

June Meeting at Utah Water Gardens





We want to thank Sheida, Chris and Ebony for hosting a really wonderful meeting at their new location. Even though we experienced a bit of rain, we were nicely sheltered in their newly remodled vintage barn. The food was good and plentiful. Our speaker Natalie Avery of Wild Birds Unlimited gave us some great information on tidy bird feeding. She brought along some wonderful products from their store and explained that tidy bird feeding techniques are great for people who love gardens and birds but hate the mess of typical bird seed products. Go check out their store located at 1967 East Murray Holladay Rd. They have great store!



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.

- 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 2inch 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 (randrcobb@comcast.net) Vice-President: Kelly Flint 801-274-3040 (kflint3040@msn.com) Secretary: Sherry Avellar 801-664-9528 (trout42@hotmail.com) Treasurer: Daniel Peel 435-660-0784 (danielpeel@me.com)

Board Members

Ty Rosser 801-995-8521 (ty@utahlights.com) Brett Reynolds 801-272-2541 (brett@reynoldsgraphics.com) Nancy Aoyagi 801-712-9484 (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!



Your club officers have made arrangements for an evening tour of three beautifully lit ponds. This tour shows off ponds in a different light! Transportation will be provided from South Towne Mall to each of the three locations and is included in the ticket price. We will end at one of the ponds where a fantastic dinner will be provided. Tickets on sale now for \$35 per person. Don't miss this first-time event that includes transportation, great ponds, terrific food and good company!

Final pond where dinner is served is adult beverage friendly so bring your own and enjoy a magical evening that will Light Up the Night!

Tickets are limited so purchase early. Contact Daniel Peel at 435-660-0784 to purchase tickets. Tickets can also be purchased at the July BBQ on July 18.



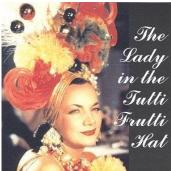




July Annual Club BBQ

July 18, 2019 7:00 pm Daniel Peel and Lewis Wayman Residence 11707 S. Thornberry Drive, Draper Adult Beverage Friendly Bring chairs and a side dish to share **TUTTI FRUTTI NIGHT!**

Bring in any two cans of fruit and receive an extra raffle ticket



August Pond Tour August 10-11, 2019 (<u>Second</u> Weekend in August)

August Meeting

August 15, 2019 7:00 pm The Cobbley Residence 1268 E. Lori Circle, Sandy Adult Beverage Friendly Bring chairs

Tuna Palooza!



Bring in two cans of tuna fish or other canned meat and receive an extra raffle ticket!

September Meeting

September 12, 2019 7:00 pm Urban Garden Company 365 W 800 North, Salt Lake City Topic: TBD Bring chairs

October Annual Banquet

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



5468 South 900 East Murray



More Details Coming Soon

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: 141 pounds of food!! \$235.00 in cash donations!!



Plant of the Month ALL ABOUT ELEPHANT EARS

Alocasia and colocasia, better known as elephant ears, are impressive plants that are prized for their dramatic foliage. Their huge leaves can measure up to 2 feet across and the foliage color ranges from lime green to almost black. Upright elephant ears (Alocasia) have shiny leaves that often display colorful variegations. They can be grown indoors as well as out. Colocasia have a more spreading habit and their leaves typically have a velvety surface texture. Elephant ears can easily hold their own as a solo plant in the garden or in a large container. They also combine beautifully with other summer bulbs and annuals.



STEP 1 - KNOW

START WITH A BETTER BULB

It's easy to see the difference in quality when you compare two elephant ear tubers side by side. We sell large, 9/11 cm tubers (shown at far left) that grow into big plants with strong stems and abundant foliage. Smaller, 7/9 cm tubers (on the right) produce smaller

plants. A healthy elephant ear tuber will be firm and heavy with a dry exterior.



STEP 2 - PLAN

Here are a few tips to help you enjoy growing elephant ears.

SUN OR SHADE: Elephant ears can be planted in sun or shade. If you put them in a hot, sunny location, make sure they get a little shade during the middle of the day.

ZONE: Elephant ears are tropical plants. In zones 9-11 they can be grown outdoors year-round. In cooler areas (zones 3-8) the bulbs are planted in the spring and usually grown as annuals.

WHEN TO PLANT: Elephant ears are planted in spring after any danger of frost has passed. The tubers will not grow until the soil is warm, so don't plant the tubers until the soil temperature is 65°F. To get a jump on the season, elephant ears can be planted indoors, 4 to 6 weeks before you plan to put them outside. Plant the tubers in pots and grow them a warm, sunny window.

WHERE TO PLANT ELEPHANT EARS

CONTAINERS, PATIOS AND DECKS Elephant ears are a perfect solution for shady porches, decks and other places around your home that are not in full sun. Their huge, heart-shaped leaves add a tropical feel to pools, spas and water gardens.

WALLS AND FENCES Planting elephant ears next to a wall or fence protects the plants from wind and too much sun. It also puts their big leaves to work, softening straight lines and adding visual interest to blank walls.

ENTRYWAYS Add a "wow" to your front door by planting elephant ears in large containers. They make a big statement and always impress guests. Plant them on their own or pair them with other plants such as caladiums or coleus.

SCREENING The broad leaves and tall stems of elephant ears can be used to screen an unwanted view or define a space in your garden. Planting them along a property line or around an outdoor living area, will make your yard feel more private.

INDOOR HOUSEPLANT Upright elephant ears can also be grown indoors as long the plants get enough light and water. Their attractive foliage can be an exciting feature all year round.

within just a few months, so be sure to give them plenty of room.

STEP 3 - GROW

PLANTING IS AS EASY AS 1-2-3



1. Wait until the soil is warm and there's no danger of frost. Loosen the soil 8" deep. Dig a hole about 5" deep.

2. Set the tuber in the hole, pointy side up. The the top of the tuber should be 1" below the soil surface.

3. Cover the tuber with soil and water thoroughly.

PLANTING TIPS

In warm, frost-free climates (zones 9-11), elephant ears can be grown outdoors year-round. In cooler areas (zones 3-8) they are usually grown as annuals. When planted in spring, they become big, impressive plants

Plant elephant ears in rich, well drained soil. Improving the soil with compost or topsoil will add nutrients and improve the soil's water-holding capacity.

For elephant ears to reach their full size, they need consistent moisture throughout the summer. They also benefit from an application of liquid fertilizer every 2-3 weeks.







STEP 4 - AFTERCARE

CARING FOR ELEPHANT EARS IN THE FALL

Elephant ears will not survive freezing temperatures and are winter hardy only in zones 9-11. In colder areas, you can either treat elephant ears as annuals and discard them at the end of the growing season, or you can store the tubers indoors and replant them next year.

If you want to store alocasia or colocasia tubers from one year to the next, they should be dug up in the fall before temperatures drop below 40°F. Dig carefully, starting about a foot from the center of the plant. Lift the plant out of the ground (or out of the pot) and move it to a warm, dry place where it will be protected from frost. Once the root ball is dry, cut back the stems and use your hands to pull away the soil. Allow the tuber to continue to dry. When dry, wrap each tuber separately in paper and store in a warm, dark, dry place at 50-60°F.

Upright elephant ears (Alocasia) can be brought indoors and grown as houseplants. Keep the plants in bright, indirect light and keep the soil consistently moist, not wet.







The Koi Spot

Why Do Goldfish Change Color? A Guide to Goldfish Color Changes



Goldfish come in a variety of breeds; each with different color & scale genes.

If you own goldfish, chances are you have likely noticed that sometimes they change color. This can be caused by a variety of factors – diet, amount of light exposure, genetics, maturing and aging, water quality, or in some cases disease or illness. The majority of color changes occur during the first two years of a goldfish's life. Most goldfish start off as brown or black due to possessing melanophores, or specialized cells that contain melanin (biological pigment), within the dermal layer of their scales. This darker coloring, it is theorized, helps young goldfish survive by being able to blend in when hiding and escape the attention of predators.



Most common goldfish species will take on their classic orange color as they mature. As they mature, goldfish will generally change to their characteristic orange or yellow coloring within about a year. Goldfish in environments with less sunlight available may not be as brightly colored as those in well-lit ponds, and so you can expect natural variations in color attributable to environmental factors throughout a goldfish's life as well.

In addition, goldfish also possess pigment cells known as chromatophores (melanophores are a subtype of chromatophores) that react most strongly with water temperature, but also respond to water quality, sunlight, and even the quality of their food, diet, and nutrition!

There are many factors that can influence the color of goldfish throughout their life; but what are the most common colors and changes to expect? And what should you do if your goldfish has suddenly changed color?

Will All Goldfish Change Color? (Comparing Different Scale Types)

Most domestic goldfish exhibit three main scale types: metallic, nacreous, and matt. The presence, absence, and/or abundance of these scale types and the density of pigment cells within them also determines if and how a goldfish's scales will change color throughout its life.

Metallic scales are composed primarily of a crystalline pigment known as guanine that mirrors light, and contain a high abundance of xanthophores and erythrophores, the cells primarily responsible for bright coloration like reds (xanthophores), oranges and yellows (erythrophores). Metallic goldfish typically have fairly stable coloring, meaning that it likely won't change much during their life. Below is a video showing a goldfish with a heavy metallic scale type:

Nacreous scales contain some guanine, and so goldfish with this scale type may appear moderately metallic while others may not at all or will instead have a sort of mother of pearl appearance (it just depends on the amount and density of guanine). Some nacreous goldfish color types (midnight, calico and bluebelly) may have scales that appear translucent. Nacreous goldfish are typically black, red, or yellow or some form of mixture of these. The pigment cells in nacreous goldfish are usually found beneath the scales, and as such this goldfish type may appear a bit dull and less bright. Their color will not typically change much as they age, though it is not uncommon for black nacreous goldfish to acquire more black coloring as they age.

Matt goldfish lack guanine as well as pigment cells, and as such are typically white, pink, light grey, or cream-colored due to their skin color showing through their translucent scales. As may be expected, matt goldfish do not change color as they don't possess pigment cells.

Why Has My Goldfish Turned White? (Possible Causes)

1) Insufficient Lighting



Ponds or aquariums with insufficient lighting can cause Goldfish to lose pigment and be dull in color. Perhaps the most common non-natural cause of goldfish turning white or becoming dull is insufficient lighting. For maximum color enhancement and to ensure that color develops properly as goldfish mature, 12 hours per day of either sunlight or artificial lighting should be available. Lack of light can, depending on the goldfish, promote the production of melanin (black pigment) or decrease chromatophore (the cells that produce color pigments such as yellow and red) production. Without light, goldfish adapt to stop wasting energy resources on color production and maintenance. This results in the goldfish becoming either white or black, depending upon its dominant genes.

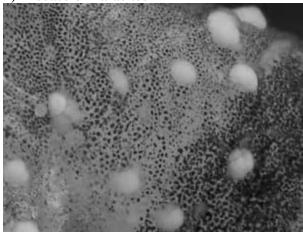
2) Natural Genetics

There are three main scale types in goldfish. How goldfish are bred heavily influences the scale type and coloration of their offspring both as fry and as adults. For example, if a matt goldfish is bred with a nacreous goldfish, there's a fifty percent chance that the offspring will be matt and a fair likelihood of some of the offspring becoming more dull or pale as they mature, even if they started off with color. Some goldfish varieties, particularly if two different types are cross bred, may naturally undergo a process called demelanization as they age. This gene triggers the loss of melanin, and gives rise to any dark scales on the fish paling or turning entirely white.

3) Poor Water Quality

If you've noticed your goldfish rapidly turning white, you should use a kit to test your water quality. Poor water quality (too much ammonia, too many nitrites, too little oxygen, high water temperature, etc.) can really mess with your goldfish's ability to regulate cell pigmentation. An excess of nutrients in particular is liable to cause any pigments that are present to concentrate, resulting in either pale or dark fish depending upon the goldfish variety and its genetics.

4) Disease or Parasites



White spot, or Ich, is a common fish disease in both koi and goldfish. If your goldfish has become white or dull and this change is accompanied by symptoms such as lethargy, lack of appetite, growths on the scales/fins, or the development of white spots, your goldfish may have some form of disease or illness. White spot disease, or ich, will cause white spots to pepper the fish's scales, and other symptoms include lethargy, difficulty breathing and swimming, and even death. Typically, the disease is either passed on by other infected fish or is triggered by poor water quality.

However, don't think the worst if you notice your fish is turning white! The first step is to test the water quality and temperature of your pond – if the pH, temperature, and nutrient levels are within the acceptable range for goldfish, it's likely that the color change is natural and nothing to be concerned about. If you know where your fish came from, you can inquire about its lineage to determine if genetics is playing an obvious role in color change.

5) Poor Diet & Nutrition

Try to feed your goldfish a varied diet, as they can naturally lose a bit of their color when not obtaining the right nutrients. Carotenoids are fat-soluble red, yellow, or orange pigments responsible for giving goldfish their characteristic coloring. However, goldfish cannot produce these pigments on their own and as such should be fed supplemental foods that are rich in carotenoids that may help to naturally enhance color, such as carrots, peas, spinach, and spirulina, which can be found in many high quality pellet feeds. While a diet with carotenoid deficiencies likely won't cause your fish to turn entirely white, you may notice your goldfish's colors becoming a bit dull or pale.

Why Has My Goldfish Turned Black? (Possible Causes)

1) Natural Ageing

Many goldfish start off dark brown or black and then gain more characteristic coloring as they mature. However, if your goldfish is over a year old and still black, chances are that you simply have a black goldfish! If it started off colorful or lightly colored and is now turning black, a few other factors could be involved:

2) Poor Water Quality



Both

Water quality and pond maintenance play an important role in fish health, so should be kept to high standards. Just as poor water quality can result in goldfish becoming pale, it can also cause them to darken as too many or too few nutrients, too many pollutants, and so on interferes with the goldfish's ability to regulate its pigmentation. Utilize a water test kit immediately to assess the condition of your water. One of the biggest things you'll want to check for is ammonia, which is produced naturally via decomposing food matter and fish excrement. Goldfish are heavy producers of ammonia, and if this isn't filtered out properly your fish can develop black ammonia burns. The tricky thing about ammonia burns is that if the ammonia levels are consistently high, the skin will not be able to heal from the burns and so they won't show up. The burns turn black once the ammonia levels have dropped enough for the skin to begin healing, so your best bet is to keep a close eye on your water quality and treat it and/or change the water if needed.

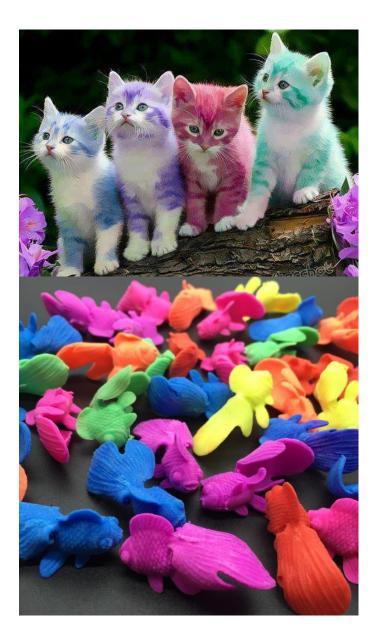
3) Disease or Parasites

Similar to white spot disease, black spot disease (or diplopstomiasis) causes black spots to form on goldfish. This particular disease is passed by a parasitic larval flatworm that inhabits aquatic snails. As the flatworms mature into adults, they exit the snail and burrow into the skin of any nearby fish. The fish respond by encasing the parasite in a black cyst. While this disease is not considered fatal to fish, you should still take care to remove any snails and infected fish from your pond if you find your goldfish are suddenly developing small black cysts, particularly if your goldfish variety is not known for acquiring black pigmentation.

4) Natural Genetics

Just as genetics may cause goldfish to turn white, they may also cause them to turn (or remain) black. If you didn't breed the goldfish yourself, see if you can find out its ancestry. If your water quality is healthy and you know that no diseases are present, your fish is almost certainly changing color naturally. Black pigmentation is not known to be influenced by diet.

What Can I Do About My Goldfish Changing Color? Much of the time, color changes are determined primarily by genetics and there is little that can be done as it's a natural process! However, unless your goldfish is black you can somewhat influence its color by providing a carotenoid-rich diet, such as with a high quality color enhancing food. Also, keep up on pond maintenance to achieve and sustain suitable water quality, regularly testing the water. Ideally, water should be tested once per week at the same time for each test. If the water quality is poor, be sure to test it daily (again, at the same time each day) as you work to improve it.



IHOP The Ponder Frog...



Ponders: Do I like Damsels or Dragons?



Meet another kind of dinosaur: When you think of dinosaurs, you might think of those found in the movie *Jurassic Park*. But there are many other prehistoric animals that are still around today. And some lived even before dinosaurs first appeared: dragonflies and damselflies! These two insects are in the same taxonomic family, Odonata. They look pretty similar and are often called odonates.

Brilliant, iridescent colors and interesting hovering flying style have made dragonflies and damselflies popular insects for years. Some countries, such as Japan, represent the dragonfly in their art and culture. Louis B Tiffany designed a stunning dragonfly stained glass lamp. Many jewelry pieces depict dragonflies. But more importantly, these insects help tell us about the health of an ecosystem. Their young can be affected by any changes in water flow and water pollution. More dragonflies in an area may indicate a healthier water ecosystem.

One thing you notice right away about dragonflies and damselflies is their wonderful array of colors. Dragonflies come in all sorts of colors like yellow, red, brown, and blue; sometimes the wings have brown spots and bands. Male damselflies typically have iridescent wings and some type of colorful blue, green, or purple body, while the females usually have a golden brown color, even on their wings.

Dragonfly:



Dragonflies generally have a thicker and shorter body than damselflies, which are slim. Both have large compound eyes. Yet damselflies have a separation between the eyes while dragonflies' eyes are close together. Their compound eyes have up to 30,000 lenses, providing them with excellent vision.

Damselflies have legs in front of their body for grasping prey. Dragonflies have strong, biting mouthparts to eat with.

Both dragonflies and damselflies have two pairs of wings. These wings are thin and sheer, with small veins that crisscross to add strength. Dragonflies can beat their wings together or individually. Like a helicopter, this lets them turn in mid-air, hover, and fly backward. Some dragonflies can even reach speeds of up to 20 miles per hour (30 kilometers per hour).



Damselflies, on the other hand (or wing!) are kind of clumsy in the air. They have weak wing muscles and beat their wings at different times, so they are slow and look a bit awkward when they fly. Damselflies rest with their wings together but not folded. Dragonflies rest with wings apart. This is a unique trait and a result of their aerial lifestyle. Both damselflies and dragonflies have no folding mechanism, as they always need to be ready to launch at a moment's notice!

HABITAT AND DIET

Odonates live near fresh water. It is the place where the females lay eggs and where the young can develop. They live in many different habitats all over the world, except the polar regions, which are too cold and have too much frozen water. Before odonates start their day, they must warm up, not by doing stretching and bending but by exposing their body to the sun.

You may notice that on cloudy or overcast days, odonates are rarely seen because they need some bit of heat to function. In the mornings, they rest on various plants while basking in the sun to absorb heat or make their own heat by shaking their wings. Once their body is warm, it's take-off time. Dragonflies and damselflies spend most of the rest of their day flying around to catch food. In fact, they are almost always moving. How exhausting! If they stop zipping around, they could end up as a snack for some other animal.

Being a good-sized insect, odonates have to watch out for predators. These include fish (bass, in particular), water beetles, ducks, water shrews, and water bugs. Most birds are not fast or agile enough to catch dragonflies. Odonate nymphs (young) are the most vulnerable. A lot of them become a meal for ducks while they are growing or emerging into adulthood.

Odonates are carnivores, but they don't eat the kind of meat we do. It is not chicken and beef for breakfast, lunch, and dinner but rather insects! They chase smaller flying insects like mosquitoes and gnats. This makes them helpful to humans by keeping those pesky insects that could carry diseases in check. Once the dragonfly or damselfly has its prey, it eats it in midair. If the prey is a larger insect, the odonate lands on the nearest branch to gobble it up!

FAMILY LIFE

Courtship on the wing: The courtship of dragonflies and damselflies often requires aerial contests, as males fight over territory. Females only mate with males that have a territory to defend that is close to a body of water. In both damselflies and dragonflies, the male often guards the female after mating while she lays her eggs in the water. The emperor dragonfly and the common blue damselfly lay their eggs onto the stems of pondweeds to protect them from being eaten by fish.

The larva that hatches out of the egg is called a nymph. It has wing pads but no functional wings and breathes underwater with gills. The nymph feeds on other insect larvae, tadpoles, and small fish. It is stocky and shorter than the adult and is usually a green-brown color to help blend in with its watery habitat. Water temperature can determine what time of year the eggs hatch and how quickly the nymph grows and molts.



Dragonfly Larvae



Like its parents, the nymph is a carnivore. It grabs prey with a unique mouthpart called a mask, which can shoot out and snatch prey in its pincers. All nymphs go through a molting sequence that can last between a few weeks to several years, depending on the species. Molting is how insects grow. During a molt, the old exoskeleton sheds to reveal the body that has grown larger underneath it.

Nymphs molt 10 to 20 times, and the time between molts is called an instar. Eventually, the nymph sheds for the last time and emerges as a full-grown adult dragonfly or damselfly. It has a long, skinny body, transparent wings, compound eyes, and two sharp mouthparts. The new adult needs to allow time for its new, soft exoskeleton to dry and harden before it can fly. During this time, it is vulnerable to predators.

CONSERVATION

Whether dragonflies or damselflies are favored for their color, aerial acrobatics, or beauty, they are key insects in our ecosystems. They help us track the health of our fresh bodies of water and serve as an important link in the food web. Dragonflies and damselflies protect us from other pesky and infectious insects and bring us a sense of beauty in nature. You could say they are the prettiest dinosaurs still living!







What do you call a fish with two knees? A two-knee fish!

















Elizabeth Kimberly Design



Click on their logo to check out their web sites!



















Aaron Gardner

















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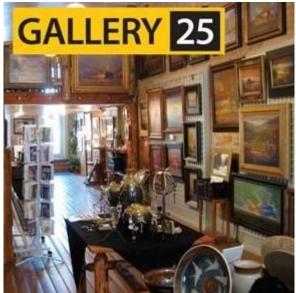
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Exploring the Art of Nature



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