my team to navigate through, ultimately leading us to the desired end result. We also had to swim through the thoughts of the lead designer as well as other contractors on-site, which made the design a bit more challenging.

A Project of Greater Magnitude

The homeowners had a pond in the past, so they were familiar with the basics of pond ownership, but they hadn't expe-

more retaining walls peppered around the property, landscape walkways, landscape lighting and landscape plants installed to finish off the design.

Some of the items that were on the radar for the project included formal stainless steel spillways through retaining walls, sheer drops over flagstone cemented walls, basalt column fountains and steel-sheet-faced retaining walls cut around surrounding boulders, as well as formal coping capstone borders surrounding the main pond.

Bringing the Plan to Life

We eventually ended up constructing a bog pond, which was 10 by 12 feet and spilled over a retaining wall with a sheer descent stone drop; a 25-foot-long waterfall that spilled into the bog; and a 20-by-32-by-3-foot pond — in that order. Yes, the system was completely constructed backwards from how it would have normally been installed. A retaining wall had to first be constructed by another contractor in order to begin construction on the bog and waterfall. Due to limited machine access and projects yet to be completed by other contractors, we couldn't begin working on the actual pond itself until last. Several spray jets were also installed on this project to ensure that adequate water flow was achieved. Several fish caves were incorporated in the main pond area as well in order for the fish to be better protected from predators.

Every aspect of the design had to be installed with laserlike precision and accuracy. Even the waterfall filter was a bit more precisely positioned because it was going to be hidden underneath a bridge in the middle of a landscape pathway that led to the pavilion. The water feature itself not only had to be placed where it could be enjoyed from the main sitting areas, but also from every aspect of the

rear of the home.

Formal coping was desired for the pond border instead of the boulder edge treatment that is traditionally installed. The client stated, "We want something different. We don't want what we see on everybody else's pond. We want a design that incorporates both formal and rustic features." A 10-inch-thick foundation of concrete had to be poured in order for the coping stones to be properly secured, but the end result was amazing.

Stone Spillway

The stone spillway that connected the bog pond and the main pond was designed to showcase the retaining wall that it spilled through. But how does one create the desired effect while keeping the pond leak-free? It wasn't an easy task. Idea after idea was explored before finalizing a plan. Of course, that plan changed countless times before coming to fruition, and even after that the plan changed a couple of times as well.

There wasn't a way to run the liner behind the existing wall, and simply running the liner under the waterfall stone

for the drop proved an extremely challenging method to disguise. We thought that perhaps we could run the liner on top of the main stone drop and place a thin stone veneer on top of the main stone, sandwich-



Planting accents add a touch of color to the feature.

stone out of the main waterfall stone in order to channel the water toward the middle, attempting to tame the immense water flow. That was the first time that our team had ever attempted such a task. We also cut a channel on the underside of the stone, approximately two inches behind the water's edge, in order to aid in the elimination of water wicking back behind the wall. Fast forward two days and voilà: waterfall stone drop complete. And the best part is that it worked without the need for adhesives that need to be replaced over time.

Too Many Cooks

ing the liner between the two. This seemed promising, but the homeowner wanted a cleaner look. OK, now what? The team brainstormed, and we eventually came up with a plan.

We decided to cut and grind out a part of the already-constructed retaining wall in order to lower the waterfall drop stone, while adding more cap stones on top of the space in order to bridge the gap. We also ground a quarter-inch of

One of the biggest challenges that my team and I faced on a daily basis was trying to coordinate with all of the decision-makers on the build. Daily changes seemed to be the norm. "I don't like this, I want this instead," et cetera. The entire backyard was a construction zone, but it looked more like a war zone. And with limited access for machines, supplies and workers, it was definitely a logistical challenge. We also had to wait until certain parts of the project that weren't pond-related were



Boulder edge treatments complete the look of the waterfall.



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completed before we were able to complete certain phases of our part of the build.

Plans Change ... and Change Again

So what do you do when there isn't a budget and the clients have endless ideas of what the final result could be? You try, try, try to stay focused while leading them to what you know will work best for their space. That can be an extremely challenging task when money is not a concern.

It's every pond builder's dream to have complete, 100-percent design control over a project. However, this isn't always the case, especially when constructing large projects where there are many decision-makers in the equation.

The project eventually evolved and found its own identity as it began to take shape. My team and I didn't exactly know how the project was going to turn out until the very last day, when we received the thumbs-up that the project was complete. I estimated that the project was going to take a week and a half to complete, but it ended up taking five weeks.

The new pond owners knew what they wanted in theory, but they didn't exactly know what that actually looked like most of the time. So, we were left creating something from nothing, with lots of guidance regarding what they didn't like when they saw it.

Pictures of what my team envisioned for the waterfall were met with many questions and eventual changes as well. Not a single aspect of the feature was left untouched by the time the feature was completed. Although there were many design changes during the build, we couldn't have hit a bigger home run with everyone involved in the project. They loved it.

A Home Run Worth the Work

A formal, Asian-inspired, Zen-like



The desired look: Asian serenity with rustic charm.

atmosphere by way of the Tennessee Hills up and landed in the middle of Georgia. That's what we accomplished, and the homeowners couldn't be happier. Despite the fact that they didn't quite know what they wanted, often didn't like what they saw (more often than on any other project we have completed thus far), and changed their minds every other day (or so it seemed), we managed to create a spectacular, one-of-a-kind masterpiece that can be admired and enjoyed for years to come.

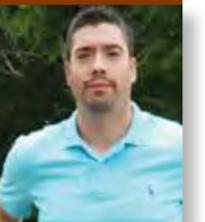
It's every pond builder's dream to have complete, 100-percent design control over a project. However, this isn't always the case, especially when constructing large projects where there are many decision-

makers in the equation. In this business, the design of a pond is the foundation upon which the beauty of the feature is developed; therefore, the process of creating the initial water feature design needs to be very clear and understandable. However, when there are multiple stakeholders involved, and input is provided from many different areas, solidifying and developing that foundation can become cumbersome, especially in large-scale projects. When multiple sources of design input are provided, not only is time impacted, but resources and manpower can also be potentially wasted. Despite all this, we were able to create a truly unique work of art. ☞

About the Author

John Magyar, owner of Universal Aquatics LLC in Atlanta, is a biologist with over 15 years of experience in pond design and installation and maintenance of koi ponds, pondless waterfalls, water gardens and water fountains. His expertise stems from years of work in the zoo and public aquarium industry throughout the United States. He takes a fish-first approach when it comes to designing and building ponds and other water feature systems.

John has worked as a biologist at the Georgia Aquarium, the San Antonio Zoo and the Flint RiverQuarium in Albany, Georgia. Working at public aquariums gave him a chance to care for exotic animals from around the world, such as whale sharks, manta rays, hammerhead sharks and venomous snakes, while developing a truly hands-on approach to designing, creating and maintaining many different types of water features.



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Pond **Patina**

A Pond's Patina

Protect vital critters with proper pond management

Jamie Beyer,

Midwest Waterscapes

Every pond is as unique as its owner. This uniqueness results from a huge number of variables, including climate, size and style of pond, fish, plants, human involvement, circulation, filters ... the list goes on. However, there is one aspect of all ponds that is the same. That is the pond's biofilm, or what I like to call A Pond's Patina (APP). This element is critical to how I manage my clients' and my own ponds. APP is so important to a pond ecosystem that, even though I wrote about it nine years ago in the magazine Pondkeeper, I want to revisit the subject.



The roots of plants like Yellow Flag Iris (*Iris pseudacorus*) provide a natural home for invertebrates and bacteria — all part of the pond's natural ecosystem.

A Layer of Life

So what is APP? It is the layer of life that can exist on everything in an aquatic ecosystem that is in contact with well-oxygenated water. It is the pond's natural biological filter. Most pond keepers know this as the "slime" layer that makes things slick. Many species of invertebrates and bacteria make up a large component of APP. Some are visible to the naked eye. Others are so small that a magnifying glass, dissecting scope or even a microscope is needed to see them. Critters like amoebas, worms, rotifers, aquatic insects and their larvae are just some examples. Literally tens of thousands of species can exist in a healthy pond's ecosystem. It is



The limestone piece was partially covered by another piece of limestone. The biofilm cannot grow where it is devoid of oxygen.

Water Hyacinth roots provide a natural biofilter for ponds. They not only utilize ammonia and other toxic byproducts of fish waste as well as organic matter decomposition, but they also provide a home for all kinds of small critters. These critters are the pond's natural ecosystem.



not important to know all the kinds and be able to identify them. What is important is to know they exist and that you should do everything in your power to keep APP healthy.

There is another live component of APP that is critical for this microcosm of invertebrates and bacteria to prosper. That is algae! Yes, there are good species of algae that we need in our ponds. Patina algae provide a substrate for the critters to adhere to, and some even graze on it.

APP is on the rocks, liner, pots, all plant parts (including roots), in the filters and, to a lesser extent, in the water itself. Of course, the critters in the water are free-floating, and that is how some of them can colonize new surfaces, which most do. There are invertebrates that live their whole lives in the water column without attaching to any surface. The amount

and type of patina varies with what it is attached to. For example, plant roots directly exposed to the water column will have a unique surface that certain critters thrive on. Water Hyacinths, with their roots dangling in the water, have heavily-colonized root zone micro ecosystems, providing a large surface area for diverse and healthy biological activity.

Maintaining Equilibrium

Earlier I stated that one thing all ponds have in common is some sort of patina, but the amount will differ. There is an optimum equilibrium between the plants, good algae and critters. A new pond and its ecosystem are in a dynamic flux of changing populations. As the pond matures, this balance becomes more stable. The balance will still fluctuate with changing conditions, like weather, plant and fish populations, but not as dramatically. This balance can be easily upset. For example, adding a treatment for string algae could inadvertently kill all the algae in the pond, including the patina algae.

A ponderer can speed up this balance by adding bacteria, plants and muck from a healthy, mature water garden. However, time is still necessary for the development of healthy populations. A community of APP can mature faster in warmer climates than colder climates. It takes a minimum of two to three years for

a Midwestern water garden to reach its best ecosystem equilibrium.

Once APP becomes mature, string algae is less likely to grow on that surface, which has already been populated by surface algae and APP critters. According to my own observations, the main body of a mature pond with APP equilibrium will not support the growth of string algae. The string algae will still grow in the stream because its patina died when the stream was shut down for winter.



This plastic pot, which was pulled out of a pond, had only an inch of muck in the bottom of it. APP grew above the muck layer. Since the patina needs oxygen, it will only grow above the detritus layer.

Proper Pond Management

Now I want to introduce a new subject, called Proper Pond Management (PPM). This is the most critical part of cultivating a healthy patina. In most cases PPM requires far less work in maintaining the pond than what is normally done by some pond keepers.

One aspect of PPM involves creating good oxygen levels throughout the pond in both winter and summer. Low oxygen levels are the most limiting factor in APP development. Increasing circulation can decrease the potential for areas of low oxygen, or dead zones. Just how much circulation is enough? A rule of thumb for small ponds is to pump the water a minimum of one pond volume every one to two hours. For example, a 1,000-gallon pond must have a water pump with an output of 500 to 1,000 gallons per hour, or GPH. This water is directed to areas that create the best circulation within the pond. This rule can be adjusted down some in larger ponds of 10,000 to 15,000 gallons. A flow rate of 5,000 to 7,000 GPH (or one pond volume per three to four hours) for a 20,000-gallon pond is enough in most cases. Wintertime circulation rates can be lower, since the demand for oxygen decreases and cold water holds much more

oxygen. But you still need some circulation in those cold months.

A four-letter word (that is actually five letters) that I say to never use or do is SCRUB. Never power wash or scrub the main body of the pond. APP has taken two to three years to mature, so to power wash it is just plain crazy. By doing this, the pond has been set back to new pond status. A majority of my clients want the "slime" removed. They want to see the beauty of the stone because, in their minds, this seems the most natural. However, the opposite is true. It takes some time to convince pond owners of the importance of this layer of life. A pond that does not have APP looks odd and unnatural to experienced pond keepers. Since the pond's ecosystem has been disrupted, the pond will go through new pond cycles every year. This can require chemicals to control the cycles.

Attempting to grow a thicker layer of APP is not possible. The layer has an optimum thickness, above which the lower part of the patina will start to suffocate and slough off. Fish are also constantly grazing on it, which is healthy for the fish but does keep the layer only a millimeter or so thick.

Most ponderers shut down the stream in the fall, so the patina in a stream will die anyway. It is OK to power wash just the stream in the spring, but only right after startup, before the stream has been running for very long. That stream will colonize quickly once it is started, because



The Calico Shubunkin Goldfish enjoy browsing the patina, shown growing on the liner in this photo. APP provides all kinds of natural food for fish.

the pond itself provides a huge population of critters to inoculate it.

Prevent excessive accumulation of organic load by keeping the leaves and sediment from building up and depleting the available oxygen.

The Power of Plants

PPM involves adding plants. As mentioned earlier, plants add a different

type of substrate for APP to grow on. Plants also extract the end products of the ammonia cycle that are created by fish excretions and decomposition of organic matter.

PPM also means never overstocking fish or overfeeding them. This adds more ammonia for the patina to process. There is only so much APP can do.

Adding some kinds of chemicals or soaps can kill critters or algae. This might be

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appropriate for certain kinds of algae, but you may inadvertently kill the good kinds as well. Of course there are good additives, so know the possible consequences by doing your research.

When cleaning a pond, avoid letting the patina dry out. I will periodically spray the



There was a muck layer in the bottom of this pond. The patina only grows above this layer where there is oxygen.

sides of the pond and all the stone with water as I am cleaning a pond. Even shutting a stream down for an hour or two can be lethal for the stream patina unless it is kept wet with a garden hose spray. Also, when cleaning a pond, try to save as much water as you can in temporary pools. As mentioned earlier, this water has a lot of critters in it. 100-percent-new water will change the pH as well as the temperature.

So, it is less traumatic for the ecosystem (the fish and APP) if the saved water is used when transferring them back into the pond.

Finally, add surface area for APP to colonize. One way is by adding a biological filter. A properly designed biofilter is an ideal home for the patina. The types of critters in these filters is different than those on the rocks because these filters are dark and algae will not grow in them. Adding or lengthening a stream will increase surface area available for APP to grow on. Adding rocks to the sides of a pond will allow the patina to proliferate. Adding rocks to the bottom of a pond is pointless, since the sediment that covers the stone prevents the biofilm from forming. This area becomes anaerobic (without oxygen) and can be toxic. Besides, removing excess sediment in a rocked pond bottom becomes a tedious job.

To be a successful pond keeper you must do everything in your power to allow APP to prosper. Practice PPM and your clients will have a much more enjoyable water garden with less work. What is good for ponds' natural biological filters is good for the fish, the plants and the beauty of water gardens. 

About the Author

Water gardening has been a passion of **Jamie Beyer's** for over 50 years and he has worked on over 1,000 ponds.



He personally has several very large ponds, which contain many kinds of water plants and fish. Jamie has a Master's Degree in Fish and Wildlife

Biology, is a Lifetime Master Gardener and is founder and past president of the Central Iowa Water Garden Association. He has a broad background in fisheries, the dynamics of water, horticulture and aquatic and wildlife ecology.

He owns a consulting/installation business, Midwest Waterscapes, in which he works as a water garden, fountain and pond consultant/installer.

Swim Ponds



An NSP in Ojai, California with traditional pool optics, featured on Animal Planet's The Pool Master. Photo courtesy of California BioNova and Animal Planet.

Swimming Ponds **VS.** Natural Swimming Pools

A **distinction** without a **difference**

by **James Robyn**,
BioNova Natural Pools

When a designer/builder sells a concept to a homeowner to construct a vessel with the intent of having people swim in it — but instead of using chemicals to treat the water, the swimming water will be treated with biological filtration — what should we call this vessel?

Two terms are being bandied about in the industry. Some people refer to these as Swimming Ponds and others refer to them as Natural Swimming Pools. Is there a difference between the two?

In my opinion, the answer is that there is a distinction, but there is really no difference. The original "Swimming Pond" was invented in Austria by Werner Gamerith in 1983. My wife and I



James and Hae-Sun Robyn with Werner Gamerith, inventor of the NSP.

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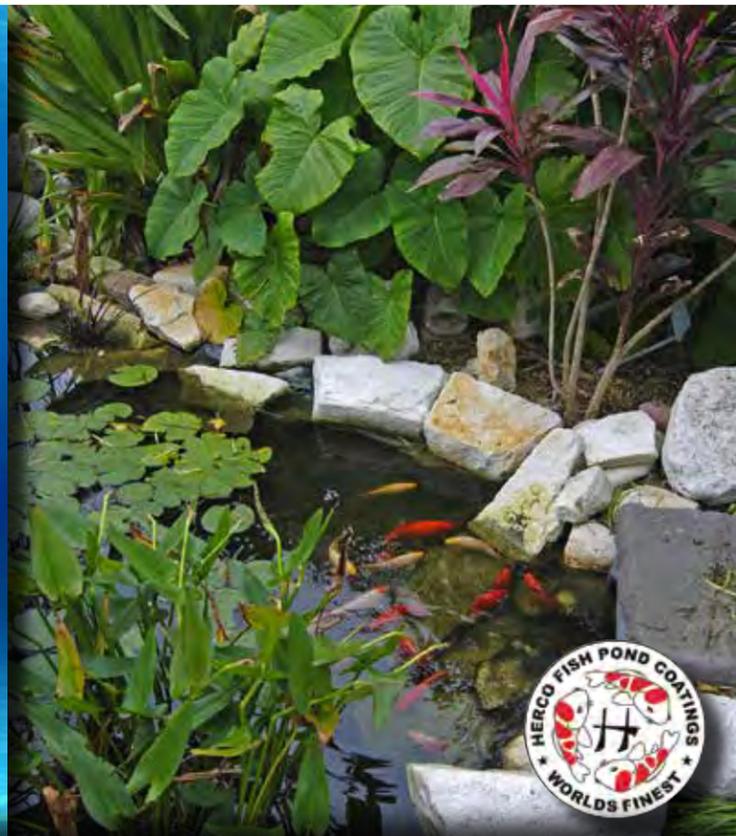
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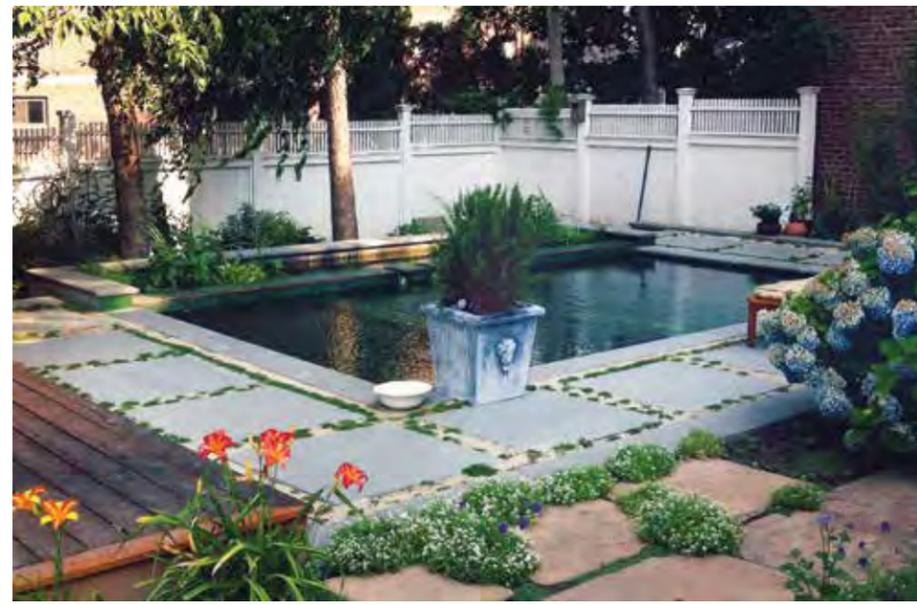


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had the good fortune to meet with Herr Gamerith in Austria last year and attend one of his lectures at the International Organization for Natural Bathing Water, to which I am the appointed representative from the USA. The IOB (see www.iob-ev.eu) considers itself to be the “governing body of swimming pond experts.”

Tracing the Terms

In German, the word for a Swimming Pond is Schwimmteich (literally SwimPond) and that is what Herr Gamerith called his invention. The Swimming Pond manifests three discrete characteristics:

- 1) It is a sealed, contained, i.e., watertight vessel.
- 2) The planted zone is separated from the swimming zone so that the swimmers do not disturb the plants.
- 3) There is no use of chemicals or devices to disinfect or sterilize the water. The water is clarified and purified with natural biological systems.

In 2003 the German FLL (Forschungsgesellschaft Landschaftsentwicklung Landschaftsbau, or The Society for Landscape Development and Landscape Construction) developed and published a set of guidelines for the design and construction of Swimming Ponds and Natural Swimming Pools, both residential



Cover of the most recent edition of Schwimmteich und Naturpool, with permission of the publisher.

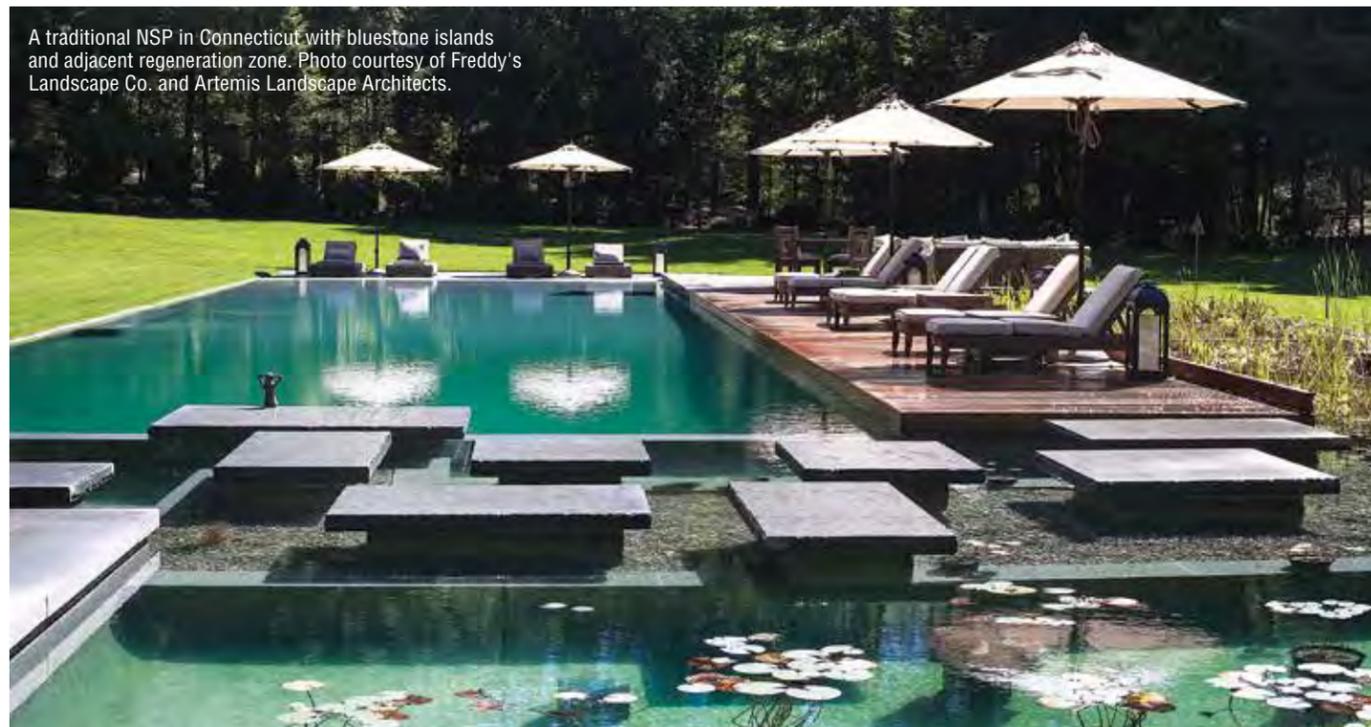
and public. Five distinct types of Swimming Ponds and/or Natural Swimming Pools are defined by the FLL. It's beyond the scope of this article to discuss these five different types, but in a future article we can explore this interesting subject.

Next, in 2005, the first book in the English language on the subject was written

by the British landscape designer Michael Littlewood. He eschewed the literal translation of Schwimmteiche to Swimming Ponds and instead coined the term “Natural Swimming Pools” for the title of his book.

In 2007, my firm, BioNova Natural Pools, introduced the genuine German Schwimmteich conforming to FLL Guidelines to the North

From left to right: An NSP in Maine with naturalistic, pondlike elements. Photo courtesy of BioNova Natural Pools and Rin Robyn Pools. A traditional NSP (middle) in a small backyard near Boston, Massachusetts. Photo courtesy of Waterscapes by Jesse Dutra. A pondlike NSP (above) in Utah with decorative stone boulders and naturalistic water features. Photo courtesy of Utah Waters Edge.



A traditional NSP in Connecticut with bluestone islands and adjacent regeneration zone. Photo courtesy of Freddy's Landscape Co. and Artemis Landscape Architects.

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American market. We decided to use the term Natural Swimming Pool or Natural Swimming Pond, abbreviated as NSP, to describe our product. Although I've always said that we should call these "constructed swimming ponds," the term Natural Swimming Pool sounds a lot better and we intentionally use the shortened term NSP.

We consciously chose to use the term NSP instead of Swimming Ponds because in English, the words "Swimming Ponds" are too nebulous. A "Swimming Pond" could easily be a spring-fed pond that people swim in — or a diverted or sectioned-off portion of a stream. We quickly found that using the term "Swimming Pond" caused more confusion to the uninitiated than to use the term NSP after having defined it.

However, there have been several recent magazine articles attempting to juxtapose the Swimming Pond and the Natural Swimming Pool as being somehow adversarial. And, the term Swimming Pond is sometimes being misused to describe a vessel that is designed for people to swim in, but actually is a landscape pond and does not conform to swimming pool code.

Swimming Pool Codes

In my opinion, it is wrong to design and construct a vessel with the intention of allowing people to swim in it, but not build it in conformance with swimming pool standards. This is potentially an insurance and legal nightmare should anyone be injured or die in one of these vessels.

The point being that if one designs a vessel for people to swim or bathe in, then this vessel should be designed, permitted and constructed as a swimming pool, no matter what type of water purification we are using. Issues with respect to everything from access to zoning, including depth configuration, diving envelopes,

If one designs a vessel for people to swim or bathe in, then this vessel should be designed, permitted and constructed as a swimming pool, no matter what type of water purification we are using.

electrical safety, fencing, line velocities, turnover rates and VGB compliance, need to be taken into account in order to provide for human safety.

Over the years, we've had many potential clients looking to go "under the radar" with an NSP by saying, "Let's not get a permit; we'll just tell them that it's a pond!" In my opinion this is foolhardy and naive.

Today in Germany, the English term Natural Swimming Pool has back-filtered its way into the German language with the word Naturpool. And in German-speaking Europe now, the word Schwimmteich refers to an NSP that looks like a pond and the term Naturpool refers to an NSP that looks more like a traditional swimming pool. In terms of

the FLL Guidelines, a Schwimmteich is an NSP of Types I, II or III and a Naturpool is either a Type IV or V. There is even a magazine published today called Schwimmteich und Naturpool that illustrates the point.

So there is a distinction between a Swimming Pond and a Natural Swimming Pond. But, this distinction is in how they look — a Swimming Pond looks more like a pond and a Natural Swimming Pool looks more like a traditional pool — and although there is a distinction, there is no difference in terms of the definition of the NSP, which is the term that we use for both of these. They still meet the same basic three criteria — and most importantly, they should be designed and constructed in conformance with swimming pool code. ☞

About the Author

James Robyn is the president and CEO of BioNova Natural Pools, which supports a network of Dealer Partners around North America in the design, construction and maintenance of NSPs. Robyn is also the founder and first president of the Association for Swimming Ponds and Natural Swimming Pools. For more information on the ASPNSP, email info@aspnsp.org.



A traditional gunite NSP in Connecticut with bluestone patio. Photo courtesy of Freddy's Landscape Co. and Artemis Landscape Architects.



Oh Baby, Baby!

Peer into the future to select show-winning koi

by **Shane Stefek,**
Water Garden Gems

One of the most enjoyable aspects of owning a koi pond is picking out your new pond family members. A trip to your local koi dealer is exciting, and you generally have a plan in mind before you walk through the gates. For instance, how many koi do you need? What size? Which colors or classifications are you hoping to find, and how much are you willing to spend? Whether you are shopping to add beauty to your pond or shopping for a future show koi, the reality soon takes hold when you look into the tanks and cannot decide. Are you making the right decision?!

“What will this koi look like in a few years? Should I buy large or small? Who can help me?”

Gambling with Tosai

When we look at koi, we have to understand that what we see when we are buying Tosai (one-year-old koi) is not what we may see in the future. This is especially true when we are buying baby koi in the typical 3-to-5-inch and 6-to-8-inch ranges. That perfect Sanke at 6 to 8 inches today may be a show-winner in three years. Or, it could be bleached out or blackened and lose all color and value. Will the colors run or splotch? Will the pattern improve with the growth of the koi? Will the black take over? Will the red disappear? These are questions that we all ask, novice and professional, because it is not a perfect science. And that is what makes “growing out” koi exciting. It is a fun and dynamic hobby.

No matter how experienced, you have no guarantees in choosing baby koi. This fact is at the heart of the reality that most koi show winners are purchased as larger fish already. With grown koi, you can see what you are getting. But breeders and

many hobbyists alike enjoy the challenge and the game of raising the koi from babies and gambling with a little luck.

Picking the Greats

So how do you pick future greats when they are merely 4 to 6 inches now? How do you guess what the fish will look like in three years? Although it is not a science, there are definite traits we look for in baby koi that increase the likelihood that our new little addition will add great beauty to

head and good separation between the eyes, signifying the likelihood that the fish will grow larger. At the tail, we are looking for a wider tail joint so that when the koi is larger, the thickness will “show” more powerful conformation.

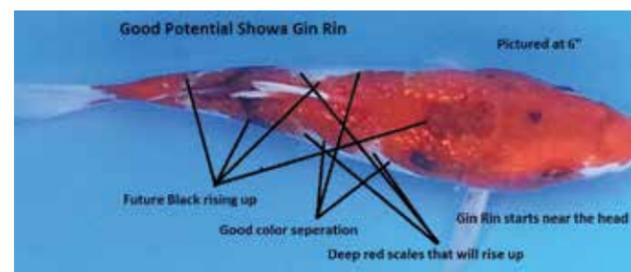
“Skin quality” means high gloss and shine as well as purity of color. Ultimately, how detailed the breeders are in their culling and their use of trusted bloodlines really makes a difference. This is why you should buy from sources that have a tradition for great koi. Certain farms are known for high gloss, pure whites, deep reds, *Ginrin* or reticulation patterns from head to tail, et cetera.

The Black and the Red

Inspect the black, buy the red. When choosing reds (*Hi*) and blacks (*Sumi*), seeing the fish in the future is critical to your selection. Red is the baseline “must-have” to consider the koi. However, red is delicate in small koi, so you want to look for deep, consistent red from the front to the back of the koi and in large patterns rather than splotches. Consistency from head to tail and side to side is what we want our *Hi* (red) to become. Of course, we need to see the potential future two-step/three-step/four-step pattern down the dorsal, but it is more than pattern. The

red has to stay there, and that is why we are looking at the details of the coloring beyond the pattern.

To best guess where we will keep the red, we look at the edges of coloring. We want the head side of the red patterns to be a little blurred, because we are looking at those red scales under the white scales in front of them. This gets cleaned up when the koi grows. If we do not see this, then the red is likely shallow and the front line of red will change. In the sides and tail end of the color patches, we want to see defined



our pond for years to come.

We are going to discuss three of those traits: Body and Quality; the Red and the Black; and finally, Pattern.

Body and Quality

First and foremost, we have to buy the healthiest fish, as this is key in growth potential. Make sure the fish is swimming normally, socializing with the other koi in the tank, has no apparent fin or body flaws and has head and tail potential. When we look at the head, we are looking for a broad

separation between the red and the white rather than a messy mixture. Bold red is the ultimate goal.

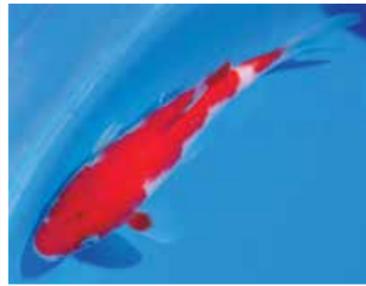
Where the *Hi* is your baseline on the white painter's canvas, your *Sumi* (black) is the icing on the cake. *Sumi* can be equally hard to predict and even more frustrating than red because often times underlying *Sumi* never develops. So you choose a Showa with great *Hi* and a potential *Sumi* pattern that would be "show-worthy," and then half of the *Sumi* does not develop and you are left with a poor-quality koi with black only at the tail, or scattered. Or, when the black does rise, it is flat rather than high-quality gloss.

When we look at the black, we want to see two things. First, we want at least one scale of good *Sumi* present in the young koi we can judge well (most *Sumi* is under the top layers of scales in baby koi, so you are looking through red or white scales and unable to determine quality of black).

Second, we want the black to be darker



This baby Shiro Utsuri Ginrin and Tosai Inazuma Kohaku have great potential. Both display great body shape; their color is deep, broad, and defined; and their patterns have winning potential.



in the center of the scale than on the edge. You can check the center of the scale by carefully bending the fish to spread the scales apart and looking between them to see the color going through to the body of the fish, although this is not very commonly allowed by retailers in order to maintain the safety of the fish. If the outside edge of the scale is darker, be it *Sumi* or *Hi*, this is not a stable color and will likely go away. We want to see color that is darkest deep into the scale. This is the color that will develop well. Also, for a truer mark, pay more attention to

how good the black on white is and less attention to the black on red.

Pattern

Pattern is what most buyers see, and it overwhelms the above qualities that are more important. In saying that, though, pattern is ultimately what sets apart the good from the great. One of the critical elements to look for in pattern is how far down the side of the baby koi the pattern falls. As the koi matures, it broadens its body shape, so a baby koi with far-reaching pattern down the sides, below the lateral

line, will hold more color pattern as it grows and the pattern "spreads" across the wider body. It is critical that pattern exist from head to tail, but when selecting baby koi you have to know that generally speaking, red is stronger near the head and weaker

Remember, you are buying koi that have not "filled out" yet. The most common mistake in buying baby koi is buying what you see and not what you don't see.

toward the tail. Also, black starts heavier at the tail and often works its way up the fish with age (in Sanke and Showa primarily).

Remember, you are buying koi that have not "filled out" yet. The

most common mistake in buying baby koi is buying what you see and not what you don't see. You need to know what color patterns do with maturity and predict where colors will change. For example, it's very likely that a great three-step adult Kohaku was the baby Kohaku that had solid red head to tail that looked too plain. But an educated and experienced eye might have seen "stepping" potential in the red that would occur as the fish broadens and the red stretches, allowing white to show through.

It is a gamble buying baby koi, but it can be the most enjoyable and rewarding part of the hobby. Shop reputable suppliers, listen to trusted experts, have them "bowl" several fish for you to compare side by side, and you may raise a Show Champion one day by shopping out of the 5-to-7-inch tank. And that would be an achievement any hobbyist would be proud of! 

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 over 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.



Shane and his bride, Alona, along with their three sons — Nicholas, Peyton and Travis — work to help their customers create their own backyard oases as they enjoy sharing their knowledge and love for the hobby. With 15 years of pond-building experience, Shane shares his knowledge at numerous seminars throughout central Texas each year at clubs, businesses and schools. He also hosts club meetings and events at Water Garden Gems, where hobbyists can enjoy 3.5 acres of waterfalls, ponds, fountains — and more than 25,000 gallons of koi and goldfish sale tanks.

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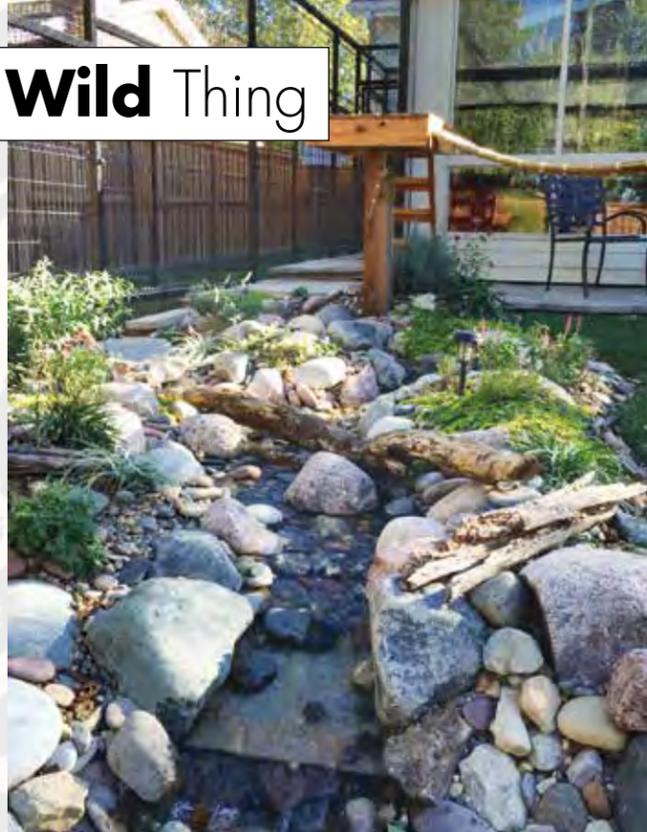
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A mini tributary (left) provides entertainment and duplicates the natural environment of a serval. Mia explores all the nooks and crannies of her tributary (right), created with Atlantic Water Gardens' Oasis line of Pond-Free products.



Mia's enclosure (left) is quite nice, measuring 26 by 24 feet outdoors with an attached 14-by-14-foot indoor sunroom. Mia's hut and platforms (right) duplicate natural environments while providing exercise and playtime.

Oh, Mama Mia!

Unleashing a feature fit for a wild animal

by Aaron Burchett,
PondMarket

One weekday afternoon, a customer came into our store inquiring about installing a water feature. Interestingly, he followed it up with, "I've looked it up online and I really do not want to buy a bunch of expensive jazz." With all the home remedies out there and the DIY channel, who can blame him? Homemade projects are made to look easy and doable with common household items.

I took the time to explain the difference between a quality system and a homemade system, centering my factual points on routine maintenance, sustainability and reliability. For example, in a pond-free system, a five-gallon bucket can be used in place of a pump chamber, milk crates can be used in place of Eco-Blox and a sump pump with garden hose can be used to run the system and deliver water to the waterfall.

Of course, there are many downsides to using these types of products. Five-gallon buckets and milk crates do not maintain structural integrity

under pressure, and we all know the disadvantages of sumps pumps and garden hoses. The power consumption of a sump pump is mind-boggling; many are oil-filled. And what happens to a garden hose when a rock is placed on top of it?

After communicating these few facts, the customer was receptive to exploring components composing a quality system. Before showing him products, I needed to ask about the application to recommend the appropriate system. I must admit, I was not prepared for the answer.

Mia the African Serval

In 18 years of business, I have never sold a water feature for a cat ... even an ordinary one. And this was no ordinary cat. Mia is an African serval.

For those wondering, African servals are medium-size cats native to Sub-Saharan Africa. Although they can be aggressive, Mia, in many ways, is no different than any other ordinary house cat. African servals tend to take to one person, similar to a parrot. In this case, Mia has taken to Cassie. Larry, on the other hand, has

learned to deal with the cat's instincts of swatting, clawing and pouncing. Mia can and will draw blood, so adequate care and caution must be taken when handling her.

Building a Habitat

In order to acquire an African serval in Missouri, as in other states, a potential adopter must take several classes and build a suitable habitat that accommodates the animal while providing a humane living space. The habitat must provide a safe environment for the adopter, the serval and the public. These habitats must be inspected by local and state government.

Larry and Cassie went through all the necessary protocols, constructed a habitat and obtained certification to adopt Mia. Based on the natural habitat of the animal, not required by the government, they decided that Mia needed a water feature to finish off her habitat. African servals, being native to Sub-Saharan Africa, live along tributaries. African servals have the ability to swim, but rarely do so.

After discussing Mia, her natural habitat and maintenance expectations of the water feature with Larry and Cassie, we all decided that a pond-free system was the way to go for them and for Mia. We compared the pros and cons of a DIY, product-based solution versus a professionally designed system. I mentioned pump longevity, safety and energy consumption as well as future maintenance. They decided they needed a heavy-duty solution designed for a professional installer, but a system that was easy for them to install at the same time. We had the perfect solution in stock: the Oasis Pond-Free System manufactured by Atlantic Water Gardens.

The Perfect System

Atlantic Water Gardens' Oasis Pond-Free System comprises a heavy-duty compact pump chamber, Eco-Blox, a robust waterfall spillway, an auto-fill kit, 45-mil EPDM liner and PVC. And we recommended the new TT series pump. The TT series pump does excellent work in a pump chamber application, requires minimal maintenance, carries a three-year limited warranty and uses very little electricity. These components fit the bill for the customer because they were robust and easy to install and would work to create a "tributary" inside Mia's habitat. After all, it is all about the cat. The added bonus was that, regardless of whether they purchased a pre-boxed kit or purchased all the components separately, there was a complete instruction manual detailed with illustrations addressing both applications.

Maintenance

The next major obstacle was maintenance, in terms of water quality and overall appearance. As with any animal enclosure, there are waste issues and organic debris issues. In a natural setting, of course, Mia would live near tributaries and rely on the tributaries for food and playtime. The pond-free water feature would duplicate this necessary component of her life. Keeping this in mind, a natural and non-toxic maintenance regimen was needed to address toxicity and organic buildup. The last thing Larry and Cassie wanted was a water feature they had to power wash and clean on a regular basis.

We recommended the Triton Ionizer as well as a regimen consisting of Microbe-Lift PL and PondMarket Restor. The Triton

Ionizer adds minerals to the water, dramatically decreasing organic buildup on rocks and coping of the water feature. Microbe-Lift PL eats up waste from Mia while naturally maintaining healthy water quality. Restor safely removes the remaining gunk buildup on the waterfall rocks, eliminating the need to power wash or scrub the water feature.

As of today, approximately five months later, Mia loves her tributary and Larry and Cassie love the low maintenance of the water feature. Even better, the tributary provides Mia with hours of rooting and exploring time while burning excess energy — without being destructive inside her enclosure. ☺

About the Author

Aaron Burchett and family

opened PondMarket in 1997, serving the DIY and contractor markets. PondMarket expanded into regional markets in 1999 with the launch of the company's website, PondMarket.com. Since 2009, PondMarket has been the vendor of choice for low-maintenance water feature design, installation and maintenance in the St. Louis and Illinois markets. Aaron has been, and continues to be, solicited by garden clubs and koi clubs for presentations throughout the country regarding low-maintenance water feature design and construction and fish and water-quality care. He is certified in geomembrane design and construction by Firestone Speciality Products.



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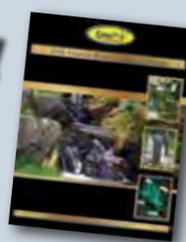


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Stop the Seepage!

Choose the right liner to seal your pond

by Paul Amos,
Amos Sales Associates, Ltd.

Ponds and lakes come in a variety of shapes and sizes. No matter if it's a small backyard water garden, a rain catchment basin, a fish farm pond, a stormwater basin, an irrigation lake or a recreational and storage reservoir ... in order for it to adequately hold water, the basin must be constructed of a low-permeability or impermeable liner that will seal the structure — or greatly limit seepage.

Calculating Seepage

The engineering community uses testing and known equations to calculate seepage rates, or permeability, through various materials. This is typically

expressed in feet per second (ft/sec) or centimeters per second (cm/sec) and indicates the rate at which water would flow

Selecting a liner is based on a variety of factors. Obviously, low permeability is critical, as this is directly related to the purpose for the liner installation.

through the material.

Sand and gravel, for instance, are highly permeable and can be expressed as 1×10^{-2} or 10^{-3} cm/sec. Compacted clay and/or soil-amended clay can seep at rates of 1×10^{-5} all the way down to 1×10^{-10} cm/sec. Properly constructed concrete can

get even lower permeability rates, such as 1×10^{-11} . Liquid-applied synthetics and premanufactured synthetics are technically impermeable, so moisture vapor transmission rates are used to calculate their relative permeability, which is often as low as 1×10^{-12} or 10^{-13} .

These numbers are fun to think about, but in reality, what does this mean? In a 400-square-foot area, gravel would seep over 300,000,000 gallons per year and sand over 30,000,000. Clay would vary between 3,000 and 30,000, and amendments could impact this 10 to 20 percent. Concretes and synthetics would seep less than 20 gallons per year.

Factors to Consider

Selecting a liner is based on a variety



Reinforced EPDM was used to line a fish hatchery pond in Dexter, New Mexico.



Putting the finishing touches on a black-colored concrete liner.

of factors. Obviously, low permeability is critical, as this is directly related to the purpose for the liner installation. However, in areas of high rain and/or runoff that will help keep a pond at the desired water level, we can choose products at the upper end of a good scale of permeability (1×10^{-6} cm/sec) specification. In areas prone to drought or long periods without rain or runoff, we should target the lower end of the scale (1×10^{-11} or less).

Durability is another key factor in selecting a liner. Unless the desired life of a project is very short, we want something that will last long and hold up to the environmental conditions in which it is installed. Liquids generally have great mass, so adequate structure to support the containment is, for obvious reasons, critical.

Selecting a liner well-suited to the application is also very important. Choosing the wrong liner can lead to

chemical attack, dead fish and reductions in the quality of the liquid contained.

The conditions of the site — including what kinds of equipment will access the area, high winds and dust, existing drainage and other factors — can dictate the type of liner best suited to the project. Also, sealing to numerous detail structures such as pipes, walls and corners can affect liner selection and success.

And, of course, we must consider value. I say “value” instead of “price” because I believe there is a balance between the initial price, installation time and maintenance and repair of issues and problems that arise during the service life. There seems to be a segment of the market that does not have the funds to do it right initially but does have the funds to do it over. Searching for the best value is aimed at avoiding this scenario.

Each type of liner has advantages and



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disadvantages in performance. The balance of this article will address those qualities and hopefully give readers some insight into what it takes to select, then successfully install, low-permeability liners. The liners I have chosen to discuss are: clays, amended soils, concrete, liquid applied and manufactured synthetic liners.

Natural Options

Clays and soil-amended liners are nature's best barriers. Good clays have small particles that expand in moisture, subse-

quently "plugging" existing gaps that water can seep through. If a good quality clay is on-site, it is usually the most cost-effective product to install. Clays can be tricky, as low PI (plasticity index) values won't result in the best barriers. Clay installation requires a large carbon footprint to install and, when left exposed to the elements, clay can dry and desiccate, leading to cracking and leakage. Wet/dry and freeze/thaw cycles can damage the liner's efficacy.

There are both natural and polymeric soil amendments that will decrease permeability. Sodium Bentonite has a very high

swell rate and, when wetted, will plug up gaps in soil. Permeability can be reduced several orders of magnitude with this process. Polymeric additives function similarly. Success increases as the product is tilled into the soil, wetted and then compacted. As with clay, this has a higher carbon footprint and when exposed will be subject to the same drying and desiccating qualities of clay. There are applications where these products are applied in existing ponds full of water. The theory is that the particles will flow to the leaks and start to plug them.

Concrete

Concrete offers the best structure of all liner types. When installed properly, using the right reinforcements and psi values, it offers a long-term, low-permeability liner. Concrete is typically more expensive than the other types of liner, is susceptible to cracking and can affect the pH of the water during the initial phase of operation.

Synthetic Options

Liquid-applied membranes may be sprayed or applied by roller. These

membranes offer very low permeability and install seamlessly, with no folds or wrinkles on the surfaces to which they are applied. The surface must have adequate structure and be properly prepared. The thickness of the applied membrane can be operator-dependent, so choosing someone with successful experience is strongly recommended.

Synthetic manufactured membranes are also very low-permeability products. Compared to liquid-applied membranes and concrete, they can be very cost-effective. Since they are manufactured in a controlled environment, the quality and uniformity of

From left to right: EPDM seals a backyard water garden in Kingwood, Texas. Putting the finishing touches on a black-colored concrete liner. A pond-free stream and falls over 30-mil LLPDE. 45 mil EPDM. This 125-by-225-foot pond (above) was lined with one seamless piece of 30-mil PVC.

the product is typically very high. Synthetic membranes can be supplied in large panels to minimize or even eliminate field seaming. These liners do not have structure and must be placed on properly prepared subgrades. They are generally thin (20 to 80 mils) and can, unless placed on smooth ground, run the risk of penetration. The ability of these

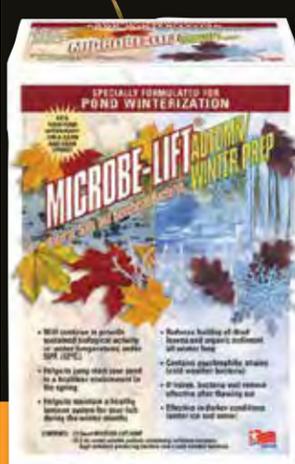
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This PVC pond liner was installed by a professional liner company.

liners to withstand chemical attack, resist ultraviolet exposure and be “fish friendly” varies greatly.

Choosing a Synthetic

The basic varieties of synthetic membrane liners are polyethylene, PVC, EPDM and polypropylene. Choosing between these four types of liner can be very challenging, as manufacturers list product specifications that can get confusing.

Take, for example, puncture resistance. Lab puncture test using sharp probes to measure the force required to penetrate the liner will get different results from lab puncture tests using hydrostatic pressure over simulated rocks. Elongation is often calculated from two-dimensional tests and only break strength is recorded — omitting yield, which is the crucial measurement of the actual point at which the material properties alter, rendering the liner susceptible to breach. Polyethylene has excellent strength and chemical resistance but very poor elongation. PVC has very good

elongation and decent strength, but in the presence of sunlight it can become brittle. Polypropylene has good strength and good elongation but has had varied success in exposed applications. EPDM has the best elongation and UV resistance but limited chemical resistance. One would be wise to look at installations where liners have been successful over long periods of time before selecting a liner for a particular project.

Success-Based Decisions

As you can tell from the above, liner selection can be complex, and maybe even complicated. However, as with most things, looking for good records of success is always a good place to start. All of the above liner types have been installed successfully — and have experienced failure. Selection becomes a process that involves the right input up front during design to narrow the options, the right techniques used to install the liner and clear understand-

ing of the maintenance involved with the particular liner chosen. During the design process, some of the questions that need to be answered are: What is the application? What is the desired appearance? What is the expected life of the project? What is the annual rainfall, and how does the site drain? What are the existing soil conditions? What regulations or permitting will be involved?

Regarding installation, seek answers to questions like these: What are we good at? What kind of equipment can I get to the site? Is adequate power available? Is there space to store product before and during installation? What inspections will I perform to ensure success?

Then, looking at maintenance, consider site issues like drainage, groundwater, erosion, drought, flood, et cetera. All of these factors can affect the success of a liner. But with proper consideration, you can choose the perfect one for the job. ☞

About the Author

Paul Amos is the managing member of Amos Sales Associates, Ltd., a manufacturer’s rep firm in Kingwood, Texas, near Houston. Following 12 years in the environmental lining business — consulting with environmental engineers, landfill owners, industry regulators and other companies involved in design and construction of lining systems — Paul started a rep firm. Amos Sales Associates, Ltd. began in January of 2004 as the Firestone Specialty Products representative assisting in the sales and installation of PondGard and EPDM Geomembrane liner.



Paul installed his first water garden in April of 2004, and various industry experts have helped form his education and knowledge of water gardens. The knowledge gained from these leaders, as well as managing a pond maintenance company for 3 years, have provided a base of information to share with others interested in pursuing successful ventures in water gardening.

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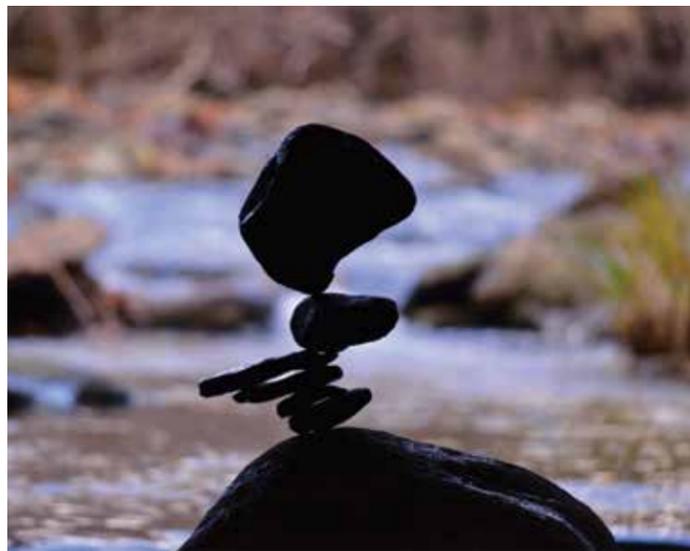
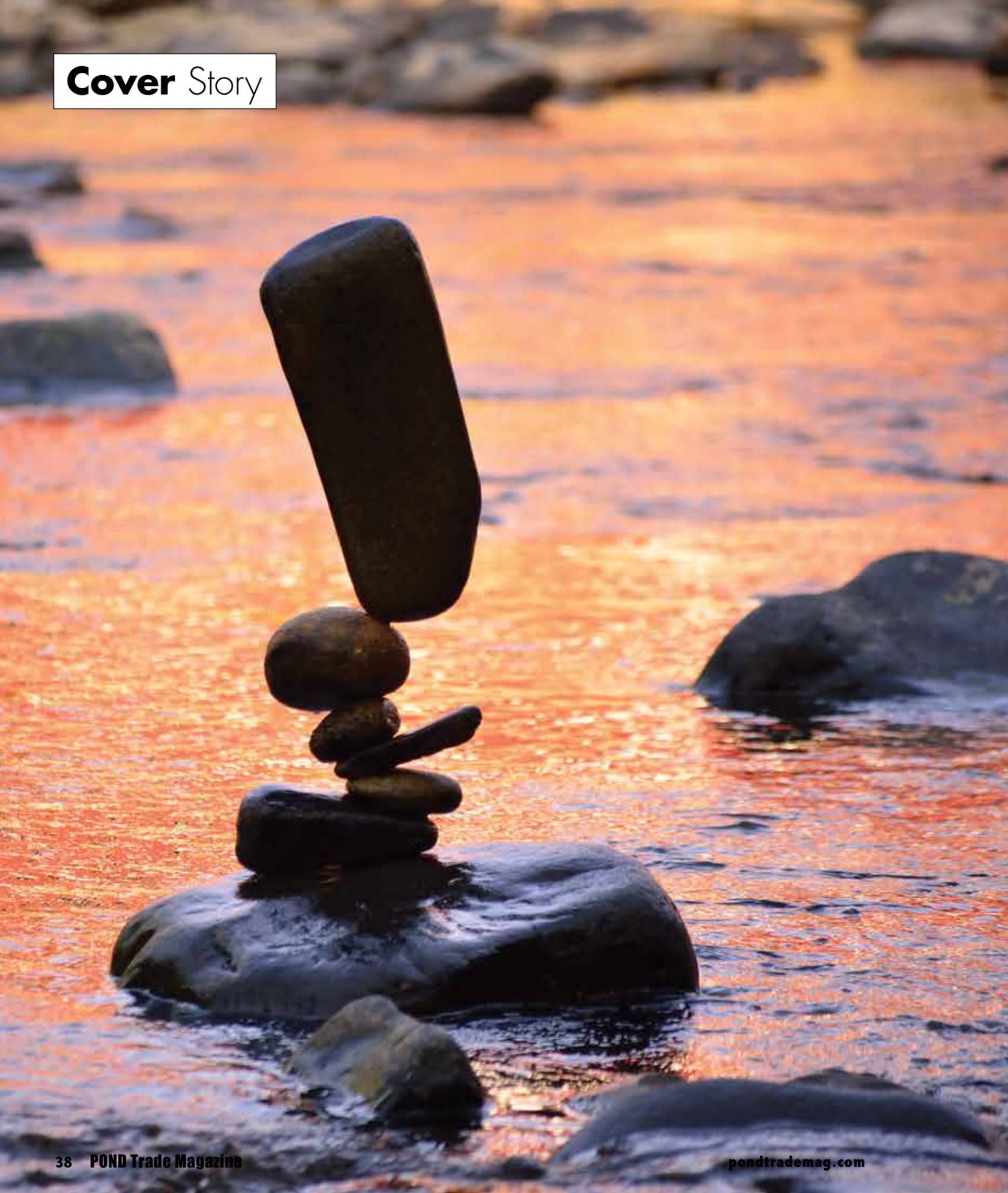
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Hanging in the Balance

The precarious artistry of **balancing stones**

by **Tim Anderson,**
Keystone Balance

The art of precariously placing stones atop one another, usually in creative and highly improbable formations, with the assistance of nothing other than gravity. For some it's a hobby ... for others, a form of meditation, a way to exercise creativity or even a profession. It is stone balancing ... and it is my passion.

Below is a compilation of the most commonly asked questions I've received about stone balancing over the last several years.

"How do you do that?"

The answer is always short and simple: tons of practice and patience! To the youngsters, I always just say that it's magic, which almost always puts smiles on their faces.

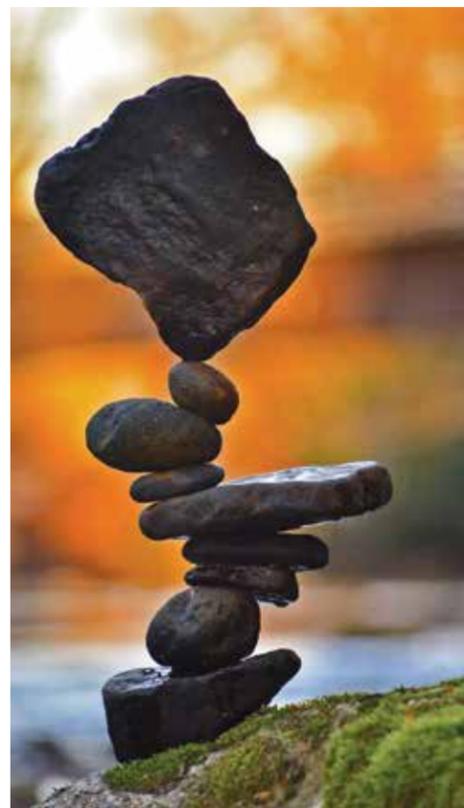
"How long do they last?"

It ranges from a few seconds to a few weeks,

depending on environmental factors. The most common causes of demise are wind and humans. Despite what most imagine, rain has very little effect on the balance — even less so if it's coming straight down. Many times those who come upon a stone balance can't resist a brief touch to see if it's been glued. Usually, to the surprise of the individual, the formation tumbles and they're quite shocked. Not many people have witnessed stones sitting in the fashion set by a highly skilled stone balance artist. As if they defy the laws of physics, many balances are so precarious that the slightest breeze sends them tumbling to the ground.

"Does it make you angry when they fall?"

Balances falling is something that one gets used to quite quickly. It's almost humorous, in a way. Personal satisfaction is quickly obtained the moment you remove your hands and realize no further support is required. Given their often short life span, permanence of the stone balance is best achieved through photography ... if you can get to the camera quickly enough.



“How long do they take to create?”

After the stone selection process, most take less than 30 minutes or so. Some of the more complex configurations can take several hours. For me, I personally prefer to work in rivers, creeks and streams. The atmosphere is very soothing and allows for the full concentration required for the most delicate balances. Besides the calming effect, they contain beautiful, polished stones that have been tumbled and smoothed over millions and billions of years, each one unique in shape and texture. These locations are always amazing and make for an incredible studio, or “office.”

Amazed at Their Amazement

“Do you get nervous when people watch?”
Not at all; I enjoy performing in front of people. It’s an experience for

the onlookers as much as it is for me. I’m amazed watching people be amazed. People become captivated by the process. There’s often a crescendo of emotion, or even disbelief, when they see an incredibly large top stone picked up one-handed and gently placed upon a teetering, unstable grouping of stones, each being steadied by the other. “No way” is often heard during this moment.

Barely visible micro-adjustments take place as the stones are moved into the exact alignment required to achieve balance. As I move my hands away, an eruption of satisfaction comes from the crowd, usually through applause. The disbelievers become believers and are quick to verify the reality-bending madness that just took place to all those who arrive after the stone balance is standing free of support. It never ceases to surprise me how a few balanced stones can break down barriers between those stopping to admire. The balances themselves are conversa-



tion-starters and crowd-attractors. On an average summer day of balancing, hundreds stop to admire my creations. Most sit and watch as I continue to create, inquisitive about the process of me wandering the water, seeking out unique and interesting stones to be used in the next balance. Upon completion, the compliments and questions start flying. I’ve found that most people are genuinely excited to express their amazement about what they’ve just watched.

I’m always happy to talk, explain and hopefully spark some creativity in those who otherwise consider themselves non-creative. Kids are quick to try to emulate, while the adults are a little more reluc-

tant. Usually, after about 10 minutes of watching the kids working on stacking rocks, adults can’t help but offer guidance ... and then begin their own creations. At the day’s end I almost always dismantle my work to prevent accidental topples that could injure people or animals. It also returns the pristine natural area back to the way it was before my arrival.

As much as I enjoy creating these balances, at the end of the day it’s even more fun to allow the kids to throw stones at them and watch them go down.

Once, during an interview, I was asked, “Why do you stone balance?” I’ve been asked that question almost as many times as “How do you do that?” ... the



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About the Author

KeyStone Balance is the artistic stone balance work of Pennsylvania native **Tim Anderson**. His work began as a result of a climbing injury that sidelined him during the 2011 season. Spending time along the river, having an artistic background and being influenced by cairns he encountered during his winter travels in the mountains, Tim began his playful venture into stone balancing during the recovery process. As his skills evolved over the next several years and photos surfaced among friends, he was urged to share his talents with the world. In the summer of 2014 he made his public debut in Ohiopyle State Park. The crowds responded well to his stone balance creations and demonstrations. Social media was the next step, where he began featuring photographs of his stone balancing. Soon after, a website, festival bookings, art gallery shows, demonstrations, corporate workshops, private collectors seeking prints for home and further success followed.



While not traveling or doing demonstrations and appearances at shows, Tim spends the majority of his time stone balancing in the creeks and rivers near his home. For more information, please visit www.keystonebalance.com or find Tim's work on Facebook under Keystone Balance.

latter being a much easier question to answer. Being asked many times, one would think a canned response should just flow out. However, this question always sends me into a brain spiral, pondering my true objective.

After a moment, I obliged the interviewer with several answers that were all legitimate: to inspire; for my own creative outlet; to see what's possible; because I'm curious; to spend meditative time in nature; and several others. We moved on to other discussions, but in reality I was left pondering the question in my head the remainder of the day. In an epiphany I came up with the most understandable answer: "Because of the pure magic that transpires." ☪

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Faux rocks provide the perfect cover for a filtration system.

by **Kent Wallace**,
Living Water Solutions Inc.

To be efficient, pond filtration equipment is usually installed as close to the pond as possible.

SERIES: Best Pond Practices

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

Hiding these parts can be as creative an endeavor as building the pond itself. Many times the ability to hide equipment in plain sight aesthetically

makes or breaks a pond's appearance. Customers want to see the pond — not what makes it operate. Skimmers, settlement tanks, prefilters, biofilters, UV lights and pumps are all types of equipment that can be hidden to great effect.

Hiding Skimmers

Skimmers used on ponds are usually larger than the skimmers used in pool construction. However, many pool-type skimmers are also used on ponds. All skimmers have relatively unappealing covers — especially when incorporated into the landscape design or a formal edge

pond. Skimmers that come with lids are obviously plastic in appearance, which leads most pond builders to use a flat stone instead. It's fairly easy to wrap around the skimmer with decorative rock, but the lid is the real problem.

One solution is to screw thin lath to the surface with stainless steel screws and apply a cementitious faux coating onto it. This takes technique and time but is well worth the effort. A redwood or faux wood lid also works well and weighs less.

Pool-type skimmers are usually smaller in footprint and easier to place



This pump is hidden in a landscape valve box.



This skimmer lid is covered with lath and a cementitious finish.



UV lights and filters can be hidden together.



This pool sits over a settlement tank.



Waterfalls make wonderful covers.

a stone cover over, but another option for pool skimmers is a "Pouralid." Pouralid makes replacement skimmer lids for almost all swimming pool skimmers available. They look like an upside-down lid with a shallow cavity in the top, which can be filled with whatever cement-type deck material matches the surrounding deck. Virtually any faux finish can be poured and formed in the cavity, making them a good choice

when used in formal installations.

Tanks and Prefilters

Settlement tanks and in-ground prefilters are a little more difficult to conceal because of their inherent size. Ranging from 2 to 4 feet in diameter, a stone cover is very difficult and heavy. The few lids available for these larger filter tanks are usually just plain, unattractive plastic. To transform these origi-

nal lids, they can be cut in sections and faux rocked, or a portion of the lid can be left off altogether if it's on the back side, away from view. A hinged redwood lid is another good option. Raised ponds with the settlement tanks located closeby or attached to the pond are always more visible than tanks placed in-ground. The hinged lid can be part of the pond's edge or used as a deck area since occasional access is all that's necessary.

Cutting the center out of the original lid and creating a vented, domed cover is another way to change the look. Vented lids are important because gases can build

Many times the ability to hide equipment in plain sight aesthetically makes or breaks a pond's appearance. Customers want to see the pond – not what makes it operate.

up inside the tank, creating a smelly situation. Shade cloth comes in a variety of colors, and making a frame and attaching it to the edge of the original lid is time-consuming but doable. A stone finish can be used to camouflage an existing lid, and always remember to vent it to allow the

gases to escape. Additionally, the vent creates an easy hand grab for removal when servicing. A raised pool for a water garden or planter can be constructed over part of the tank as long as there is enough room left for easy access to the prefilter or rotating micro-screen inside it. If a small pool area with plants is built over the tank, a 2-inch drain in the bottom with a threaded plug makes for easy cleaning,

flowing directly into the settlement tank.

Biofilters — The Natural Equipment

Concealing biofilters is where the pond industry has always shined. In the early years, Aquascape introduced the concept of the open waterfall filter, and from that point on our industry has been hiding biofilters inside waterfalls.

It is fairly easy because these filters are usually installed above water level, and surrounding them with the rocks, boulders and landscape material to blend them into the landscape is a natural solution. Currently almost every pond filter manufacturer has their own version of a waterfall filter. Many of these come with a spill or weir made of plastic that is unattractive and unnatural-looking. It's



Biofilters can be covered by planted material.

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These Redwood lids are hinged in the center.

relatively easy to cut off the spill, leaving just the clamping section for the liner or polyurea. This allows the waterfall and spill rocks to be built right up to the filter's face for a more natural look.

Waterfall filters generally don't need complete access like settlement tanks do,

so it's easy to cover the front half and build over the top with rocks and plants. A shallow planter covering half of the top is a good way to soften the look of a waterfall, allowing succulents or ground cover treatments to flow down around the falls.

Lights, Pumps, Action!

External pumps and UV lights are probably the hardest to hide. External pumps need to be placed in an efficient location between pond and filters. If necessary they can be placed in a large, in-ground landscape valve box or in a

box built specifically for them. Fake rocks of hollow plastic can also be used. Any pump box lid or cover should be vented and fake rocks should have holes put in them as vents for a constant flow of cooling air.

Freestanding, large-diameter UV lights can be placed on a slab behind the filters or tubular types can be mounted off the ground, but it's always a challenge. The electrical portion and power supply must always be located off the ground to prevent moisture contamination. I have modified several single-tube lights for downflow capability so they could be mounted inside a biofilter with the electrical portion above the waterline. This works well if the biofilter is deep enough to allow for it. UV lights can also be buried in the ground, with the electrical portion and bulb access above ground for accessibility.

Put those finishing touches on a build by getting creative, and you can make your equipment covers as beautiful and high-quality as the pond itself. ☺

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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, along with working at his own shop as a race car fabricator at age 24. Then, in 2001 a neighbor asked Kent if he could build her a koi pond like the one Kent's father had.



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

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QuickBooks

Cooking (with) the Books

Navigating the labyrinth of QuickBooks

by **Barbi Holdeman,**
The Pond Gnome

Accounting is a necessary evil for all business owners. Unless you can afford to hire someone — and don't get me started on where that can go wrong — you need to know how to at least do the basics.

Enter QuickBooks, a pretty user-friendly bookkeeping program that doesn't require you to go back and make an adjusting entry just because you transposed a couple of numbers. (Being somewhat dyslexic, I really appreciate that.) I've been using QuickBooks for 15 years and have been through many versions. I am currently using Pro 2015.

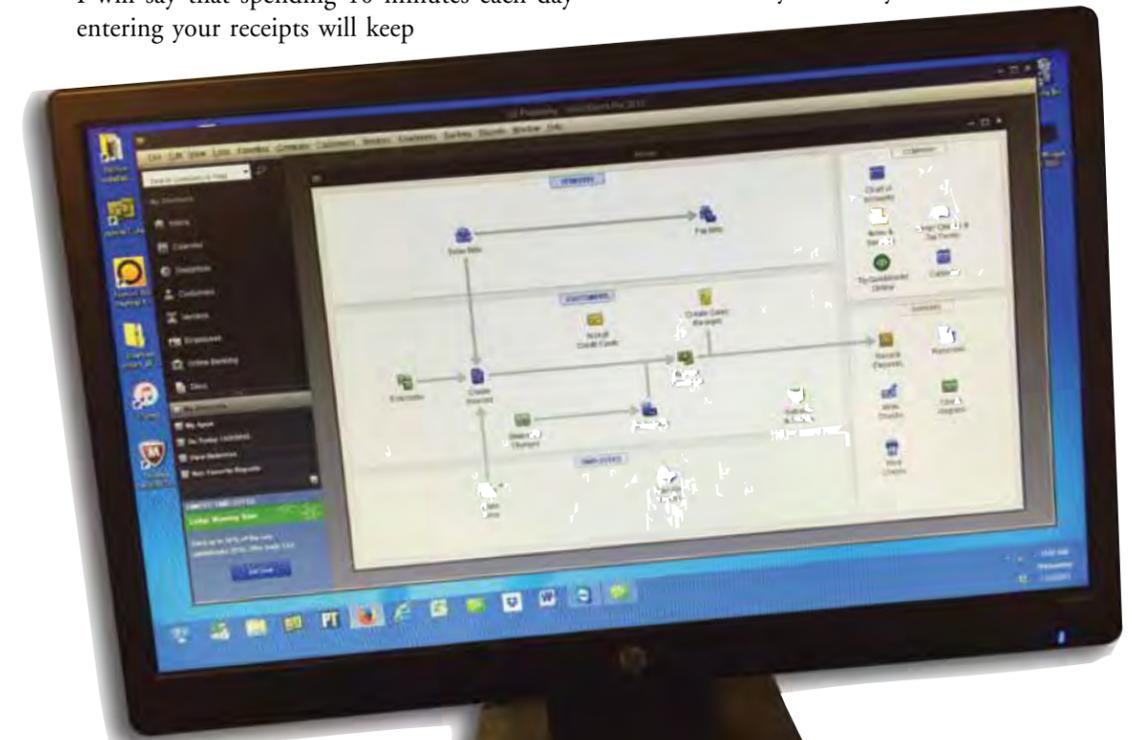
QuickBooks has tutorials on all of the basics, so I won't go into that here. (I recommend you check out quickbooks.intuit.com/tutorials/.) I will say that spending 10 minutes each day entering your receipts will keep

you more sane than doing it once a week, once a month, or — and I know you're out there — once a year!

Getting Started — Preferences and Classes

A good way to become familiar with QuickBooks, and make sure that it is set up for how you'd like to use it, is to set up your preferences. Under "Edit," choose "Preferences." Go through each tab, both for Company Preferences and My Preferences. Here, you can customize QuickBooks and get a feel for what it can do for you.

At the very top, you will find "Accounting." Under the Company Preferences, you will see a category for Class. Check that box! And check the prompt option, too! And here's why ... Classes. This is very important, because using Classes will tell you exactly



where you're making money — and where you're not. You can't steer the ship if you don't have a course!

Our company, The Pond Gnome, is a water feature contractor. So we have classes set up for the types of installations we do as well as all the types of maintenance that we provide. We even break down our annual cleanings into categories (because in our climate, we offer two types). The more detailed you are, the more information you will have at your fingertips for decision-making purposes.

Using Classes

So how do you set up Classes? It's easy! First, think about your business and what services you provide. You might want to jot down a quick list first, just to get organized.

Then, in QuickBooks, under "Lists," choose "Class List." Click on "Class" down at the bottom and choose "New," or simply right-click anywhere on the

screen and choose "New."

Now comes the important part. Whenever you enter a receipt, write a check or enter an employee's time on their timesheet, be sure to enter the Class to which it belongs. When we first started using Classes, I went back to the beginning of that year and added a class to every single item so that we could run reports for the year and get the information we needed. From now on, because you chose this in the Preferences area earlier, QuickBooks will prompt you to enter a class before a transaction is saved. You can override it, but at least you'll get a reminder.

So why do we use Classes? That's the fun part. You can now run a report based on those Classes! For example, a P&L by Class will tell you exactly where your money is being made (or not). This is powerful stuff, as it gives you the ability to make adjustments in your business practices.

Job Costing

Something that goes hand-in-hand with Classes is job costing. This will tell you whether or not you made money on a



specific project (or maintenance account). You can't do much about it if you've already lost money, but you can use the information to do a better job of bidding

in the future. Under "Reports," click "Jobs, Times & Mileage" and then "Job Profitability Detail" to get a specific job's information. There, in black and white, you will see exactly what happened. Keep in mind that payroll won't show up until the employee is paid, so that may affect the numbers. Also, I have yet to figure out how to make it calculate overhead (an oversight in the program, I think), so I calculate that using the standard P&L reports, dividing it by the days worked that month, and then multiplying it by the number of days on that job.

Financials

This is huge! By using the Reports feature, you can run just about any report imaginable, and even create some of your own. After you have run the report, you can customize it by date, or even add or remove a filter. If this customization is what you want on a regular basis, simply add it to the Memorized Reports — a big time-saver.



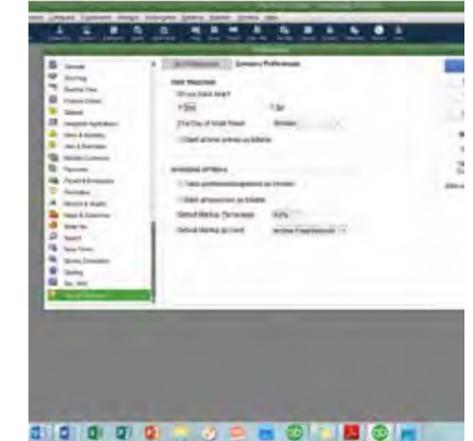
The Profit & Loss report, for example, will tell you exactly how much you've spent so far this year or this month on each expense that you have listed in the Accounts. (Here is where the date customization comes in handy.) You can also run a Statement of Cash Flows or a Cash Flow Forecast to give you an idea of what's going on in your business at that moment in time, and what to expect in

the near future.

In the Budgets area, you can set up what you expect to pay in each category, and then run a comparison to see how you're doing and plan for the next month/year/season. Information is powerful stuff!

Billable versus Non-Billable

Another thing I'd like to point out, because I learned this the hard way, is



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that “Billable” and “Non-Billable” meant something very different to me than it did to QuickBooks. Oops. I was marking everything Billable because it was, at least in my mind. They were all costs that went into a billable job, right? Yeah, well, I eventually discovered that I had this long list of “Unbilled Costs.” Huh? You see, our company works mostly on a contract basis, so I wasn’t using “Billable” time and costs the right way.

It’s a really cool system, once you understand it. If you mark something “Billable,” QuickBooks flags that as something that needs to be added to an invoice. This is great if you’re doing something that’s T&M, because when you go to make the invoice, QuickBooks will prompt you to add the time & expenses that have accumulated, and you can just add it all to an invoice without having to keep it in a stack on your desk. Honestly, I don’t care for the way QuickBooks does mark-ups, so I tend to do that manually. Use your Preferences tab under “Time & Expenses” to control this option. I turned mine off, unless specifically check-marked for T&M.

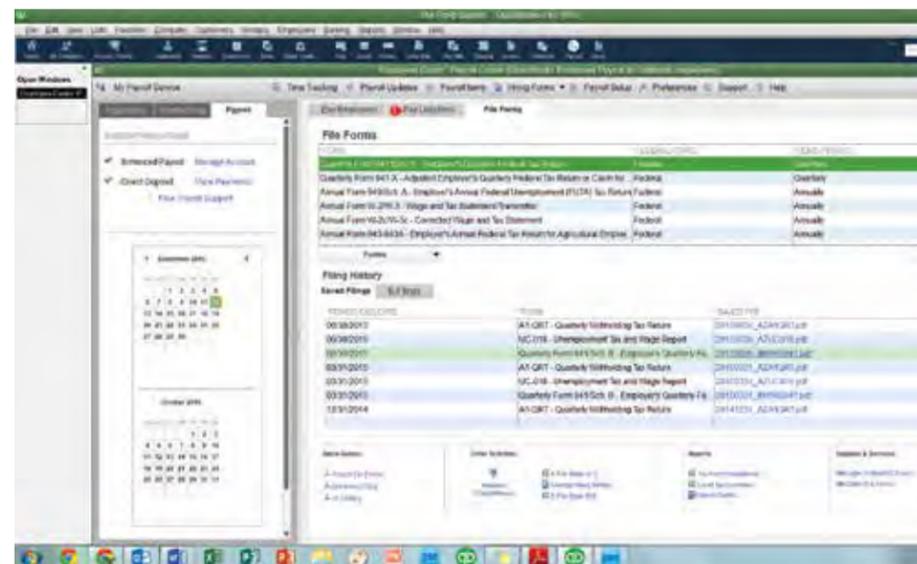
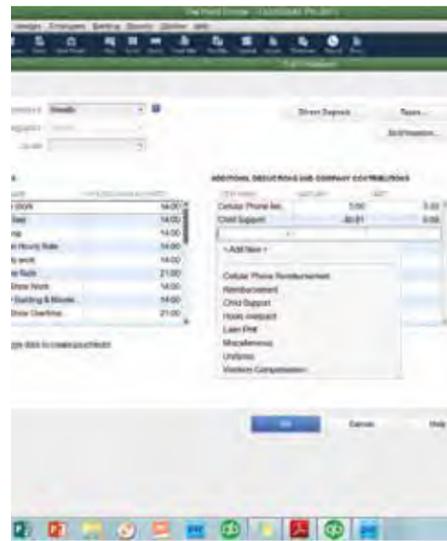
Payroll

Lastly, let’s quickly address payroll. We use Enhanced Payroll through QuickBooks. New tax tables are automatically downloaded, and we can print all of our monthly, quarterly and annual payroll tax reports right from

QuickBooks. At the end of the year, you can print and mail out all your W-2s onto forms in just a few minutes. You can even set up vendors to be 1099s and print out those, too. It’s very handy and efficient. Time is money, after all.

I use timesheets to enter the crew’s hours each day. I also use Direct Deposit for everyone that I can get to sign up for it. Yes, it costs a buck and change per paycheck, but it’s so much easier. I don’t have to cut checks, and I can email employees’ pay stubs to them. We happen to like being as paperless as possible because we are trying to be a “green” company, and every little bit helps.

For reimbursements and deductions on paychecks, you can set those up



under “Lists,” then “Payroll Item List.” QuickBooks will have set some items up already for taxes and such. You can add things to this list like reimbursements (specific and general), child support deductions, bonuses and profit sharing, et cetera. But you don’t have to try to think of this all at once. You can also add things on a case-by-case basis right from the employee’s file under “Payroll Information,” “Additions, Deductions and Company Contributions.” You simply click in the area and choose “New” in the drop-down box.

I hope this article has helped clear up a few things, or at least given you a jump-start on some items. The folks at Intuit are pretty nice, and are usually very willing to help their customers use the software to its fullest potential, so don’t be afraid to call them! Now, go get back to making money! ☺

About the Author

Originally from St. Louis, Missouri, **Barbi Holdeman**

migrated to Phoenix in 1977 in an old station wagon with her mother, grandmother, six cats and two gerbils. She attended Central High School, obtaining her GED so that she could strike out on her own at the ripe old age of 16. She’s a bit on the independent and rebellious side.



Barbi has completed the Maricopa County Master Gardener training courses and has an Associate’s Degree in Ornamental Horticulture & Landscape Design, a Paralegal Certificate and an Associate Degree in Fashion Design and Apparel Construction. She also speaks fluent sarcasm. As co-owner and administrator of The Pond Gnome, Barbi concentrates her energies on promotion, administration and comic relief.

IWGS Winners



Winning Waterlilies

Denver hosts colorful, world-class blooms

by **Tamara Kilbane**,
Denver Botanic Gardens

Denver Botanic Gardens in Denver, Colorado served once again as the growing site for the International Waterlily & Water Gardening Society’s annual New Waterlily Competition. The contest drew entries from waterlily hybridizers around the world. 20 of these new hybrids bloomed in time to be judged in mid-October.

The entries were divided into the following categories: Hardy, Tropical and Intersubgeneric.

Photos were taken of each entry’s first-, second- and third-day blooms (along with fourth- and fifth-day blooms for those hybrids with longer-lasting flowers) as well as each second-day bloom with a ruler and each plant with a yardstick.

After taking the photos and notes provided

by the grower (Tamara Kilbane, Senior Horticulturist at Denver Botanic Gardens) under careful consideration, an international panel of 12 judges provided scores for each new hybrid in the following categories: Flower, Foliage, General Impression and Unique Characteristics. The judges’ scores were then combined and the hybrid



“Manickam,” hybridized by Vasu Manickam, Germany (First Place Hardy and Second Place Overall).



“Amaranthine,” hybridized by Mike Giles, USA (Second Place ISG).



“Darjeeling,” hybridized by Florian Henaux, France (Second Place Hardy).



“Valentine,” also hybridized by FAN, USA (Second Place Tropical).



“Morada Bay,” hybridized by Florida Aquatic Nurseries, USA (First Place Tropical).



Nopchai Chansilpa of Thailand won the coveted prize of Best New Waterlily of 2015 with his “Srichon.”



A great look at the contest pond at the IWGS 2015 event.

receiving the highest number of points in each entry category was awarded first place for that category. The entry receiving the highest overall number of points was named the Best New Waterlily of 2015,

and the Second Best New Waterlily of 2015 went to the entry with the second-highest number of points overall.

The IWGS would like to congratulate Nopchai Chansilpa of Thailand for

winning the coveted prize of Best New Waterlily of 2015 for his stunning entry, "Srichon." This tropical intersubgeneric waterlily hybrid is the result of crossing a tropical day-blooming waterlily (in the sub-genus *Brachyceras*) with an Australian waterlily (subgenus *Anecphyta*). This new hybrid boasts large flowers which change color gradually from the first-day bloom to the fifth-day bloom. These flowers are held an average of 8 to 9 inches above the plant's compactly arranged green leaves.

This year's Second Best New Waterlily award went to hybridizer Vasu Manickam's hardy waterlily, "Manickam." This new waterlily has peony-like, pink blooms with a blush of yellow on the inner petals. Its high petal count and appealing color combination made it a standout in the contest.

A full listing of the winning entries and the panel of judges can be found on the IWGS website. 

To see full press releases and additional news items, visit www.pondtrademag.com/category/tradenews



Aqua Logic Inc. Looks to Future with New Facility and New Website

In 2015 Aqua Logic moved into a new 30,000-square-foot, state-of-the-art manufacturing facility in sunny San Diego, California — and decided it was time to give the entire company a facelift to match. This month they are launching their brand-new website to debut their new look and they are really excited about the updated content and enhanced features.

"Aqua Logic has always been a company that evolves and responds to the needs of all our markets, and these changes will help us continue to grow along with our customers," Aqua Logic president Douglas Russell said. "We want to provide the best possible solutions for a whole host of aquatic challenges and remain accessible and approachable. As a family business, we consider ourselves friends to our industry, and this year we plan to reach out in a big way through blogs, social media pages, newsletters, online tutorials, trade shows and conferences."

Koi enthusiasts love Aqua Logic's titanium in-line heaters and many take advantage of the other great products Aqua Logic has to offer, from compact, high-output UV sterilizers to multi-stage filtration sumps and complete skid-mounted life-support systems. As experts in aquaculture, their holding tanks, bait tank systems with dividers and custom hatchery rack systems have proven invaluable to koi breeders and wholesalers. Aqua Logic offers custom fabrication and design, and all their own products are proudly manufactured in the USA and backed by the support of their friendly and knowledgeable team.

For further information visit the new www.AquaLogicInc.com and sign up for their e-newsletter or call 858/292-4773.



Lifegard Aquatics Introduces PG 9000 High-Performance Pump

To complement the popular Quiet One Pump line, Lifegard Aquatics introduces the new flow rate, energy-efficient, small-footprint — and best of all, affordably priced — Lifegard PG 9000 pump. Designed for submersible or external applications such as freshwater ponds, fountains, waterfalls, hydroponic systems, irrigation systems and water features. The PG 9000 features wet rotor/wet bearing technology that enables cooler running, while the included pre-filter screen handles large particles for less maintenance. Other sizes available in the UL-listed line of Lifegard PG Pumps include 1600, 2700, 4500, 5300 and 6600. For more information and flow charts, contact:

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Atlantic Water Gardens Introduces the 2016 Product Catalog

Atlantic Water Gardens is pleased to announce that their 2016 Product Catalog is now available. Call, fax or email to receive your copy today. Get a look at all the new products available in 2016, including Copper finish Scuppers and Splash Rings, the TidalWave Variable Speed Controller, a Pond & Lake Management line and so much more. Visit our website for more information.



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Trade News

Pondliner Wholesale Announces 2016 Water Garden Expo

Charles Vander Kooi and David Duesing headline Pondliner Wholesale's 2016 Water Garden Expo February 24-26 at the Heart of Oklahoma Exposition Center in Shawnee, Oklahoma.



Charles Vander Kooi has been involved in the construction industry for over four decades as an estimator and upper-management employee of companies as well as professional speaker and consultant. He has bid over a billion dollars in work over his career and has helped over 1,500 companies in their estimating/bidding systems.

David Duesing appears on Pool Masters with Anthony Archer-Mills. He served as the first president of the National Association of Pond Professionals. He contributed extensively to the association's original educational curriculum and certification program, and continues to lead numerous seminars annually for members of the water garden, landscape design, swimming pool and irrigation industries. Many of his seminars are accredited for professionals, including those offered through Genesis 3, an international forum for continuing education and establishing high standards in watershape design, engineering and construction.

Some of Aquascape's biggest names will be facilitating a hands-on pond installation class on February 24, showcasing innovative design and construction methods that will be beneficial for professionals at any experience level.

The next two days will feature 24 educational seminars. Eric Triplett, Demi Fortuna, Kelly Billing, Paul Amos and Greg Wittstock are among the industry's top experts scheduled to speak. Attendees can also visit with around 25 manufacturers exhibiting in the trade show and network with peers from across the country.

The Water Garden Expo is free for trade professionals. Visit WGExpo.com or call 866/219-3561 to register or for more information.



EasyPro's New 2016 Catalog Now Available

EasyPro Pond Products of Grant, Michigan has released a new catalog for 2016. 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 water treatments in 2016 along with new pumps, basins and aeration compressors.

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

Winter Pond Care Guide Released by Collaboration of Industry-Leading Experts

Nualgi Ponds has announced the release of a new eBook titled Winter Pond Care for Professionals. The free eBook is a collaboration of expert advice gathered from store owners, koi champions and pond maintenance professionals. Learn tips from professionals for winter pond preparation in multiple regions as well how-to tips for keeping water healthy throughout the winter months.

"Winter Pond Care for Professionals" includes unique ideas from the professionals for managing water quality, plants, fish and technology during the Fall/Winter months.

Nualgi Ponds' director of marketing, Roger Tower, is excited to bring together experts in the field for this eBook. "Based on feedback in our last eBook, we have made additions to include tips for multiple regions. The winter is a tricky time for managing water quality, and just like in the Spring, it is very important that we prepare early for our Fall maintenance routine. We look forward to hearing more feedback from the community so we can develop the best information available."

Each pond is different and the water/air temperatures are never changing at the same time. The tips in this guide are not guaranteed to work with every pond, but Nualgi actively works with pond owners for success in their individual habitats by using natural solutions and provides educational resources to help with algae overgrowth.

Visit the Nualgi website to download Winter Pond Care Guide: www.nualgiponds.com/winter-pond-care-guide.



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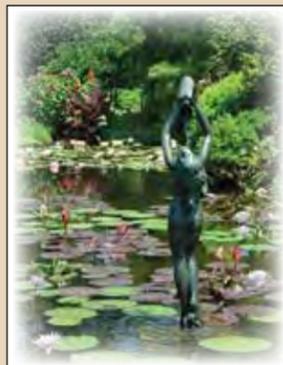
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