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Helen Nash's Pond & Garden

"Creating backyard havens"

Volume 1, Issue 4

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Ben and Kit Knotts' pond, "Reflection," is the home of five Victorias overlooking the Atlantic Ocean. Pictured are V. amazonica in the foreground, V. 'Longwood Hybrid' in the center, and the new V. 'Adventure' at the back. Photo by Kit Knotts.

The Adventure Begins

We're delighted that so many of you were captivated with Kit Knotts' tale of the ditch lily, *N. 'Azure Dawn.'* As we finalized the page plan for this issue, Kit called with more exciting news — she and Ben, Nancy and Trey Styler, and Joe Summers of the Missouri Botanical Garden have come up with a new *Victoria* hybrid! With a terminal case of the giggles, erupting at inappropriate moments, I awaited the copy of Kit's text and the slides of the new Vick. Doing the magazine out of home with only the able assistance of six golden retrievers and a splendid, back-massaging cat allows a high degree of flexibility.... I reworked the issue's page plan for this incredible story. The *coup d'etat* was the glowing tapestry of fresh and startling ideas woven by the many threads of this event. As Kit laughed, "Helen, you're going to have to rewrite

the entire *Victoria* section in your book!" This is one correction I will enjoy making, but, in this case, a group of amazing people, most of whom are simply enthusiastic backyard gardeners, are the writers. The Knotts' adventure, and the parallel efforts of Nancy, Trey, and Joe, along with the support and efforts of many others, have culminated in a real 'can-do' saga. Congratulations to them for this exciting achievement....and a special thanks, too, for their unselfish sharing of the 'adventure.' They inspire and enrich our backyard garden lives.

Enjoy and cherish the life of your garden! :o

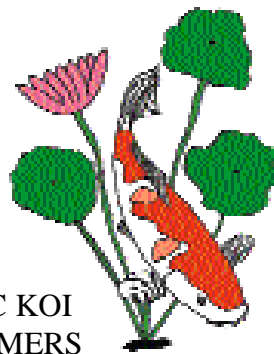


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Pond & Garden is published bi-monthly.

Post Office of Origination: Zionsville, Indiana 46077.

Postmaster: Send address changes to Pond & Garden, 1670 S 900 E, Zionsville, IN 46077.

Subscription Rates: U.S.: one year (6 issues) \$20.00; 2 years (12 issues) \$35.00. Canada and U.K.: payable in U.S. funds, base rates plus \$7.00 per year.

Address all correspondence regarding subscriptions, distribution, and editorial matters to P & G, 1670 S 900 E, Zionsville, IN 46077.

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TRAIN YOUR Koi TO EAT FROM Your Hand

by Judy Birch

*Reprinted from August 1999 newsletter of SKAPA
(The Southwest KOI and Pond Association)*

K*oi are very sociable and love a crowd of friends. They are less shy when they are in a large group. Your koi will eat from your hand if you have the patience to earn their friendship.*

Feed them in the same place every time. Drop a small handful of pellets and stay there and observe. The bravest or hungriest will start to eat and the rest will follow. They must see you when they eat. Don't walk away from the pond before they start to eat. If you walk away, the koi will think that the food falls from the sky and you are a predator. Withhold food for a day if they won't eat in front of you.

Gradually, the koi will equate you with food. Tease them closer with small sprinklings of food. Put your hands in the water while they eat. The koi will perceive that the food comes from your hand. Start with just a few pellets. The bravest koi will soon be nudging your hand. It is only a matter of time and their friendship will be yours. Soon all of your fish will swim, jumping and splashing, toward you every time you walk by the pond. You can tickle their chins and

pet their heads. Just be patient.

Remember, though, koi should not overeat, and it is up to you to make sure they don't. The amount you feed depends on the structure of your pond, the way to control it, the number of koi and their size. Their appetite is influenced by their health, especially by parasites, by weather and climate. In the summer they have a strong appetite, but in the winter they hibernate and do not eat.

As koi do not have organs equivalent to stomachs, they cannot eat much at a time. Therefore, they must be fed often, a small amount at a time, in order for growth. However, if you want your koi to grow large, the number of koi should be small and the water must be well controlled.

Most of us, as beginners, keep too many koi and are unskilled at controlling the pond. If the koi are fed too much they may die due to oxygen shortage. Generally speaking, it is safe to feed koi only twice a day. Koi are polyphagous and eat everything that we eat: bread, fish meat, beef, chicken, shellfish, fruits, vegetables, and cereals. The most balanced food consists of good commercially prepared koi or goldfish pellets, but chopped fresh fruits and vegetables are always good.

Remember, your filter must handle all the waste from your fish later on. The more you feed, the more waste material there is. Healthy koi will always be hungry.☺

Judy Birch is the Editor of the SKAPA newsletter. You can e-mail her at: jbirch1@elp.rr.com.

SKAPA meetings are usually held the 2nd Sunday of each month at members' homes. Besides informational meetings, club members enjoy access to "troubleshooters", member volunteers who help with problems or emergencies. Visit the SKAPA website: <http://web.whc.net/skapa>

FANCY THAT! GOLDFISH KEEPING



by Vivian McCord

Shubunkins

When you gaze upon their jewel-like colors and swift swimming habit, you can see why Shubunkins are one of the most popular of pond fish. Resembling the body shape and finnage of the common goldfish or the comet, depending on the breed, a startling amount of color is crammed into each Shubunkin. They also share with their plainer cousins the absolute cold hardiness and evasive speed required for outdoor pond life.

The original Shubunkin was, of course, developed in Japan. In the early 1900's Mr. Kichigoro Akiyama crossed a telescope eyed calico with a common goldfish. This would be considered 'back-breeding' as the Demekin or telescope eye was a much higher bred fish. The beautifully hardy result, however, puts we pondkeepers forever in Mr. Akiyama's debt.

The next development in the history of the Shubunkin came in post-war Britain, when Pamela Whittington developed a new version which came to be known as the London Shubunkin. While its finnage is very similar to the common goldfish, the London Shubunkin is famous for the greater development of the blue areas in its coloration. This very true blue, achieved only in Shubunkins, was new and very exciting to fish breeders.

The Bristol Shubunkin, a later introduction, is merely an offshoot of the London line. It has longer fins resembling the comet, but the blue areas of its coloration are not as bright as the London line. There is some tendency in breeders today to overdevelop the fin lengths in the Bristol, which looks great in the younger fish. However, when the fish matures and most fin growth occurs, the fins can become too heavy for the dorsal spine to support. The fins may even collapse. When purchasing young Bristols, take care not to go for the longest finned youngsters, keeping in mind that most fin length growth is yet to come!

Feed Shubunkins a balanced diet of a good quality pellet once a day, plus a treat such as frozen or freeze-dried bloodworms, shrimp, brine shrimp, tubifex or daphnia once every one or two days, more around spawning time and less near autumn.

Whether you prefer the deeper bodied original, the true blue London, or the longer finned Bristol, you will always appreciate the grace and tenacity of these three variations of the Shubunkin breed. Make sure, in any fish choosing, that you check for good health as well as good form. Look for the color patterns that please your eye and enjoy! :~:

Vivian McCord combines her artistry and goldfish hobby in Cody, Wyoming.

SEASONAL PONDKEEPING

by Scott Bates, Grass Roots Nursery



Late summer...

Late summer offers water gardeners just as much color and interest as any other time of the year. The hardy water lilies are at their best in the heat, except for a few of the reds that may sulk for a few weeks. Bog and marginal plants are still showing their best, as are the lotus. However, the window of opportunity for dividing aquatic plants successfully is narrowing. They need time to heal over the wounds that occur during dividing and time to regrow before winter dormancy. The time is here and now, otherwise wait until next spring.

It is not uncommon for the water garden to be over-run with water hyacinths and water lettuce this time of year. After you have filled every birdbath in the neighborhood with these tropical plants, they make excellent compost for the garden.

The lotus are still growing and still blooming in the heat. Continue fertilizing them through August in colder climates and through September in warmer climates.

Biological filters may need a little attention, but be wary of over-cleaning them. Many first-time pond owners unknowingly clean their bio-filters to the point of killing or removing most of the beneficial bacteria... and then comes the pea soup algae. If you take the attitude of most teenagers about

cleaning their rooms, you would be in a better frame of mind. Clean it when you need to, not when you want to. Seeding the pond with nitrifying bacteria once a week aids greatly with water quality and clarity, as well as with reducing the amount of sediment in the water.

The appetites of the fish have increased since spring and will soon decrease during the fall. Adjust your feeding schedule and amount appropriately. This time of year is especially important to keep an eye on your fish population and the operation of your pump. If you find your fish at the surface early in the morning and not interested at all in being fed, they are probably looking for oxygen. This is an indicator of things to come... and not all good. Make a point to operate your pumps and/or aerators continuously to avoid this serious form of stress (for us and the fish).

If we really have to find something to do, we could remove some of the old leaves from the aquatic plants, seed our biological filters, and find a shady spot to sit, relax, and enjoy our ponds. ♡

Scott Bates, along with parents Gary and Rosemary, owns Grass Roots Nursery in New Boston, Michigan.

KOI KEEPING

Dr. Erik Johnson, known at his Internet site as Doc Johnson, the Koi Vet, shares a letter he posted the night of July 1, 1999.

Total Loss

Tonight I overdosed my koi on potassium by ten fold. I used four pounds in twenty-two thousand gallons. I knew something was wrong within ten minutes, but there was no way to undo the mistake.

I lost "Oro," "Stormy" and everyone dear to me, and a host of new, smaller fish I'd been picking up this spring to stock my 22,000 gallon 'pool-to-pond' experiment.

I did the math in my head, converting grams to pounds, and somehow figured 22,000 gallons was 2200 grams and 4.4 lbs of potassium. There was not enough peroxide to reverse it. Just about everyone died.

I am stopping the 'pool-to-pond experiment.' I learned you should never keep your beloved fish in so much water that you cannot catch them for biopsy, thereby avoiding 'shotgun' therapies. You should be able to dump your whole pond in an hour and do a massive water change when necessary. You should



always have ample dechlor on hand. I learned you should always do your 'dosing-math' on paper and run it by at least two or three math 'noodlers.' It's funny, just before I added the potassium, I thought, "I wonder if I should call Roark in California and see if he agrees with this dose."

Tonight I shall have nightmares...of fish swirling around upside down in the emergency triage, gasping, dying before my eyes. Betty is gone, Inky is dead, Jerry is dead, my new goldwing is gone. Tequiza, "the bastard," the bronze, I never even found my goromo to move him to quarantine.

The reason I am sending you this message is to let you know a few of the things I have suddenly learned....after all, isn't that why I always write you?

First — Never do dosing math in your head. Especially if you SUCK at math like I do.

Second - I got a priorities-reality check: I humbly thank God nothing is wrong with my "real" children. They are all so healthy and adorable. I hold them tonight at an emergency slumber party...I move their mattresses into my room so I can enjoy their stupid "farty" jokes and noises, while my fish expire in their triage. I imagine God said to me, "Erik, your priorities are not right. Perhaps you are becoming vain about your collection. You are over-confident. You are materialistic."

Third - The most important thing I learned is this: it is not WHAT you have in your collection ...(the fancy Kujakus and leather platinums), it is the WHO that you have. Your personal friends, your Oros, your Stormies, your Blancos, your Inxies.

For those of you who ever lost a fish or will lose a fish, I have become a better fish vet. I will better

understand when you tell me that the loss of a particular fish broke your heart. I've been there, got the tee shirt.

I most probably will not give up treating fish. I will not give up finding out better ways to care for them or treat them. I will not stop sharing experiences if they may help someone somewhere, eventually....even my screw-ups.

I will stop collecting fish. I cannot replace the WHOs in my collection even though the WHATS might be replaced easily. I cannot be forgiven for killing my pets of so many years. Please do not do this to your fish. Make sure your math is right every single time you use a medicine like potassium, or formalin, or chloramine — anything where an overdose could be deadly. Don't get cocky like me and do it in your head and dose it like it was candy.

There are people who will read this and shake their heads without understanding. God bless you. There are people who have felt this same way with the loss of their fish. God bless you. There are people who have expected me to be "perfect" in the treatment of fish. This is not true. God bless you.

I recall the story of David H., a dear person to me, who lost all his fish one winter when his pond was pumped dry under the ice. I never really could understand a complete, or total, loss. I recall the horror of his story to this day, frantically moving his few survivors to triage, etc...but nothing like that had ever happened to me before.

God has give me everything money cannot buy — my health, my family, my kids, and my career But sometimes, He doesn't think twice about shaking up your priorities when they get skewed, does He? Funny, I just put six hundred bucks on my credit card for some fish I just "had to have" I even promised Cecil that I would keep them alive... If only I had.

Best wishes,
Doc Johnson

For the most comprehensive and up-to-date info on koi keeping, check out Doc Johnson's website: www.koivet.com. You can either E-mail him at the site or fax him at 770-973-0301.



NATIVE LANDSCAPING

by JoAnn Gillespie

The emergent edge of plants for your water garden presents the most important and versatile portion of your garden and the ecosystem you are striving to create.

Many families of hydrophilic plants live there. They perform many of the functions of wetlands and at the same time allow for diversity in the form of your garden from an aesthetic point of view.

Many of the emergent plants belong to the Cyperaceae family. Let's take a look at the bulrush. Bulrushes will grow in water 0-5 feet deep. They have been found in deeper water on occasion. Waterfowl and shorebirds eat the nutlets which appear as brown clusters at the top of the plant. Muskrats and geese eat the rhizomes (roots). Bulrush creates nesting habitat for birds and spawning habitat for fish. Northern pike in particular like to raise their fry there. Amphibians like frogs love to deposit their eggs in rushes. From a bio-engineering standpoint, they trap sediment and control erosion. Like other emergent species they hold back waters in times of flooding and release it in times of drought. From an aesthetic point of view they are hard to beat as an emergent plant in your water garden. They are both linear and cylindrical in form, ranging from deep green to light green in color. They remain fairly rigid in winter and thus stay upright as they change to attractive shades of tan. Although most species are round, some are also square giving interesting diversion of shape at the water's edge. Some thrive in water of alkaline nature while the majority like a pH of 7. Many of the species can tolerate some dry down

and survive. Ecologically speaking, they uptake nutrients and clean up water.

Bulrushes are one of my most favorite plants. Some individual species to consider are two that prefer alkaline surroundings: *Scirpus acutus* (hard stem bulrush) and *Scirpus lineatus* (alkali bulrush). Hard stem bulrush is dark green in color and loves the water's edge. The alkali bulrush likes drier situations in which only small amounts of water stand above the surface. This bulrush has a lovely plume-like seed head. While most other bulrush seed heads stand upright at the tip of the plant, the alkali bulrush hangs down in a pendulous manner giving the appearance of lace waving in the breeze.

Most common of all bulrushes used in restoration and water gardening is the species *Scirpus validus* (softstem bulrush). Its stems are greenish yellow in color with brown nutlets topping off the stem. It flowers, as do most other bulrushes, in June through September. It grows well with other emergent species allowing them space to grow. Its functions are the same as other bulrushes.

Both *Scirpus fluviatilis* (river bulrush) and *Scirpus americanus* (three-square bulrush) as the name implies, have square stems. Its leaves are M-shaped like many of the Cariceae and its nutlets are borne on stalks at the very tip of the plants. *Scirpus americanus* takes its common name from its triangular stem. The leaves come from a basal sheath, once again mocking one of the characteristics of a Cariceae and found in shallow waters

Shorter species of emergent plants that look like miniature bulrush are the *Eleocharis* or the needle rush. We'll look at these and their kissing cousins, the Juncaceae, in the next issue.☺

JoAnn Gillespie is a noted wetland mitigationist and consultant. She can be reached at Country Wetlands Consulting at 414-679-8003 or by fax at 414-679-6866.

ASK CHUCK: PONDKEEPING Q&A



by Chuck Rush

Q I have recently made a new biological filter for my pond and am concerned about it maturing fast enough so that the water quality doesn't suffer. I really don't want to start buying commercial additives because my husband is still recovering from sticker shock because of the filter. (It's really a good one.) I read in a Tetra Pond book that small scraps of meat could be used to seed filter media. Mine is pea pebbles, but the book doesn't say how much, what kind, or anything. My pond is 1000 gallons.

A Meat??? Stay well away from something like that. I don't want rotting meat in my pond; that's not the bacteria you need!!! You can do just fine by adding your plants and letting the filter run so long as you don't have too many fish in your pond. (Consider an inch of fish per square foot of pond surface as the maximum load for your pond before you need bio-filtration in operation.) The plants will introduce bacteria and you'll get the rest free. It's in the air! But as an aside, you might think about replacing your filter media in a few years with a lighter weight material. Gravel has a tendency to clog up and is very difficult to get really clean without removing it from the filter. Lava rock isn't much better, but it's lighter and less expensive when you replace it in 6 months or so. I prefer a plastic media designed for filters like bio-balls or bio-ribbon. They rinse easily and you don't have to take the filter apart to clean it. You can get these products from many pond shops. When the filter is not really clean, the

good aerobic bacteria don't get enough oxygen and die. Then the bad anaerobic bacteria move in to work on the dead organic matter that has accumulated in your filter media.

Anaerobic bacteria (it doesn't need oxygen) can give you a smelly pond and could eventually kill your fish.

Q I've seen on the Home and Gardening channel that you can use barley hay to rid your pond of algae. How does this work?

A Yes, it is possible....but first let me explain what's happening. As the straw decays, it releases a mild herbicide that kills algae which sinks to the bottom of the pond. But it also causes a problem. The herbicide is short-lived and as the algae and the straw further decay, they just release nutrients into the water. And what do more nutrients do if not cause more algae?

The only long-term solution to algae is to keep it from growing in the first place. As a plant, controlling it is a two-fold problem. First is to control light; plants need light to grow, right? You need to cut down the amount of light in the water. This is done with plants. A 60% to 75% coverage of the pond with plants like lilies is what's needed.

Next is to reduce the amount of nutrients in the water. You first do this by keeping the pond clean. All that stuff on the pond bottom just decays and releases nutrients into the water. So keep your bottom clean. You can further reduce the nutrients in the water with more plants. Oxygenators such as *Cabomba*, anacharis, and *Elodea* will suck nutrients out of the water before the algae gets a chance to use them. You need 1 to 2 bunches of these things for every square foot of surface area. It's really simpler to do this than to keep dumping stuff in the water.✦

Send your questions to Chuck Rush in care of Pond & Garden or to his E-mail address: Crush@dallas.net. Many of Chuck's Q & A's appear courtesy of the North Texas Water Garden Society.

SPIRITUAL GARDENING

by Karin Albert and Sander Heilig

Garden Bound

It's vacation time and everybody appears to be going somewhere. We, too, used to enjoy traveling. Back in the 1970's, Sander took off for Europe; he loved the quaint fishing villages of Northern Spain where he would paint and roam the lavender- and thyme-covered hills overlooking the Mediterranean. Myself, I came to the U.S. from Germany as a starry-eyed college student, and whenever there was a break from school, I'd hop on my BMW motorcycle and cruise the winding back roads of California. In the 1980's, my curiosity took me all the way to Shanghai, China, where I spent five years learning, among other things, about Chinese gardening. Those were the days of adventures in distant lands.

Nowadays, we prefer to stay home. Relaxing on our deck surrounded by hickory, oak, and beech trees, we listen to the Oconee River roar past at the bottom of the hill. Enjoying a glass of wine, we watch a hawk soar overhead while a yearling deer nibbles a favorite hosta. This is where our human environment blends with the wider and wilder world out there. We quietly listen and learn, trying to forge a bond with our non-human co-inhabitants — one that respects and protects them while affording us a glimpse into their magical world. As evening comes, a group of frogs gather at the water garden on our lower deck and start singing. A 40" ceramic container planted with a water lily, water hyacinths, and irises has become their pond. Three or four adults relax on the container's

rim or sit perched on the hyacinth leaves, while thousands of tadpoles wiggle about. The frogs' loud chorus continues throughout the night. We find it comforting.

Today, the faraway destinations that used to capture our imaginations have been replaced by small wonders close at hand. An inward journey has taken the place of cross-country travel. Sheltered from the urgencies of everyday human existence, our focus changes. Feeling safe in the private world of our garden, freed from daily noisy and clutter, we begin to explore our delicate inner lives. A sense of relief sets in. Everything is all right. The rhythm that pulsates in the natural world all around us beats in our veins, too.

The garden is more than a private paradise shielding us from life in the fast lane. It is a place where we can experience our rootedness with the natural world. This is a concept that the ancient Chinese understood 1500 years ago. They built their gardens to include all the essential features of their vast scenic lands so that a person could partake in the great outdoors without venturing far from home. Gardens were designed to attract and concentrate the great life force of the universe. Thus the Chinese garden was a place conducive to contemplation and a rich spiritual life, and in this column, we will often draw on this time-honored tradition to see how it can enhance our own endeavors of creating gardens that are spiritually rewarding and meaningful. ♡

Karin Albert has written and translated extensively on the subject of Chinese gardening and bonsai. Sander Heilig is a painter and medical illustrator who combines a passion for art with a keen interest in unusual plants. A husband-and-wife team, they garden in Athens, Georgia. You can reach them at PO box 48822, Athens, GA 20604-8822, tel 706-369-1547 or by E-mail at venus@venuscomm.com.