Utah Water Garden & Koi club

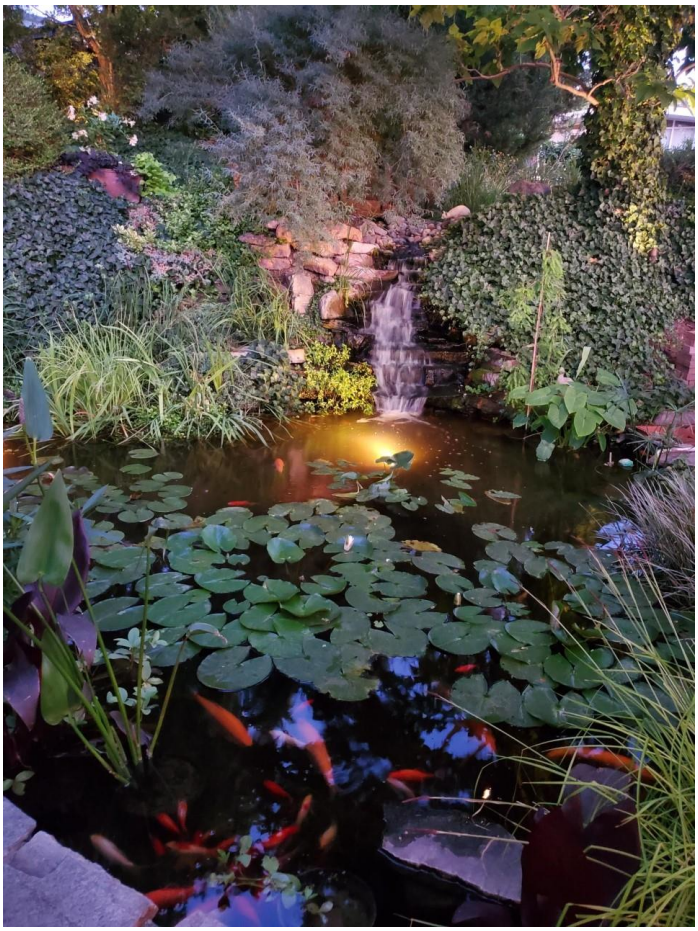
September, 2019 Newsletter

August Meeting at our President's Home

This meeting was without doubt the best meeting of the year. The evening was perfect and it was a joy to wander through the Cobbley's extensive streams and pond. Their backyard is full of fun surprises, beautiful lighting, and stunning plants.

Our speaker, Keith Rosser who is the owner of Landscape Lighting Pro of Utah and a loyal club sponsor, gave an **enlightening** presentation on how outdoor lighting design can transform your yard into an evening wonderland.

And the food!
Rosie's pasta fazool was just outstanding and we appreciate her efforts and Richard's support in hosting a wonderful meeting!



The Pond Trading Post

Equipment for Sale

We are moving to St George and unfortunately will not take our Koi with us. We have some good equipment that someone in the club may be interested in. We would like to sell all of it for $650 OBO.

1. About a 100 gallon isolation tub made from tough black plastic, it does not collapse. We used this as an isolation tank as well as to support fish during pond cleaning.
2. 1000-gallon collapsible tank with pump, filter and all plumbing. We used this for holding our Koi during the winter as well as during pond cleaning, and as an isolation tank if we found any diseased Koi. A year ago, during pond cleaning we had nearly 100 Koi in it, about half of them small; this year we had around 50 larger Koi. The ability of the filter to back wash and discharge dirty water from the tank made care of the Koi easy even if it required daily cleaning due to fish load. New/similar tanks are around $700-$1000
    a. Pump: Performance Pro Cascade – new these are around $500
        - Out of tank pump
        - Baldor - Reliance 110 V, 1/8 HP Industrial Motor.
        - High efficiency industrial grade pump that is ideal for pond, water feature, or holding tank
        - Long life, corrosion resistant, 316 Stainless steel shaft seals, industrial grade poly propylene housings
        - Impeller is interchangeable if required
        - Pump and motor designed for quiet operation
    b. Filter: Professional grade Aqua Ultima II 2000, biomechanical filter with 2-inch input and discharge ports – new these are between $850 and $900
        - Combines both biological and mechanical filtration
        - Patented tubular media design has the highest surface area on the market to grow beneficial bacteria. These bacteria breakdown fish waste, creating a safe, healthy environment
        - Rotating the valve on top engages the patented cyclonic backwash system, performs normal filtering of tank or discharges water from the tank, plus other settings
        - High flow rate filter excellent for fish loads and elevated feed rates
        - Backwash takes about 5 minutes per week

If anyone is interested, they can text Don Jackson at 801-842-2882

Fish for Sale

For those of you who are looking to improve your herd of Koi, or try a different species of fish, you need not look any further than our very own Lewis Wayman and Daniel Peel. They are now offering high quality, beautiful, healthy and colorful Koi for sale. They offer the beautiful butterfly Koi as well as standard fin Koi. They also often have other unique fish to offer such as the Shubunkin, Chinese Hi Fin Banded Shark and Sturgeon. Please give them a call at (435) 660-0784 or (801) 916-2500 and they would be happy to assist you.

Club Officers 2019
President: Richard Cobbley 801-641-0179
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Vice-President: Kelly Flint 801-274-3040
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Secretary: Sherry Avellar 801-664-9528
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Treasurer: Daniel Peel 435-660-0784
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Board Members
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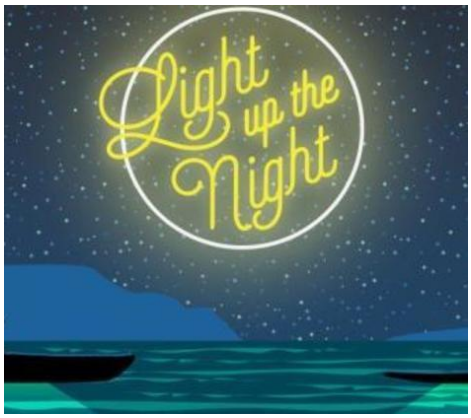
(avon_naoyagi@hotmail.com)
Sponsor Chairman
Lewis Wayman 801-916-2500
(lwayman@stylecraftframe.com)

September Special Event
September 7, 2019
6:00 pm – 10:30 pm
Evening Pond Tour!
Light Up the Night!
Tickets are sold out!



September Meeting
September 12, 2019 7:00 pm
Urban Garden Company
365 W 800 North, Salt Lake City
Adult Beverage Friendly
Bring chairs
This is our last chance to bring food for the food bank, so let's end the year with a bang! Bring in two cans or more of any type food and receive an extra raffle ticket!

Big News!

If you want to continue the fun times as a member of the club, pay your dues now for next year. We have some exciting ideas for 2020 that you won't want to miss. Annual dues are $35.00 for singles and $45.00 for couples. Contact Daniel Peel at 435-660-0784 to purchase your membership today.

October Annual Banquet and Auction

October 17, 2019 7:00 pm
Annual Banquet
Celeste Ristorante

5468 South 900 East
Murray
Cost is $30 per person for members and $40 per person for non-members
This will be a buffet dinner with several main course options, a salad and dessert. Soft drinks are included and you are welcome to bring wine.

Fill the pond food drive

This year, our club is sponsoring a year-long food drive in support of the Utah Food Bank. We encourage all members to bring packaged food items to our meetings and we will deliver them to the Food Bank. Cash donations are also most welcome. We feel it is critical to help our community feed hungry citizens, especially children.

Let's see how much we can collect by our October Banquet!

Most needed food items:
Peanut Butter
Mac & Cheese
Canned Meats (tuna, chicken or beef)
Chili
SpaghettiOs/Ravioli
Canned Fruits and Veggies
Rice, Pasta, Oatmeal
Other Boxed Meals

Current tally:
183 pounds of food!!
$285.00 in cash donations!!

Election Time is Here Again!

What does scary Halloween masks, frost on the pumpkin, and falling leaves have in common? They all appear during election season and this fall is no exception. We need volunteers to run for President, Secretary, and two board member positions. Only eligible club members can hold elected offices. We will be holding elections at the October banquet.

Please submit your name, or someone else's name as a nominee to our club President, Richard Cobbley at randrcobb@comcast.net. Names should be submitted no later than October 1st. Terms of service are two years for officers, and three years for board members.

Our club officer/board member team is very supportive, fun and helpful to each other. We try to spread the workload and not overly burden any one person. Come join us if you would like to help our club flourish.

The Koi Spot

Dear Ponders: I found a very interesting article with video and detailed information about Koi Symptom Diagnosis. It was too long to put in our newsletter, but I thought you would like to check it out. You can find it at:
https://hanoverkoifarms.com/koi-symptom-diagnosis/

Overwintering Goldfish & Koi

Generally speaking, Koi and goldfish are very "hardy" fish that can tolerate lower oxygen levels and overall poorer water quality than most other types of fish. This means in most environments they can survive through frigid winter conditions. Even so, some consideration must be given to ensure their survival through freezing conditions in backyard ponds.

The first consideration is the geographic location of the pond and how much and how often does ice typically form on the surface. If you are not sure a general guide would be the USDA Hardiness Growing Zones. These are based on minimum annual temperatures and range from Zone 4 (coldest) to Zone 9 (warmest) in the lower 48 states. Generally, Zones 7 and higher rarely see surface ice, Zones 5 and lower will usually have good amounts, and Zone 6 can go either way. This is a generalization and of course these zone locations will continue to change with current trends in climate change. Most gardens in Salt Lake City are in zone 5.

The reason the amount of ice is important is because this is a large factor in nearly all winter fish deaths. Obviously, fish cannot survive freezing in ice, but this is only possible in the shallowest ponds in the coldest climates. Normally in most ponds there is a layer of unfrozen water that will remain under the ice. **FYI** Many people will swear their pond fish "froze solid" only to thaw and begin swimming in the spring. This is simply impossible.

It is likely the pond appeared to be frozen to the bottom and the fish remained visibly motionless appearing to be frozen stiff. If they begin to swim with the thaw then there was at least some unfrozen water under the ice. The ice usually does not have a direct effect on the fish. The direct effect of the ice is on the pond. Specifically, on the pond's ability capture oxygen and expel carbon dioxide. Oxygen in the water is used by the fish and most living organisms in the pond. This is replenished simply by the water directly contacting the air, at the pond's surface. Moving (pumping) the water through a waterfall, fountain, etc. increases the oxygenation or aeration of the water by simply creating more direct contact with the air. Conversely carbon dioxide created by the water life must be released from the water and may only be accomplished the same way, by the water contacting the air. This means when the pond's surface is completely covered with ice this "exchange" of gases ceases completely. If these conditions persist long enough it is possible for fish to perish from lack of oxygen. Other factors that increase the potential for fish loss in these conditions include, accumulated organic debris (especially deciduous tree leaves), shallow water less than 2 ft

deep, snow cover on the ice, and large fish loads (populations). A combination of these factors left unchecked can lead to low oxygen levels, low water quality, and eventually fish fatalities.

Historically, experts have given the following advice to help ensure survival of ornamental pond fish in the winter. First remove any organic debris from the pond that can be netted, vacuumed, etc. A netting cover in the fall minimizes debris collection. When ice begins to form on the surface turn off your pump(s) and place an adequate de-icer in the water and plug it in. The reason for stopping recirculation of the water is to allow the pond water to naturally "stratify" into temperature layers. This meant the water at the bottom would always be slightly warmer than the frozen water at the surface, creating a more "comfortable" environment for the cold-blooded fish. So, a de-icer is used to maintain an opening in the ice coverage. Check your de-icer periodically to be certain it is working by keeping an area or "hole" ice free on the surface. Turn the pumps/ filters back on in the spring once the threat of a prolonged freeze has passed. The pond water is typically oxygen rich since most living organisms are using minimal amounts due to the low temperatures. The fish remain generally motionless using minimal amounts of oxygen, and any size hole in the ice will allow enough gas exchange to prevent problems.

Recently however some pond owners/experts, specifically koi enthusiasts have pointed out that these methods may not be enough to sustain large populations of large koi (up to 30 lbs. or more each) in freezing climates. Clearly the overall oxygen demand can be much greater for a pond full of these large fish. Larger fish also burn more energy than smaller fish in cold water due to the extra weight they must carry. This means they will need to eat, and even if they are not "fed" by the pond owner they will consume material, organisms, etc., in the pond. This will result in more organic (fish) waste which can only be removed or detoxified through filtration. When considering these factors and the fact that fish like this are usually named family pets, extra caution/ care should be used when overwintering these types of ponds in freezing climates. Pumps, recirculating water, and filtration should all be continued 365 days/ year if possible, in ponds with many large koi. The emphasis is to create an environment for the fish that is as "stable" as possible. This makes for healthy, "comfortable" fish. So even though the recirculating water minimalizes the stratification of temperature layers, it more importantly slows water temperature swings affected by changing air temperatures. These weather conditions particularly in late winter/early spring can create unstable water conditions. Dramatic, constant water temperature swings negatively affect aerobic bacteria colonies in the pond needed to breakdown increasing levels of organic waste. The resulting lower water quality can negatively affect fish health. Moving water allows/ promotes filtration for maintaining good water quality. The moving water obviously prevents complete ice coverage and aerates the pond.

There is one other strategy that is successful. The use of an air pump with some type of weighted diffuser/ airstone. The electric pump forces compressed air through thin tubing to be released as "bubbles" from underwater. This will keep an area ice free and recirculate/aerate the water. This method works alone or can be used combined with the first two methods.

Some may consider actually heating the pond to prevent freezing, such as people do with swimming pools. The fact is heating water requires a tremendous amount of energy. The costs for even minimally heating water outdoors overwinter exceed the practical budget of most households.

There are some things to further consider. All of these methods require electrical power, so allows have a plan for power outages. This is especially true when recirculating water to filters/ points outside of the pond. Check to make sure pipes drain and/ or be ready to act to manually drain water where needed. Consider creating a weather-proof structure to house large out of pond pumps, filters, etc. and winterizing pipe lines/ valves. In ponds where de-icers are used it is best to simply wait for the power to return. Otherwise a rubber child's ball can be placed in the

hole to allow temporary periodic removal. Normal outages rarely last more than a few days not long enough to cause trouble. Snow can also create negative pond conditions. If allowed to build up and remain on any ice coverage it blocks light penetration into the water. This may create dying algae/ bacteria that would lower oxygen levels. Any snow that can be safely removed will improve conditions. Conversely any existing ice should never be forcibly cracked or broken as the acute sound waves this produces in the water can cause harm to the fish.

In summary try to keep the pond fairly clean prior to winter, do not allow the pond to completely ice over, safely remove any snow build-up, do not feed fish through the winter and check the pond regularly. Return the pond to its normal operation as promptly as possible in the spring. If you are still not sure which method may be right for you consult your local pond expert.

IHOP The Ponder Frog…

Ponders: New Friends!

The Best Small Pond Fish for Outdoor Ponds (50-500+ gallons)

1) Common Goldfish *(Carassius auratus)*

Though goldfish prefer temperatures that are between 68 and 72° F (20 to 22° C), they are able to overwinter so long as temperatures don't drop below approximately 50° F (10° C). Once water temperatures hit that mark, goldfish enter a state of dormancy called torpor in which they conserve their energy and are thus able to overwinter outdoors so long as the pond doesn't freeze entirely. A pH of 7.2 to 7.6 is the most suitable for them, though they can tolerate fluctuations in this better than most other domesticated fish. Common goldfish need to have at least 50 gallons of water per goldfish (ideally 100 gallons), while fancy goldfish may require more or less depending on their size or other factors; for example, pearlfish need closer to 30 or more gallons per fish due to the unexpected amount of waste that they generate relative to their smaller body size. Goldfish are social fish and prefer to live in small to medium sized groups, so you'll need to have more than just one or two in order to keep them happy and healthy. Common goldfish are overall laid back and very non-aggressive, but temperament can vary a bit more with fancy goldfish depending on the variety. Common goldfish tend to enjoy swimming about and are fairly active fish, so it may be best to not stock them with fish that are overly sensitive or easily stressed. Most fancy goldfish are slow and have a hard time competing with more zealous fish for food, so you shouldn't keep common and fancy goldfish together. The average goldfish lifespan is around 10 to 25 years with proper care, though the oldest one on record lived to be 43!

2) Common Minnows *(Phoxinus phoxinus)*

Common Minnows

The most commonly kept minnow species among ponders and aquarists is the fathead minnow, and so the term "common minnow" generally refers to them. Fatheads are an adaptable species that does well in cooler waters ranging from 53 to 68° F (12 to 20° C), often feeding on plant matter that is provided to them or that grows in your pond as well as adult and larval aquatic insects (including mosquitoes!) and algae. They're native to much of North as well as Central America, though they do prefer cooler waters. They enjoy both swimming and lounging about, so your pond should have open space as well as hiding places like plants and hollow rocks or logs.

Very sturdy creatures, fatheads are able to withstand conditions that would cause most other fish to perish or become ill, such as low oxygen levels, high turbidity, or pH variances outside of their 7 to 7.5 range. Regardless, you should do your best to keep water moving only slowly, the temperature and pH within their preferred range, and oxygen levels at or above 7 parts per million (ppm). In addition, in the wild they keep together in schools of 5 or more, so apply this when keeping them as pets. Each fathead needs at least 10 gallons of water.

3) Mosquito Fish *(Gambusia affinis)*

A Mosquito Fish

As their name implies, mosquito fish (which are actually a variety of small minnow) are quite adept at consuming mosquito larvae, with just one mosquito fish eating anywhere from 100 to 500 of them in a single day! Each approximately 2 inch long adult needs at least 10 gallons of water, and the water should be between 50 and 84 °F (10-29 °C) with a pH ranging from 6 to 8. Since mosquitoes compose such a large portion of their diet in the wild, this means that mosquito fish can tolerate waters that have lower oxygen levels (do try not to let it fall below 5 ppm, though!) since mosquitos tend to lay their eggs in stagnant water. Much of their diet consists of insects and supplemented with a bit of plant matter and algae, so if you choose to feed them additional food aside from the natural insects that exist in the pond, stick to high protein snacks like brine shrimp or mealworms.

While mostly peaceful, mosquito fish have been known to be aggressive at times and nip the fins of slower fish or those with long fins. With this in mind, don't keep them with long-finned species or with docile and easily bullied fancy goldfish. Due to their extreme hardiness, they make excellent fish for even

first-time ponders. Keep in mind, however, that they breed very quickly and as such you'll likely need to get rid of some after a while. In addition, they usually live 1 to 3 years (with this short lifespan contributing to their quick reproduction).

4) Sticklebacks *(Gasterosteidae)*

Sticklebacks, are small (less than 6 inches long) fish with a handful of bony armor plates that are more closely related to seahorses and pipefish than anything else. They're bold and energetic, known to dart about ponds, but they aren't known to pick on other fish with the exception of breeding season, during which males can become aggressive. The majority of their diet consists of aquatic macroinvertebrates like insects and crustaceans, but they'll also eat tadpoles and the occasional bit of plant matter as well.

Perhaps the hardiest species on this list in terms of temperature, sticklebacks do just fine in waters as low as 39° F (3.8° C), though their general range of comfort is anywhere from 50 to 70° F (10 to 21° C); above 70° F and their metabolisms speed up to the point of illness. They prefer to be kept in groups of 5 or more, and again about 10 to 20 gallons of water per fish is suitable.

5) Red Shiners *(Cyprinella lutrensis)*

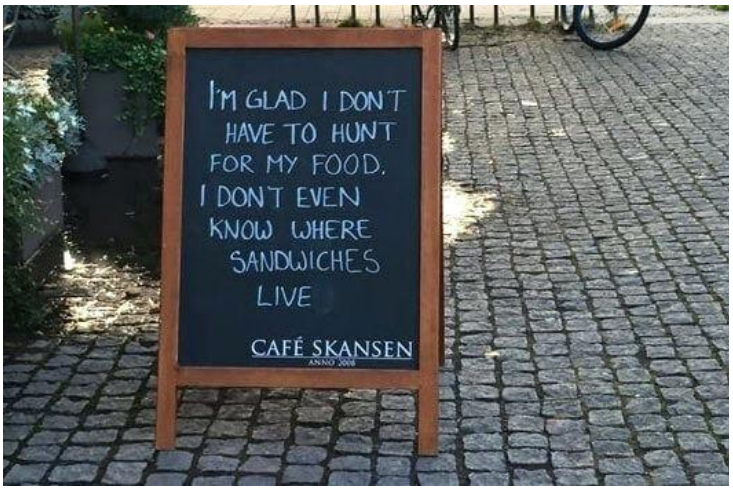
Native to North America, red shiners have silvery-blue bodies with vibrant red-orange fins and typically live around 3 years with proper care. In the wild, they're often found in mountainous regions and as such are able to survive water temperatures as low as -21° C, though this is in extreme cases and water should be kept within the range of 59 and 77° F (15-25° C). They're an active fish and can be known to nip fins, so don't keep them with slow-moving fancy goldfish. Though tolerant of pH shifts from 5 to 10, water pH should be kept between 7 and 8 for red shiners, which are only about 2 to 3 inches long and need 20 to 30 gallons of water per individual. As with most small fish species, red shiners should be kept in groups of 5 or more so that they feel safe and comfortable.

6) Shubunkins & Comets *(Carassius auratus)*

Though both of these are varieties of goldfish, they are listed separately due to their popularity, hardiness, and uniqueness. Shubunkins and comets look quite similar at first glance, but shubunkins often have blueish coloring and longer, more flowy fins. Both are very peaceful (but lively and playful), can grow up to a foot in length (though about 5 to 6 inches is more common), and live up to 15 years if properly taken care of.

Each individual will need about 30-50 gallons of water in order to live comfortably, though closer to 50 works better since they are such active fish. Their temperature and pH parameters are the same as those listed in the goldfish section above. Comets in particular may nibble on plants (like water lettuce, hornwort, and anacharis), and also have a propensity to dig at substrate, perhaps out of nesting instinct, and as such may dig up smaller submerged plants.

Random Thoughts



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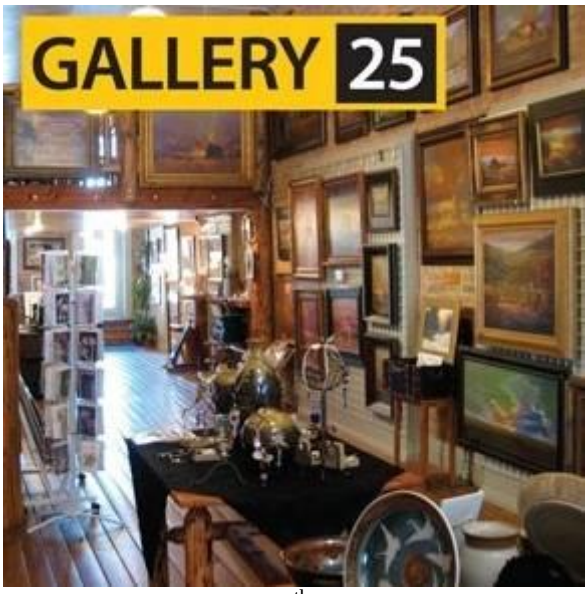

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