



# International Waterlily and Water Gardening Society

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# WATER GARDEN JOURNAL



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Night-time lighting makes a water feature appear magical. Photo courtesy of Aquascape.



The late Larry Schokman collected the seeds of the 'Bali Red' lotus in Bali in 1994.



Group photo from 2017 IWGS Symposium. Photo by John Sou.

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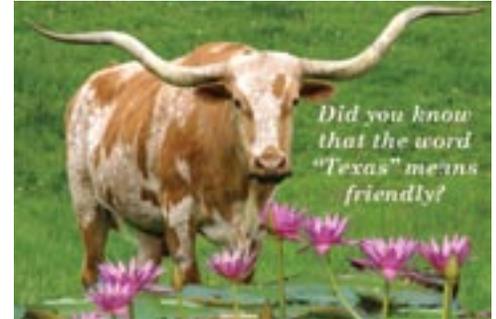
Victoria waterlilies at Longwood Gardens, Kennett Square, PA, USA. Photo by Kathy Jentz.

### Submissions

If you would like to submit water garden content for the next edition of the *Journal*, please send your submissions **before December 15** to [KathyJentz@aol.com](mailto:KathyJentz@aol.com).

## President's Letter

Hello, Everyone! Last year at this time, I introduced our new Board members Danny and Kathy to you. This summer we elected a new Board member, and it is my pleasure to introduce her to you! Jeannie Suffern is the co-owner of Aqualine Aquatic Plants & Waterfeatures, located in Sherwood Park, Alberta, Canada. Her mission is simple: promoting the growing of aquatic plants in Alberta, where temperatures range from 0°C to -35°C during approx. 5 months of winter, and up to +30°C in the summertime, where the season is short, but the daylight hours are long (17-19 hours daily). She shares her passion for waterlilies with her customers, and delights in introducing them to the world of tropical waterlilies. Jeannie is also a director for the Alberta Invasive Species Council and for the Colchester Agriculture Society.



Even before joining our Board, Jeannie managed to scan ALL of our past *Water Garden Journals* so that we could archive them on our website. A very enthusiastic member, Jeannie has been hard at work with website improvements, and is ready to take on the question of invasive species and related laws on an international level!

Late this summer, random storms ravaged parts of the U.S.

**Random:** Proceeding, made, or occurring without definite aim, reason, or pattern.

The extent of devastation in Texas and Florida continues to be overwhelming, and yet residents of these areas continue to be resilient as they try to get back to their lives!

**Devastation:** Great destruction or damage; severe and overwhelming shock or grief.

Amongst so many others, extensive damages occurred at Florida Aquatic Nursery and Naples Botanical Garden, where Board members Brandon McLane and Danny Cox do their life's work. Although Nelson Water Gardens was barely harmed, chaos reigned all around them. Board member Kathy Cahill packed her bag and headed to Florida to lend a helping hand; Rolf Nelson and Mike Swize and crew jumped in their boats to rescue their neighbors from extensive flooding in the greater Houston area.

**Hero:** A person admired for courage, outstanding achievements, or noble qualities.

Although most of us did not experience the direct hit of these storms, we felt the impact on our community and continue to marvel at the resourceful strength of our cohorts. I also admire the sense of dedication and volunteerism that exists within our society in our everyday efforts to update our policies and goals. People in action are a powerful thing.

The IWGS is supporting a Public Garden Disaster Response Forum, which will allow affected members to post plant requests. If you are with a public garden and your collection or significant specimens have been lost due to natural disaster, we can help. Please direct questions and inquiries to [iwgsmail@gmail.com](mailto:iwgsmail@gmail.com). Specifically list your requests and time table so fellow members with availability can share.

Looking forward, I would like to invite you to our next symposium in Texas! Boasting the most extensive waterlily collection in the world, Ken Landona and the City of San Angelo are planning quite the Lilifest, and our Texas Symposium Committee is busy planning yet another spectacular event for us! **Save the dates: Sept. 13-16, 2018, and look for updates on our Facebook page, in our emails, on our website, and in future issues of the *Journal*!**

See you there,

**Susan Davis**, IWGS President, [we@watersedge.com](mailto:we@watersedge.com)



## Home Gardening Corner Garden Lighting: Create Magic at Night

Water features are stunning during the day, but when pond and garden lighting is used to enhance evening views, you'll find the landscape takes on a whole new dimension! Tuck a spotlight behind a waterfall and the feature takes on a magical feel. Used in the main portion of a pond, you'll enjoy watching fish dart in and out of the lights.

As the sun begins to set, pond and garden lighting creates a magical mood in the landscape. Think of that vacation you experienced at the beach, and the serene feeling you enjoyed watching the moon cast a glowing trail over the ocean's surface.

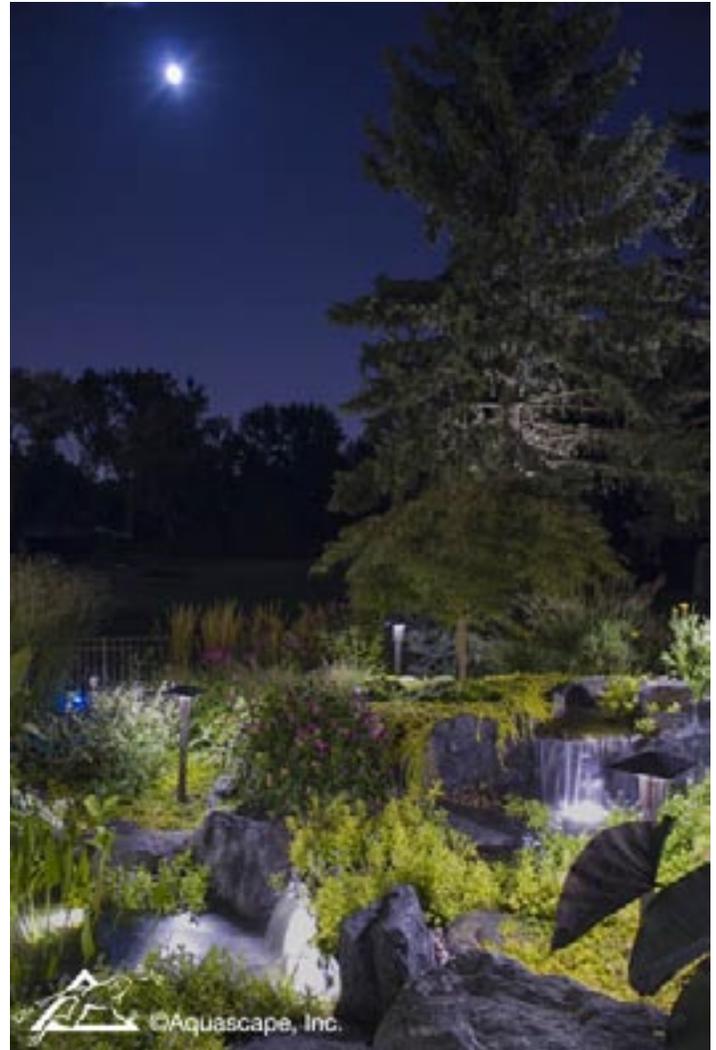


When you add waterfall or underwater lighting to your water feature, you extend your viewing pleasure well into the evening. You can add lights during the installation of your water feature, or add more later if you see dark spots you'd like to highlight.



Although moonlight casts its own soft glow on your water feature, waterfall and garden lighting shows the details of the rock and water.

It's always a joy to watch fish swim in and out of lights. Be sure to incorporate LED lights which use approximately 80-90% less electricity and last 10 times longer than their halogen counterparts.



To make lightscaping easier, lighting kits are pre-assembled and pre-wired, making installation a snap. Simply plug in the transformer, and your lights are ready to go. You can also incorporate a photocell to put the lights on a timer. If you come home after dark, your water feature will be all lit up for you.

Place a single bullet light in a container water garden or fountain bowl for a dramatic and interesting effect.

Be creative with your garden lighting options and you'll find you enjoy your water feature during the evening hours just as much as you appreciate it during the daytime.

### *Article Source*

Aquascape, St. Charles, IL, USA. [www.aquascapeinc.com](http://www.aquascapeinc.com).

## Top Plant Pick

### *Orontium aquaticum*

by Kelly Billing

**Name:** *Orontium aquaticum*, Golden Club, or Never Wet

**Attributes:** 12-18" tall, Flowers in early spring. Slow to spread with a good clumping habit. Germinates easily from seed. Full sun to part shade. True aquatic. USDA Zones 5-10

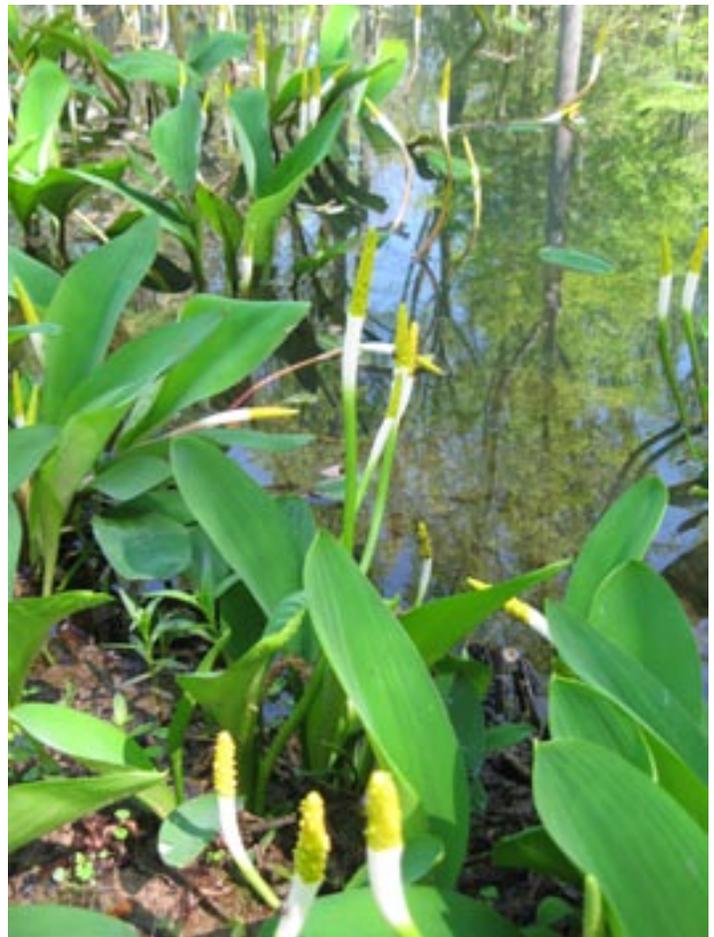
**Description:** Golden Club is like skunk cabbage in that it is up and awake very early in the spring. A clear sign that warmer, sunny spring days will soon arrive. It is always a welcome sight. A stream, creek or river dweller, golden club loves a current. It is perfectly suited to growing in a stream amongst the rocks or planted in a container snugly set in the path of moving water. It suffers from little or no insect pests or disease and requires little care. My own have been in one-gallon containers for five years with no attention paid to them at all. They are completely carefree, tolerant and quite beautiful. Often a tough sell because it takes them a couple of years of growth to be in their glory. They grow best in 6-8" deep of water with a half day of shade either morning or afternoon.

\*These plants exhibit favorable traits; however plant growth is also dictated by climate, nutrients available and growing conditions. Care should always be taken to choose plants appropriate to the location. Know the law and never release plants into natural water-bodies unless they are indigenous.

#### ***About the Author***

Kelly Billing owns Water Becomes A Garden and serves on the IWGS Board of Directors. She can be reached at [nelumbo22@gmail.com](mailto:nelumbo22@gmail.com).

Excepts for this article were taken from an article featured in *Pond Trade Magazine*. Visit [www.pondtrademag.com](http://www.pondtrademag.com).



## IWGS Symposium 2017 A Youth's Perspective

by Marc Marrero

The 2017 International Waterlily and Water Gardening Society's Annual Symposium (IWGS) started off with a warm welcoming reception held by Danner Manufacturing. It was my first ever symposium and I was not too sure what to expect, but being treated to delicious food and a room full of friendly faces was a wonderful first impression. The next morning, we started off our day with a visit to Terrain. I've been to many gardening centers before, but none quite like Terrain. Once you enter their compound it's almost as if you enter an entirely different world. Their gardening displays ranged from cute and simple to intricate and beautiful. Walking through and seeing all their displays inspired so many creative ideas and gave me a new perspective on how gardens can completely transform a space and make it something truly magical.

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

Later that evening we were treated to a delightful dinner generously provided by Chanticleer. Chanticleer is one of the great gardens of the region. Once the Rosengarten estate, Chanticleer today is an eclectic, conversational, and overall just interesting contemporary garden within a historic setting. No matter where you are in the garden there's always something to gaze your eyes upon that strikes conversation and wonder. One of my favorite moments of the entire symposium was visiting the ruin garden, being in that area of Chanticleer made me feel like I was a part in an Indi-



All aboard the Winterthur tram tour. Photo by Kathy Jentz.

ana Jones movie. The overall experience that Chanticleer provided was one that was unique and unforgettable, their garden displays were some of the most beautiful I had ever seen and it was truly a pleasure to experience such a wonderful place.

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

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

The morning lectures began and speaker from all around the world shared their knowledge with us. Yu Cuiwei came all the way from China to discuss cold stress gene tolerance among waterlilies. Kathy Jentz spoke on how horticulturists can use social media to not only promote themselves and their products, but to also engage and attract a more youthful clientele. Laura Bancroft a nine-year experienced lotus grower with over 200 different varieties shared what she learned through her experiences. Next up was Stanton Gil who works for the University of Maryland's Cooperative Extension as an entomologist. He reviewed aquatic plant pest research. He explained how to identify the signs of different aquatic pests and how to get rid of them. After Stanton, Zijun Li gave a presentation on his work hybridizing waterlilies on his small roof top garden in China. It was very inspiring for me to see someone my own age who has accomplished so much. He has already created numerous hybrids and won the Best New Waterlily Competition last year. He is setting a precedent for many young people behind him. His drive was un-mistakeable but he was also humble in his limitations. Without fancy facilities on the top of his home he has followed his passion and succeeded.

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

The expert panel and Q&A was next which included Tim Jennings, John Sou (Australia), Tamara Kilbane, and Danny Cox. Each member in the panel was extremely knowledgeable and very kind, they answered any questions the group had very eloquently. We were also given a tour of Longwood Gardens main fountain pool which has recently undergone a 90-million-dollar renovation! The largest project Longwood has ever done in the gardens, contains over 1700 fountains and jet streams that can reach up to 90 feet in the air! Later in the evening we went back to the lily pools to enjoy the night-bloomers and hear Tim Jennings give an-



**Panel talk with (from left-to-right) John Sou, Danny Cox, Tim Jennings, and Tamara Kilbane at Longwood Gardens. Photo by Kathy Jentz.**

other presentation on Victoria. To close out the day we saw Longwood Gardens evening fountain show and it was breathtaking, watching the fountains colorfully shoot up high in the night sky in perfect sync with some of our favorite songs from classic movies was truly something special.

The last day of the symposium started off with a visit to Mt. Cuba Center. Mt. Cuba Center inspires an appreciation for the beauty and value of native plants and a commitment to protect the habitats that sustain them. Following Mt. Cuba was a trip to Winterthur, like its name probably suggests Winterthur was a majestic place. The estate is set amidst a 1,000-acre preserve of rolling meadows and woodlands. Designed by Henry Francis du Pont, its 60-acre naturalistic garden is among America's best, with magnificent specimen plantings and massed displays of color. He selected the choicest plants from around the world to enhance the natural setting, arranging them in lyrical color combinations and carefully orchestrating a succession of bloom from late January to November. Du Pont translated his love of the land into a unified work of art that embodies a romantic vision of nature's beauty.

North Creek Nurseries then welcomed us to happy hour and a tour of their growing operation. They had some of the most advanced technology I had ever seen in a nursery before and some of the nicest workers as well. I felt like I was a part of their family. Their mission is to be a leader in the development and practice of sustainable horticultural systems, and producing

world-class plant material. Some of the flowers of their new hybrids they were growing were bigger than my head. It was incredible!

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

It was amazing to watch the interaction among attendees. I felt as though everyone speaks daily even though through conversation I learned that many have not spoken for years. There was a collective passion, love of industry and willingness to share that clearly brought everyone together for a common goal. Each day I engaged in conversations that were focused on learning. People openly shared their knowledge. It was less about competition and more about collective information directed toward building industry growth.

I was also impressed by the diversity of countries in attendance. France, China, Australia, England and Mexico to name a few. In the sometimes-divided world in which we live there was unity driven by a shared passion. It was unlike anything I've been to in the past. I look forward to going again and renewing and building on the relationships I started. Texas 2018!

As a newbie entering this industry it can be quite overwhelming, with so many questions it is almost impossible to answer them all on my own without some sort of guidance. For that and so much more I owe Kelly Billing, because of her I was introduced into this wonderful industry and have learned an uncountable amount about the natural world around me. One conversation with Kelly had me convinced that this industry and everything it represents is something that



**Photographing and judging the trial garden entries at Longwood Gardens.  
Photo by Kathy Jentz.**

I must learn more about. She has the ability to captivate anyone who encounters her through her passion and kindness. I've been fortunate enough to be taken under her wings and she has shared so much of her knowledge with me and for which my gratitude cannot be expressed in words alone. Because of her I have caught the water gardening fever. I can write books about how much Kelly has influenced my life and what she means to me, needless to say because of her I look forward to the future and what it has to offer me and all those I care about.

### ***About the Author***

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

A version of this article was originally published in *Pond Trade Magazine*. Visit [www.pondtrademag.com](http://www.pondtrademag.com).

## IWGS Symposium 2017 A Veteran's Perspective

by Vicki Aber

Another symposium is in the record books and what a symposium it was. We had so much crammed into a few days that it is hard to process. After seeing a lot of the other attendees' pictures posted on our Facebook page, I realize everyone had a slightly different experience. Many of the pictures made me realize there were things I missed especially at Longwood Gardens. Now I have got to go back!

It fell to Kelly Billing to do the lion's share of organizing the symposium. Kelly was rightfully proud of her home turf and was determined we see as much of it as possible. It took me at least a week to rest up after I got home. I imagine Kelly is still recovering.

I'm going to write a little bit of the symposium from my point of view. If you weren't at the symposium, this is what you missed if you were and would like to add things I missed, that would be great. I'm sure we will be talking about this one at least until the next one.

I got in on Monday. Last year I missed the first day of the symposium because of missed connections. I didn't want to take a chance on that happening again. Mike Swize, Tish Folsom, and I went shopping to stock the hospitality room. It was interesting dealing with different liquor laws than any of us had dealt with. We had a delicious meal at the hotel with others that had arrived that day.

Tuesday we had a board meeting. It ended up being four hours long, but we got a lot of business done that is harder to do in our monthly phone meetings. I feel like we have a very good group and are energized to get a lot of programs up and running. Shortly after the board meeting, people started coming down for their bags and to meet up with old and new friends. I am a party pooper and headed to bed earlier than most. I'm told the hospitality room was hopping until the wee hours each night, but I can't speak from experience.

Wednesday morning it was down for breakfast and off to the buses. The buses are always a treat in them-



**The Longwood Garden's Victoria waterlily display at dusk. From left to right: Verena Liechti, Oregon Aquatic; Kelly Billing, Water Becomes a Garden; and Bobbi Jo Ayres, Maryland Aquatic Nurseries. Photo by Kathy Jentz.**

selves with a lot of socializing. We saw a really well done retail garden called Terrain at Stylers. After that we had an amazing pond tour and lunch. From there we went to Chanticleer, an historic estate with extensive gardens. One of the highlights was a huge stand of lotus. We had a picnic dinner there, then back to the hotel.

Thursday was an early day for most of us. We got on the buses at 5:30 am to see the sunrise at Longwood gardens. We saw the night-blooming lilies fully open and the Victorias in their glory. It was very inspiring. Tim Jennings talked to us about the lily area. Then off to the general meeting. We had some tweaks to the bylaws (mostly to up-date them) approved. We talked about charging for basic membership, but are not able to do this until the website can support it. We added Jeannie Suffern to the board. We talked a little about next year's symposium in Texas. Next were talks starting in two places so one had to make a choice. I listened to Kathy Jentz's talk about social media. The other concurrent talk was by Yu Cuiwei on genes and cold tolerance. Laura Bancroft then gave a very informative talk on lotus. I have a very long wish list now.

Next, we had another choice, see the trial lilies or get a behind-the-scenes tour of the dancing fountains. I chose the trial lilies. As usual there are some very exciting things going on with the hybridizers.

The first afternoon lecture was Anthony Archer-Wills with some beautiful slides of water features and some

great tips. Next, Stanton Gil talked about plant pests with some great discussion about dealing with unwanted bugs. After a short break we had a panel discussion (Tamara Kilbane, Tim Jennings, John Sou, and Danny Cox) these are always great and go in unexpected directions. Then on to dinner (one doesn't starve at symposia) and back to Longwood for a talk about the Victorias at the pool with Tim Jennings. We early birds got to see the sun rise and the sun set at the Victoria pond. Then a real high point. The famous Longwood fountain light show! It was spectacular, like fireworks only much better.

Friday we went to Mt. Cuba Center, a garden dedicated to Eastern U.S. native plants. It was hard to believe we were so close to the city. After that was Winterthur, another historic estate with amazing gardens that we saw on foot and by tram. We then departed for North Creek Nurseries for a tour of their state-of-the-art facility and some snacks and libations. Everyone looked as beat as I felt by then. We then had a few minutes to freshen up at the hotel before the banquet and auction.



Relaxing at North Creek Nurseries after a hard day of garden touring in the August weather. Photo by Kathy Jentz.

We enjoyed delicious food and a very entertaining (and profitable!) silent and live auction. The banquet is always bittersweet because you know that tomorrow everyone will be scattering to the winds until next year in Texas.

I would love to thank individually all the people who made this symposium possible. If I start naming names this would go a few more pages and I would still miss someone. Kelly did most of the organizing. Tish who made sure all the venues were paid and kept track of all the expenses and income. All of the speakers and presenters and of course our fearless leader Susan Davis who likes to stay in the background, but is always directing traffic and keeping us on track.

Writing this I realized what a whirlwind it was. I could have gone on and on about each experience, but those that were there know how great it was. If you weren't there then you really should be jealous and be making your plans not to miss next year.

### ***About the Author***

Vicki Aber is an IWGS board member. She is also a member of the Colorado Water Garden Society (CWGS) and has served there as a board member and an officer, including the position of president. She can be contacted via email at [docvicki@msn.com](mailto:docvicki@msn.com).



Mark Wilson playing with the water pump at the Winterthur children's garden. Photo by Kathy Jentz.

## Online Community Image is Everything!

by Kathy Jentz

What is one of the first things you do when researching a business or a person? I bet you go online and do a Google search. Maybe you visit their website, Facebook page, or Linked In profile. You scan through their recent blog posts or tweets to see what they are about.



What would you think of them if the last few postings were full of typos and misspellings? How about if they had posted photos of aquatic plants that were mislabeled? You would write them off in a heartbeat. Amateurs and interns should not be the face of a professional company.

This is why I'm so astonished that many companies leave their online presence in the hand of the least competent person on their staff to be the image to the world. Remember that everything – and I mean everything – you put online (even if you think it is behind a privacy wall) is public, searchable, and permanent.

Did you know that anything you type on Facebook is recorded? Even if you do not hit “post!” That is right, if you type it, then think better of it, back space and delete, it is still there in their records. Scary, right?

So, why do you want to be online anyway? Simply: that is how people do business in the 21st Century. Maybe your business only deals with the trade and not the end-consumer. In that case, your online presence may be more limited, but is still necessary.

You want to set yourself up as the easy solution to your customer's problems. Whether it be the best fountain filter or a gorgeous new lotus hybrid, they should think of you first when the need arises and the only way they will do that is if you have a constant, consistent presence in their lives.

One way to be the constant presence is to collect your customers' emails and send out a monthly enewsletter. You may already do this, but is it being opened and read? The statistics show that over 50% of emails are read on smart phones now, if your enewsletter is sent as an attachment, it is likely being deleted unread. Unless the content is so compelling that the recipient saves it for reading later on their tablet, laptop, or desktop. Let's work on making you that exception!

How about a bit of homework for the winter doldrums? Open up your website and any other place you are online (Twitter, Facebook, Instagram, etc.) on various devices and platforms. Is your image consistent across the various platforms? Is everything displaying correctly? Are the photos of high quality? Is the text polished and error free? If not, take note of where things can stand to be improved.

Next set up a Google alert to see what your customers and the world may be saying about you online by filling out the simple form at <http://www.google.com/alerts>. I suggest keeping it very specific and simple. Enter the company name and any common misspellings to start. You may want to enter product names and company employees as well. (After a few days of receiving alert posts, you may wish to narrow down your searches and finesse them a bit, especially if your alerts are common terms.)

I hope this gets you thinking a bit about how the world perceives your company and your brand. In this column, we will explore best practices, case studies, and, of course, examples of what not to do, when marketing yourself online. If you have a specific questions, please share that with me and I will address that in a future column.

### ***About the Author***

Kathy Jentz is editor of *The IWGS Water Garden Journal*. She can be reached at [kathyjentz@aol.co](mailto:kathyjentz@aol.co)

# From the Vaults

## The Results of Hybridization of Hardy Waterlilies

By Kirk Strawn

[Editor's Note: All of our older *Journals* have been scanned in now to make them available to the membership. We will be selecting an article from an old *Journal* issue in each future issue for our readers' enjoyment. This excerpt was Kirk Strawn's follow up article to the "Hybridization of Hardy Waterlilies," which was reprinted in our Autumn 2016 issue. The article below first appeared in the *Water Garden Journal* Vol.VII, No. 2, June 1991, p.21-24.]

This is a follow-up on the hardy waterlily seedlings resulting from the 1987 crosses previously reported in the *Water Garden[ing] Journal* (Strawn 1988a, b) and on the crosses made in 1988. Also, I would like to compare my results with those most interesting ones shared with us by Perry Slocum in the December 1990 issue (Slocum 1990).

A simple way to obtain new waterlilies is to select the best of the seedlings that come up on their own and proceed to bloom in a pond. Two of my best, 'Charlene Strawn' and 'Nigel', originated that way and Perry Slocum (1990) recently described some most excellent seedlings thus produced. My experience is that chance seedlings mostly sprout in a first year pond. The disadvantage is the large number of seedlings that must be discarded. Perry Slocum says about 1,500 compared to the few he saved and named. Many of the choices to either save or discard are difficult to make. The beauty of this, and the next method, is the chance to get an unique seedling from a cross that one would probably never make.

A second way to produce new hybrids is to either let insects do the pollinating or let the flowers pollinate themselves and then save and plant the seed (many highly fertile cultivars with *Nymphaea odorata* type rhizomes such as 'Peter Slocum' and 'Perry's Pink' are self pollinating the second day). The advantage here is that you know the pod parent and you can restrict your effort to gathering seed from the best parents.

Two outstanding pod parents of bee-pod seedlings are 'Rembrandt' (listed as 'Conqueror' from Bennett in Strawn 1987a, but matches 'Rembrandt' as obtained from several sources in England) and 'Rosy Morn'. The former gives some excellent miniatures in addition to full sized waterlilies. I have stopped saving bee-pod seed from *N. odorata* types because a very high percentage of the seedlings have *N. odorata* rhizomes.

Space to grow out seedlings is finite, so your best bet is to cross two excellent parents and then concentrate on crosses that give the best results. *Nymphaea* 'Rembrandt' x *N. mexicana* (I have not used Florida strains) yields seedlings with upright rhizomes (Slocum 1990) and flowers ranging from yellow to red plus beautiful sunset shades. Most of these seedlings have flowers that are unique and are as good or better than any on the market. One good bloomer and cut flower is the most double of any yellow that I have seen. I am inclined to name and market at least half of the about 20 that have bloomed. The nagging question is, if 1,000 seedlings of this cross bloomed, would I save and name any of the ones that I have bloomed so far and how many of the 1,000 would I name? Over 2,000 seeds of this cross were planted in the fall of 1990. If even half of these seed become blooming plants, there will be space for only the most unique and for seedlings with the best and most flowers, attractive foliage, longest blooming season, heat-resistant flowers open the longest hours and with compact rhizomes. Also, any reasonably good seedling that produces seed will be saved for future crosses as very few hybrids from *N. mexicana* pollen are pod fertile. One excellent sunset red of this cross is producing seed.

*Nymphaea* 'Sultan' x *N. mexicana* should also produce top seedlings as my 'White Sultan' (a mutation of 'Sultan') x *N. mexicana* gives variously shaped excellent yellows through reds. 'Pink Sensation' x *N. mexicana* produces some unusual peach colored flowers ranging from flat to cup shaped. Perhaps 1 in 10 would be worth naming. Pinks with odorata type rhizomes x *N. mexicana* produce plants similar to 'Charlene Strawn' and 'Texas Dawn'. The latter has down-turned sepals so perhaps one parent is *N. tuberosa* rather than *N. odorata*. The F[1] rhizomes are less compact than those of the previous crosses and the flowers are usually light to deep yellow with a few of the seedlings producing beautiful yellowish pink flowers that are unlike any on the market. At least two of the yellows are either equal to, or one better than any now available. Next year I plan to cross 'Peter Slocum' and 'Perry's Pink' with *N. mexicana* in search of a large double yellow and try *N. mexicana* as a pod parent for the first time.

The 1987 crosses among 'Fabiola'[\*] (the one on the market does not fit Marliac's description as to another color), 'Perry's Pink' (*N. odorata* rhizome but stem stripes of *N. tuberosa*) and 'Peter Slocum' resulted in mostly pinks with *N. odorata* rhizomes. Many produced an abundance of beautiful flowers that melted on a hot summer afternoon. A very few such as 'Celebration' and 'Mayla', is reminiscent of a tropical night bloomer. They should be top *N. odorata* types in cool climates. 'Perry's Pink' will be used again in the future as 'Fabiola' x it produced 'Burgundy Princess',

a pod-fertile, extremely dark-red miniature with a compact root. 'Pink Sensation' x 'Sunrise' produced 'Pink Sunrise' and *N. odorata* type. Except for a few more petals, the flower is identical to that of 'Sunrise', but it is pink. When Ray Davies visited in August 1990, this was the first flower he waded out to see.

Bee-pod seeds of 'Arc-en-Ciel' planted in 1988 produced many seedlings with 'Arc-en-Ciel' leaves but all were lost. In 1989 the stock of 'Arc-en-Ciel' was transplanted to a freshly dug pond and many of their 1990 volunteer seedlings have 'Arc-en-Ciel' leaves and flowers of various shades of pink. 'Arc-en-Ciel' x both 'Rembrandt' and 'Fabiola' produces seedlings with plain leaves, probably indicating that the beautiful leaf pattern is recessive. The two plants of the latter cross have not proven pod fertile. The F[1] seedlings of the former cross tend to have *N. odorata* roots like their pod parent. Alyn Mayor of Stapley Water Gardens visited for two weeks in September 1990 and we selfed and crossed F[1] siblings of 'Arc-en-Ciel' x 'Rembrandt' and also saved their bee-pod seed. Our hope is for at least a small, F[2] percentage of excellent pinks, whites and reds with *N. marliacea* rhizomes and 'Arc-en-Ciel' leaves. The few bee-pod seed that have sprouted to date have had plain leaves. We also made many new crosses using 'Arc-en-Ciel' as both pod and pollen parent.

Experience to date both raises many questions about and helps evaluate Marliac's hybridization of hardy waterlilies. Both 'Col. A.T. Welch' and 'Sulphurea' appear to be *N. odorata* x *N. mexicana* crosses. Kenneth Landon, personal communication, says wild *N. alba* from France x *N. mexicana* gives *N. marliacea* 'Chromatella'. These cultivars of Marliac's are probably F1 's obtained by crossing two species. I believe his changeables could all be from selected hybrids x *N. mexicana*. I do wonder if 'Charles de Meurville' and 'Madam Wilfron Gonnere' might have *N. mexicana* in their ancestry. Johnson's 'Rosy Morn' has the purple pattern in the cross section of its rhizome similar to 'Hal Miller', 'Virginia' and 'Sunrise'. Could this indicate *N. mexicana* in its ancestry?

I only know of a few of Marliac's hybrids that are pod fertile. These are 'Arc-en-Ciel', 'Escarboucle' (not pollen fertile), 'Sultan' and 'Virginalis'. However, the stocks used either may or may not be what Marliac named. I tend to think of infertility as an indication of a Marliac hybrid. This is puzzling as over 75% of my seedlings (excluding those from *N. mexicana* pollen) appear fertile. They range from low to high in seed production. A high percentage of hardy cultivars named by people other than Marliac are both pod and pollen fertile, for example, 'Anna Epple', 'Gladstoniana', 'Hollandia', 'Perry's Pink', 'Peter Slocum', 'Pink Opal', 'Pink Sensation' and 'Rosy Morn'.

Marliac must have gone past the F1 generation in his breeding program. My white mutation of 'Sultan', when crossed with *N. mexicana*, gives a wide diversity of excellent progeny with regard to flower shape and color indicating a complex ancestry. Was Marliac's secret a failure to name and to release his fertile brood stock? Could 'Rembrandt' be a hybrid Marliac used for breeding that some how escaped? It is genetically complex as all of about 20 'Rembrandt' x *N. mexicana* F1's are distinct from each other and its seedlings from other pollens show great diversity including plant size.

My method was to neither bag flowers nor remove stamens. Crosses were made the first day by placing pollen covered stamens in the liquid of first day flowers. Characteristics of the resulting seedlings usually indicated the planned cross had occurred. For less than 5% of the seedlings it was obvious that they were not of the intended percentage. It appears that an abundance of pollen applied to first day flowers, soon after it dehisces, prevents other pollen from being effective. During the summer seeds are produced, some sprout in their Baggie (plastic bag) before collected and others after planting. Most of the summer and fall planted seed sprout when the water warms the next spring and a few the second spring. At College Station, Texas, a seedling sprouting in a new pond usually blooms the first summer as mentioned for North Carolina by Perry Slocum (1990). Seedlings more crowded in containers usually do not bloom until lined out the second summer.

Most seedlings here have had a much slower increase than reported by Perry Slocum (1990) for his seedlings. This could be either genetic or cultural. Fast increase is certainly good for the commercial producer but it may not be an advantage to the home owner with a small pool who probably has no desire to repot quickly multiplying plants each year. I can see a place for tissue culture of slow multiplying cultivars such as Marliac's 'Seignouretii'. The greatest one-year increase counted in my seedlings has been from 1 to 18 plants for 'Yuh-Ling'. The cultivar 'Rembrandt' has gone from 1 to 25 plants in a year. Waterlily crown rot does not seem to be a problem in hot climates, so I do not know which of my seedlings are resistant.

#### Citations

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[\* The 'Fabiola' mentioned here was the one sold in the USA under that name and later sold by Kirk Strawn as 'Pink Beauty'.]

## In Memoriam A Horticultural Tribute to Larry Schokman

By Craig Morell

With a memorial nod to the late Larry Schokman, we pay horticultural tribute to him with some notes on a lotus variety he brought in called 'Bali Red'. Larry collected the seeds in Bali in 1994, and it has been in our collections for many years. We regained a plant of it from Florida Aquatic Nurseries last year, and it is growing quite vigorously in our small lily-lotus pond at The Kampong in Miami. Information about many of the aquatic plants of The Kampong can be found in the article: "Exploring the Kampong's Aquatic Allure," in *The Aquatic Bulletin*, Summer 2008.

Larry tended to The Kampong property and its 1000+ accessioned plants for over 30 years. He was horticulturist, superintendent, Director, and Director Emeritus until his death this October at age 82. Larry lived life in high gear for all of his days, was a consummate gardener, and an oracle of information ready at a moment's notice. We have him to thank for hundreds of introductions of fruit, flowering, economic, and ethnobotanical plants.

Hailing from Sri Lanka, Larry came to the U.S. as the superintendent and horticulturist in 1974 for Dr. Catherine Sweeney, a wealthy philanthropist and socialite from Washington, DC. Dr. Sweeney bought the The Kampong in 1964, and started planting hundreds of colorful and exotic plants from around the world. Today, The Kampong is one of five botanical gardens within the National Tropical Botanical Garden (NTBG), based in Kauai, Hawaii. Dr. Sweeney gifted The Kampong to NTBG in 1984.

We are proud to carry on the heritage of Larry Schokman, Dr. Sweeney and Dr. David Fairchild before her. The Kampong was the home and garden of Dr. David Fairchild, where hundreds of important fruit and economic species were introduced a century ago. It is reasonable to say that today we are eating some of the modern iterations of the plants that Dr. Fairchild introduced.



Larry Schokan (top) and the 'Bali Red' Lotus (below). Photos courtesy of Craig Morrell.



### ***About the Author***

Craig Morell is the Director of The Kampong of the National Tropical Botanical Garden in Coconut Grove, FL. He can be reached at [cmorell@ntbg.org](mailto:cmorell@ntbg.org).

## Expert Corner

### Leafy Issues: Leaky Ponds

by Mike Gannon

Leaky pond issues seem pretty common during Autumn and times of heavy leaf fall. The leaves might be causing the water loss. Many pond and water feature owners in my home state of New Jersey and other areas of the world that experience the Autumn season will experience water loss from their pond during the Fall. Don't panic, but be sure to react quickly.

There are always seasonal issues to deal with for pond keepers who experience Autumn and the change of seasons.

Pond professionals will spend time each Autumn handling calls from concerned koi pond water garden keepers, and water feature owners regarding sudden water loss and leaky pond issues. Many water features such as waterfalls, fountains, and streams will be affected by leaf accumulation causing "leaf jams" which can redirect the flow of water to outside of the desired course of flow. These leaf jams will affect the performance of many water features due to the leaks they cause. These leaf jams can often cause huge water loss very quickly.

The loss of water from any type of system whether it is a koi pond, water garden, pondless waterfall, fountain, stream feature, or whatever shape your water takes; can cause some big problems. Leak issues and water loss need to be dealt with quickly and may require the services of a pond and water feature professional. Water loss can cause very expensive equipment damage, landscape damage to your landscape and neighbors, and heartbreaking fish loss.

Autumn leaks in your koi pond water garden will often follow a storm or windy day when a lot of leaf loss occurs. Ponds that have waterfall displays and streams are more likely to be affected. If you see that your pond has water loss take a look around the pond paying particular attention to the waterfall area to see if leaves are jamming up to the point of redirecting the water flow out of the stream or waterfall; perhaps splashing out by falling on piled leaf debris.



Leaf jam. Photo by Mike Gannon

Many pond professionals will offer services that prepare your koi pond, water garden, and/or water feature for the big impact that leaves falling can create. Contact your local pond professional to learn more about these types of services. A professional service for your pond will keep the leaves out and greatly reduce the possibility of leak issues and other leaf accumulation problems with your koi pond or water garden.

Local pond professionals will also be familiar with finding and correcting Autumn water loss and leaky ponds due to leaves falling. Pond professionals will know how to deal with local conditions and will offer a fast proficient service that will keep the pond keepers from the much more expensive problems that often accompany water loss.

Autumn leak issues with your pond don't have to be a big problem. Know what to look for and know what to do. Get to know your local pond professional, they can be an invaluable resource for you and your pond.

#### *About the Author*

Mike Gannon is owner of Full Service Aquatics located in Summit, NJ. Mike is an award-winning pond, water garden, and water feature builder. Mike is the creator of "The Pond Hunter" video series seen on Youtube and has made several television appearances on networks such as HGTV and the DIY Network. He also hosts the Pond Hunter Radio Broadcast. You can contact Mike at the LOVEYOURPOND blog at <http://fullserviceaquatics.com>.

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**International Waterlily Collection at the Civic League Park in San Angelo, TX, USA. Photos by Mike Swize.**

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