March Newsletter

Welcome to spring!

We're happy to be (almost) back to the pond season (also known as summer). Hope y'all had a great off season (*i.e.,* winter). We're looking forward to another great year with the pond club, and to being with you and enjoying your company at our meetings.

Our first meeting will be May 19 at Red Butte Gardens. Their spring bulbs should be lovely. House of Pumps will be our speaker. Come join with us!

We're always looking for yards in which to hold meeting, and for ponds to be on our pond tour. This year's tour will be August 13th and 14th. If you'd like (or are at least willing) to host a monthly meeting or be on the pond tour, please let us know. Those who've hosted in the past or been on the tour will agree it's a lot of fun and a great opportunity to show your ponds and yards – large or small, new or well settled in – and share with fellow club members.

Part of ponding is learning new things and keeping up with the latest developments. Please let us know if you have a topic you'd like addressed in a monthly meeting, or if you know of someone who would be willing to make a presentation. And invite your friends and neighbors to join the club

Finally, a big shout out to our sponsors. We appreciate them so much. Please keep them in mind as you shop this summer.

Utah Water Garden & Koi club

Inside this issue

Dates of interest

- Our first meeting is May 19 at Red Butte Gardens
- The first day of summer this year is Tuesday, June 21
- The annual barbeque will be on August 18
- Our 2022 Pond Tour will be August 13th & 14th
- The annual banquet will be on October 20

Spring is almost here!

Getting your pond ready

Once the snow has disappeared (assuming we get any more), the ice has melted from your pond, and the temperatures have been consistently above 40°F for a week or more, it's time to open up your ponds and water features for the spring. Below are 12 steps to lead you through the process.

Step 1

Rake up and dispose of any remaining leaves in the area surrounding your pond. Then, remove any pond netting still in place (which was hopefully installed in the fall to prevent the leaves from falling into the pond).

Step 2

Use a skimmer net or pond vacuum to remove debris from the pond. A long handled brush is also helpful in removing string algae.

Step 3

Clean up your water plants, cutting back dead debris and bringing pots that were placed in deeper levels to over winter up to their proper location. If water plants are overgrown, spring is an excellent time to divide and repot, with the exception of early blooming plants such as Iris. You'll need aquatic pots, planting soil and fertilizer to repot existing plants. Begin fertilizing aquatic plants in late April or early May.

Step 4

If your pond has minimal debris and sludge build-up, perform a 25% water change. If your pond has significant sludge and debris (1"or more) after the initial skimming and vacuuming, you'll want to perform a more substantial water change. Note: Before adding new water, be sure to add a water conditioner that will remove chlorine and chloramines from city water, detoxify heavy metals in well water,

May Meeting

Our first meeting of the year will be at 7:00 pm on May 19 at Red Butte Gardens, 300 Wakara Way in Salt Lake City. Our speaker will be from House of Pumps. Come and renew old friendships and make new friends!

2022 Meeting Schedule

- **May 19** - 7:00 pm at Red Butte Garden
- **June 16** - Flints' pond
- **July 21** - watch for info
- **August 18** - Annual Barbecue
- **September 15** - watch for details
- **October 20** - Annual Banquet

We're on line!

Check out our website
utahwatergardenclub.org

We're also on Facebook
Utah Water Garden & Koi Club

Do you have (or just like) Waterlilies?

The International Waterlily and Water Gardening Society (IWGS) is the international registrar of waterlily hybrids, and conducts an annual waterlily competition. Their 2022 Symposium will be held in Naples, Florida August 24—28.

Spring (*continued)*

and reduce fish stress by adding essential electrolytes, replacing the fish's slime coat.

If you need or want to do a complete water change, set up a temporary tank for your fish using water from the ponds surface (do not pull water from the sludge laden bottom that may contain significant toxic gases). Add an aerator or pump to the tank to add oxygen to the water. The tank should be set in the shade and covered to prevent the fish from jumping out and predators from getting in. Do not feed the fish while they are in the temporary tank.

Prior to returning the fish to the newly cleaned pond add a water conditioner to remove chlorine, chloramines and heavy metals. Also, if the temperature of the new pond water is more than 2°F different than that of temporary tank, the fish should be placed in plastic bags with water from the temporary tank and floated in the pond for 10 to 30 minutes prior to release. The floating time will vary based on the

Want to learn more? The Club's website has a wealth of information on pond construction, filtration, and maintenance, together with plants and fish.

temperature difference: if the difference is 5°F or more, replace 25% of the water in the bag with pond water every 10 minutes until the temperature of the bag water is within 2°F of the pond water. When releasing the fish into the pond, carefully net the fish out of the bag and dispose of the bag water on the ground.

When cleaning the sludge from the pond bottom a pond or wet/dry vacuum can be very helpful. Be sure to set the vacuum outside the pond for easy emptying.

Step 5

If you disconnected your pump and filter for the winter, reconnect them now. If the filter or skimmer pads were not cleaned in the fall, they should be rinsed prior to restarting your pump. Do not over clean your filter pads or use any form of soap, or bleach on the pads. If pads are badly worn or torn they should be replaced.

Step 6

Test your water quality using an at home pond test kit. The Ammonia and Nitrites levels should read zero. If higher than zero, an additional 25% water change should be done until the levels are reduced. pH should be between 6.5 & 8.5. If the pH is outside this range add pH Up

Spring *(continued)*

or pH Down and pH Buffer according to the directions on the container. If you have fish in your pond, the salinity should be between .1% and .25%. To achieve a salinity of .1% (assuming your current salinity is 0%) add 1 pound of pond salt per hundred gallons of water. Pond salt is 100% pure salt, contains no additives and is in large crystal form for slow release.

We all enjoy feeding our koi. It's the best part of the hobby. But don't rush to start feeding. Wait until the water temperature is 50° , and then feed spring (wheat germ) food.

Step 7

Add start-up bacteria to re-colonize beneficial bacteria in your bio-filter; and barley straw (or liquid extract) to help control algae and keep your pond water clean and clear.

Step 8

If you have an ultraviolet (UV) light clarifier or sterilizer to prevent green water, replace the bulb and clean the quartz sleeve that covers the bulb. However, do not turn the UV unit on until the bacteria have had 48 hours to colonize.

Step 9

Prepare for The Return Of The Heron by placing fishing line around the edge of your pond, netting the pond, installing a Koi Castle to provide a safe area in the pond for fish to hide or installing a motion detection device (such as a water spraying ScareCrow) to scare away predators.

Step 10

You can begin feeding your fish when water temperatures remain at 50°F or higher. Use a pond thermometer to test the water's temperature. From 50 to 65°F, feed fish once weekly and at 65°F and above, feed fish every other day with a spring fish food that is wheat germ based and contains vitamin C and immune stimulants for optimum fish health, or a higher end koi food that has additional additives such as high levels of spirulina and montmarillonite clay for color enhancement, beta glucan that stimulates immune systems to prevent disease and infections and added vitamin C.

Step 11

To keep your pond clear and healthy, and to breakdown sludge and debris throughout the season add an all season beneficial bacteria on a regular basis, and once the water temperatures are consistently 60°F or higher, begin adding a sludge remover as needed. If your pond has green or brown water a water clarifier to quickly clear up murky water caused by floating organic and inorganic particles by pulling these floating particles together and settling them to the bottom. If this is an ongoing problem, consider adding an ultraviolet light.

Step 12

Enjoy the beauty and tranquility your pond brings you each day!

Calling all ponds

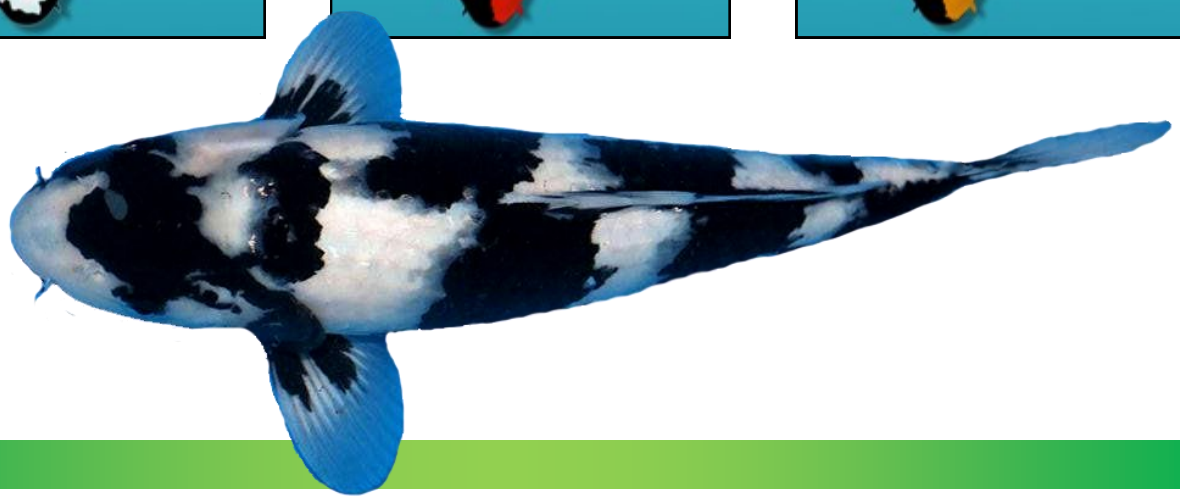
Our annual pond tour will be on August 13 & 14. If you're interested in being on this year's tour, contact our club president — Daniel Peel — or any club officer.

Know Your Koi – Utsuri

Utsuri are very popular koi fish for koi ponds and water gardens. When you search for quality koi to purchase, look for Utsuri koi that have pleasing checkerboard patterns and clear defined colors. Utsurimono have black skin, and are divided by interlacing markings of one other color. They have black bands of color wrapping around the body with one other non-metallic color. A red Utsuri is called Hi Utsuri, white type is called Shiro Utsuri, and the yellow type is called Ki Utsuri. Hi Utsuri and Ki Utsuri have red and yellow markings respectively in place of the white areas on a Shiro Utsuri. The sumi should be dark and distinct on the koi regardless of the contrasting color.

Utsuri are black koi with white, red or yellow markings

Like the Showa variety, sumi (black) on an Utsuri should essentially appear as bands of color on the nose, face side and throughout the body, as well as in the pectoral fin joints. Motogoro is the term for the black pigment located on the pectoral fins. Menware is the term referring to a band of sumi which divides the face or head pattern on the koi. The pectoral fins of Hi Utsuri and Ki Utsuri do not show Motoguro in the pectoral joints, instead, they are striped with sumi.



Upcoming Community Events

Great Salt Lake Bird Festival tickets are on sale here

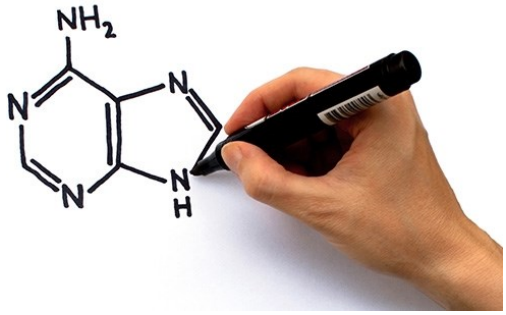
Thanksgiving Point Tulip Festival tickets are on sale here

Ammonia, Nitrite and Nitrate: (The Nitrogen Cycle)

The Role of Nitrogen

Nitrogen is essential for all living cells. Air is about 78% nitrogen gas, however most plants and animals cannot use nitrogen in gas form. Nitrogen must first be consumed by microorganisms that in return are consumed by plants and animals.

All animals get their nitrogen from plants or animals that have eaten plants.



The Nitrogen Cycle

Nitrifying bacteria cause what is commonly called "The Nitrogen Cycle." All ponds, aquariums and lakes go through a nitrogen cycle. In your pond, the nitrogen cycle begins and ends with the fish. Fish eat either plants or fish food and create waste. This waste is ammonia. Ammonia is also caused by the decay of an organism. These organisms include leaves, branches, and dead animals such as frogs or fish. High levels of ammonia can be deadly to both fish and plants living in the pond. The beneficial "nitrifying" bacteria in your pond help break down this organic matter and restore it to the earth so that it is able to be consumed again in nitrite form.

The nitrifying bacteria are integral to the cycle. During the initial stages of the cycle, ammonia is produced by fish respiration and fish waste.

Nitrifying bacteria – Nitrosomonas – convert ammonia into nitrite, which is then converted by another bacteria – Nitrobacter – into nitrate.

Ammonia is harmful to fish (and should be ideally kept at the 0 ppm and becomes very dangerous at 1.0 ppm or greater). Nitrite is even more harmful and should also be kept at 0 ppm, as it suppresses a fish's ability to carry oxygen in its bloodstream. Even slight amounts can stress fish. Large amounts can cause them to suffocate. If your pond has a pH greater than 8, with ammonia present, the fish will be subject to burn faster. Once the nitrite is converted to nitrate, the nitrate is viewed as plant food and is usually of no concern to pond keepers regarding fish. However, Nitrate can be a key contributor to green water and string algae.

You need to restart the nitrogen cycle each spring

When a pond is first set up or opened in the spring, higher measurements of ammonia and nitrite levels indicate where your pond is in the natural "Nitrogen Cycle". Ammonia peaks first, followed by nitrite peaking in 6 to 8 weeks, if the process occurs naurally. To speed up this process, you can add nitrifying bacteria, and the ammonia and nitrite will

The Nitrogen Cycle *(continued)*

cycle within as little as two weeks at 70°F water temperature. Once the levels of both are negligible, the pond is considered in balance.

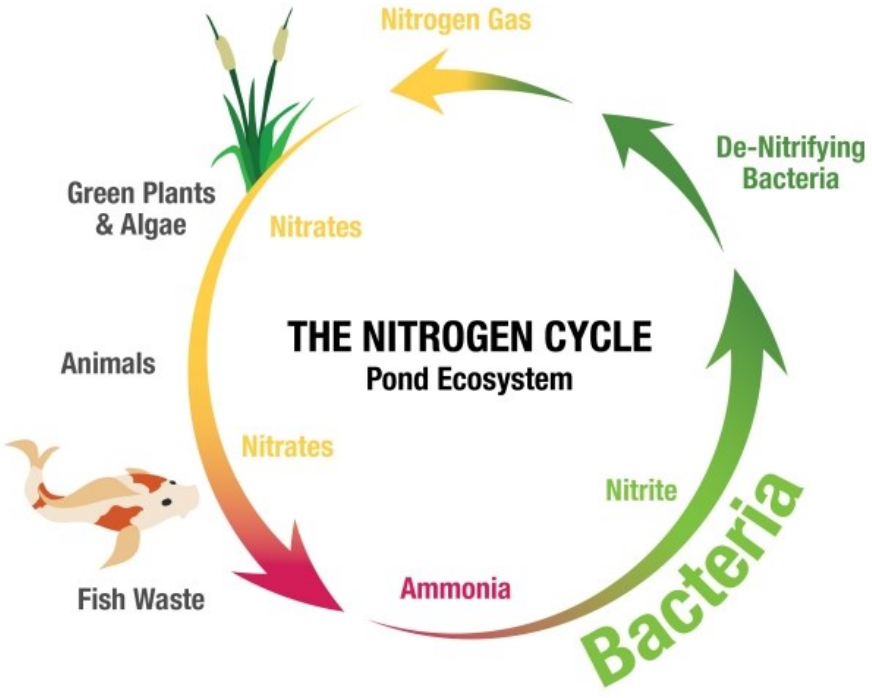
High ammonia levels can also be caused by anaerobic bacteria and by decomposing organic matter/sludge in the pond. Organic debris like leaves, lawn clippings, and dead fish or insects will break down, forming ammonia as a byproduct, starting the cycle of de-nitrification again. Reduce the amount of plant debris in your pond by using a skimmer filtration system and removing plant leaves and debris before it enters the pond. The use of protective netting helps reduce leaf litter from entering the pond in the fall.

In the spring, remove as much debris as possible from the bottom of your pond (note there is often large amounts of debris and leaves trapped between rocks if you have a rock bottom pond).

Adding sludge-eating bacteria on a regular basis can eliminate this. Most sludge eating bacterias will only work above 55° to 60°F. However, there are some new products on the market that claim eat sludge in cold water (below 55°F). These cold-water sludge-eating products are strongly suggested for use in the fall, to prepare your pond for the winter.

Therefore, it is essential to test your pond water in the early stages to ensure that your pond has negligible levels of ammonia and nitrite before new fish are added.

Ideal Nitrites: 0
Acceptable Range Nitrites: 0 - 0.25
Ideal Nitrates: 0
Acceptable Range Nitrates: 0 - 5.0
Ideal Ammonia: 0
Acceptable Range Ammonia: 0 – 0.25



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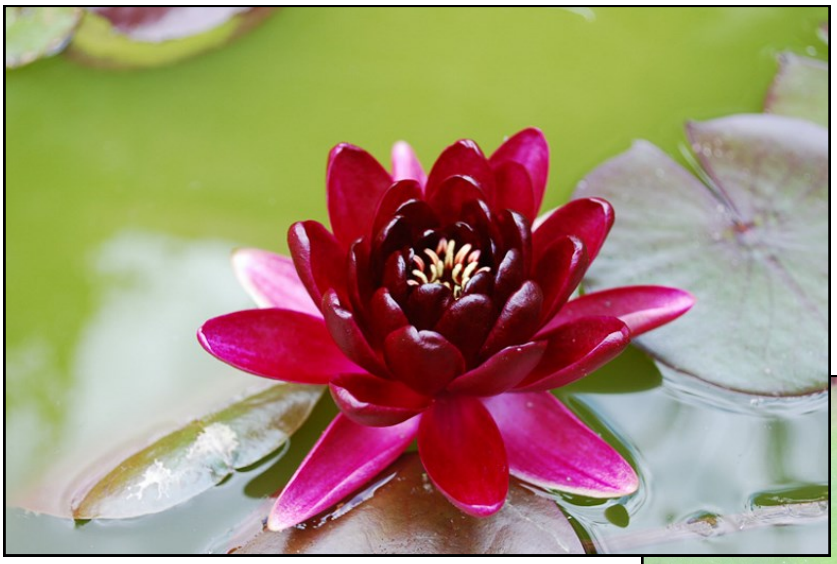
Know Your Water Lilies – Black Princess

Nymphaea “Black Princess” is a day-blooming aquatic perennial boasting purple rounded leaves, 8 inches across, gradually turning green as they mature. Floating on the surface of the water, they create a lovely backdrop for the striking dark red, almost black, peony-shaped flowers. Each slightly fragrant blossom, up to 5-6 inches across, features substantially red outer petals with nearly black inner petals, surrounding a conspicuous bouquet of yellow stamens. Each flower lasts several days, opening in the morning and closing at night. Blooming from late spring to early fall, Black Princess is free-flowering and produces many flowers over a long season. This hardy water lily is recommended for any water garden.

- Grows up to 3-5 feet wide
- Depth of water: 6-36 inches.
- Performs best in full sun in loamy soil in undisturbed water. Plant in a basked with the crown just below the soil surface. Feed during the growing season with aquatic fertilizer.
- Deadhead and remove yellow leaves regularly.
- Keep an eye out for water lily beetle, water lily aphid, brown china-mark moth, false leaf-mining midge, crown rot, brown spot and water lily leafspot.
- Propagate by division of they rhizomes or offsets in summer, place in pots in shallow water until established.



Who we are

The Utah Water Garden Club is a non-profit organization serving the greater Wasatch Front. We strive to foster an appreciation for and interest in the use of water in the landscape, through monthly meetings, educational programs, an annual pond tour, and sharing our water gardening experiences. We are a group of volunteers dedicated to water gardening, pond keeping, and koi. Our members range from novices to commercial professionals.

Our annual Water Garden Tour is a self-guided tour of outstanding local ponds and gardens. We were excited to again to hold our tour last year, and are looking forward to this year. Watch for details in future newsletters and on the Club's website at UtahWaterGardenClub.org

Utah Water Garden Koi Club

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