

Pond & Garden "Creating backyard havens" **Creating backyard havens** **Creating backyard have











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Pond & Landscape Lighting by Bruce Zaretskypg 22
Getting the Best from Your Water Lilies by Reg Henleypg 32
Pecan Island, Louisiana by Jim Leonardpg 38
Pond Tour USA - Creating That Special Place
Nebraska
New York
New Jersey
Texas
Missouri
Taking the Mystery Out of pH by Helen Nashpg 64
The Vignette Garden: Davidsons, Mt Morris, MIpg 68
Doing It Right by George B. Davispg 74
Water Garden Skimmers by Linda Silerpg 80
Build Your Own Water Garden Skimmerpg 84
Descentingents
Departments
Editorialpg 2
Native Landscaping by JoAnn Gillespiepg 6
Goldfish Keeping by Vivian McCord
Pond Tale by Joan & Ernie Pomattopg 9
Seasonal Pondkeeping by Scott Batespg 10
Q & A by Chuck Rushpg 11
Koi Keeping by Pam Spindolapg 12
Cooking with Marilynfor the Birdspg 13
From Our Readerspg 15
The Dirt Digger by Bruce Zaretskypg 18
Victoria Update by Kit Knottspg 19
Travels with Helen & Marilyn
Club Index
Retail Products & Sources
Shopping Martpg 98
Predator Protection by Carol Henrypg 100
Advertiser Indexpg 102
Websites to Browse

Cover: One spotlight cross lighting the waterfall from the left creates dramatic effects. Photo by John C. Menihan, Jr.

A New Century

or the past few months, our local paper, *The* **☐** *Indianapolis Star*, has been running a series of photos looking back at the past century. So much has changed! And life seems to only gain speed with technological advances popping up daily and concrete encroaching upon our lives. Our homes have always been our castles, but our backyards are becoming even more important as a source of respite from the pace of the modern world. In my travels and visits to your backyards, I have noticed certain trends: turning the backyard into an outdoor living room, bringing arts, crafts, and our personalities into that outdoor room, inviting Nature into our lives with birds, butterflies, integrated pest control, and native plants, and, of course, providing water as part of the landscape. We've planned

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an exciting year for you with Pond & Garden, exploring these trends. Together, we will create worlds of peace and tranquility. May God bless



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Pond & Garden

NATIVE LANDSCAPING

by JoAnn Gillespie

Emergent Plants

The emergent edge of the pond is where terrestrial vegetation slowly ends and aquatic vegetation slowly begins.

In the last issue we looked at rushes which occupy this area. Now we'll look at some of my favorite linear aquatic plants which share the water's edge.

High on the list of my favorites is *Sparganium* eurycarpium — burr reed. A most useful plant, it provides habitat and food for wildfowl. It also uptakes nutrients and holds back sedimentation. In the fall its beautiful seed heads look like small maces and make attractive additions to dried floral arrangements.

Following close on its footsteps are the two water irises — *pseudacorus* and *versicolor*. *Iris versicolor* is commonly called 'Blue Flag' and *Iris pseudcacorus* is called 'Yellow Iris' or 'Yellow Flag Iris.' The Irises perform the same functions as burr reed. They bloom in early summer and continue to provide attractive foliage and seed heads into fall.

Acorus calamus is next on my list of favored emergent plants. Its spathe or seed head resembles cattail although it is green instead of brown and is located at a junction of the leaves and stem rather than at the top of the stem. Bearing a vanilla scent when bruised, the foliage was used in pioneer homes as floor covering. It is still used today in many Asian countries as a part of rituals such as wedding ceremonies.

Flowering rush, *Butomacea*, has a special place among the linear plants around the pond's edge. Its pink and white flowers, held atop the plant, add an ethereal dimension to the water's edge.

Last, but not least, are the shorter, spathed, leaved plants and the unusual flowering plants. High on the



list is Sagittaria latifolia, commonly called arrowhead for its heart-shaped leaves. It bears charming, papery, white flowers

in summer and produces tubers that waterfowl find irresistible. *Peltandra virginicus*, water arum, resembles arrowhead but has shinier and more pear-shaped leaves. Although its flower spathes are usually hidden by the foliage, they are more evident in the fall when the seed pod's stem arches into the water to allow the seeds to ripen.

One of my favorite plants in the water garden is *Alisma plantago-aquatica*, commonly called water plantain. During the growing season it resembles a bush topped with stems of cloudlike, minute white flowers. In the fall and winter, it looks like a Christmas tree as the seeds turn into round ornaments. Willow herb, *Epilobium*, finishes off my favorite emergent edge plants. Bushy like *Alisma plantago-aquatica*, it produces small, pinkish-white flowers and beanlike seed pods that are attractive in dried arrangements.

These emergent, shallow water plants of the water's edge do more than feed and shelter wildlife. They adorn the pond with attractive foliage and flowers, many producing desirable dried material for our indoor arrangements. During the winter, they are appreciated even more as their dried forms provide substance and texture to the brown scape of the slumbering season.

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.

FANCY THAT! GOLDFISH KEEPING

by Vivian McCord

Tiny Drogons

The Black Moor was developed by Chinese nobility in the 1700's A.D. for an emperor, the Chinese people equally delighted as it resembled their beloved dragons. They called it the Demekin, or Globe Eye, and treated it with great reverence. At that time many new forms of goldfish were being developed, and, though not all of them survived, the Black Moor proved especially resilient.

The genetic properties that form the black pigmentation are linked to the gene for globe eyes.. When the fish reach about two years of age, the black color begins to fade from the belly up, eventually lightening to a reddish or dull gold color that can cover the entire fish. These fish are difficult to judge when young as the eyes don't fully develop until several months of age and can sometimes develop unequally, with one side larger than the other or not developing at all.

To pick a good specimen of the Black Moor, look for symmetry in the eyes and fins. Also look for the deepest black, almost a matte blueblack, and the absence of any gold-tinted scales. The Black Moor commonly has short fins, so the longer the fins you can find the better, and the more broad or veil-like the caudal fin, the better also. The belly should be deeply rounded with a short, full body. The eyes should be clear with no signs of cloudiness and can be a red or cinnabar type. This fish may not do well in the severely cold outdoor pond as the globe eyes



are delicate. It can, however, enjoy temperate climates and may prefer more shallow water.

If kept with other breeds, take care that they receive enough

food as the faster, better sighted fish may gulp it all down before our myopic friend can find any.

Black Moors enjoy a typical goldfish diet, including

mosquito larvae and bugs and a good quality pellet once a day with occasional treats of chopped earthworms and brine shrimp.

If you wish to breed them, separate them from any other breeds to ensure that the off-spring resemble their parents. They will spawn readily at temperatures of 65 to 70 degrees. Their fry look like tiny black minnows, even though their full color may not develop for many months. Feed them hard-boiled egg yolk strained though a cheese cloth for the first several weeks.

These dark beauties are entrancing when mixed with brilliant counterparts in any water setting. Their small, waddling bodies move with an unexpected grace. They are especially useful in container gardens or smaller ponds as they usually do not exceed five to six inches in length and don't require a lot of swimming space. Very friendly, they will eat from the hand of someone they get to know.

With the rich history of this fish, it really is surprising to see it regarded as one of the more common types of goldfish. The next time you look at a Black Moor, remember that this is an ancient breed, the first of the truly 'fancy' goldfish, developed for kings.'

Vivian McCord is an avid goldfish hobbyist and artist who lives in Cody, Wyoming, with her husband and two children.

POND TALE

by Joan & Ernie Pomatto

Apollo, PA

When two adjoining ponds with a very shallow lip between them. In the top pond we have 8 Koi that are 8-10 inches in length. Two years ago we put 2 shubunkins in with these Koi. The shubunkins always swam together and not with the Koi.

One week we noticed that one shubunkin was missing. We searched all around the outer pond, thinking that it might have jumped out. Each day we looked for that fish, but never found it. One day, when we were feeding the fish in the lower pond, we found our missing shubunkin. As the week went on we felt bad that they had become separated, but as you know, fish are so hard to catch in a pond.

One Saturday, we couldn't find the remaining shubunkin in the upper pond. We looked for it each time we stepped outside. That night, while feeding the fish, we noticed that he had also made his way to the lower pond to join his friend!

We were happy to know that they were together again, but it amazes us to wonder how the second fish knew where to find his friend. We have had our ponds since 1986 and only once or twice during really big storms when a lot of water went over the lip did we ever see a fish go over. Since we had not had any rain in nearly two weeks, we can't attribute this reunion to being washed over the lip in a rainstorm.

It seems that there is so much that we don't know about fish life. Do they have a thought process? Do they even have a brain? All we can say is that they must certainly form attachments with each other. These are the joys of having a pond!!!! **



SEASONAL PONDKEEPING

by Scott Bates,

Winter Ponding

For the Northern pond, winter usually means a bout with ice. The potted plants resting on the pond bottom are promises for spring and can be ignored for now. The fish lay low in the slightly warmer, deeper water. If we could peer through the ice, we would see them moving just enough to keep themselves in an upright position, huddled closely together, looking pretty relaxed. They are not so much hibernating as they are adjusting to the water temperature, waiting out the winter cold. Their body functions and metabolism have just slowed down.

Do not add fish food to the pond when the water temperature is below 50 degrees. The fish's metabolism is too slow to properly digest the food. The food can actually rot in their intestines, causing serious and possibly fatal illness. Also, the uneaten food decomposes, releasing ammonia and toxic hydrogen sulfide, using valuable oxygen in the process. Koi and goldfish use the fat they have stored to survive the winter. If they need nourishment, they will beat up on the algae left on the pond liner. Water gardeners in warmer weather climates see this to a lesser degree and can anticipate hungry fish in late February. Those of us in the colder weather climates must wait for mid-March to break out the fish food.

With all of nothing going on, we can do a few things to assist the fish through the winter. Check your air bubblers to ensure their operation. Make sure they don't slip in deeper than



the top one-third of the pond's depth to avoid further chilling or

even freezing of the deeper waters where our fish and plants await the spring. Bubblers set up to cycle from the pond bottom can result in the water's freezing clear down....killing the fish and plants.

Check your heaters or de-icers for heavy mineral deposits that may impede or destroy their operation. Since these units keep only a small area open in icy conditions to facilitate gas exchanges (allowing toxic hydrogen sulfide produced by decomposing organic matter to escape), their maximum performance can be critical to your fish's survival, especially in the heavily stocked pond. To clean the unit, unplug it and remove it from the pond. After it has cooled, use vinegar or lemon juice to soften the mineral deposits enough to remove them with a soft rag. Do not scratch the element with a wire brush or steel wool as this can damage the heater. Rinse the heater and return it to the pond. While many heaters need to be in the water for a while before the thermostat triggers them, checking them once a month is a good practice. Folks with hard water or well water may want to check them more often.

With our fall clean-up efforts behind us, and the warm spring rains just a few snowflakes away, the best thing we can do now is plan this year's projects. After all, with this winter behind us, we're veteran pondkeepers....and our fish are Y2K-compliant.

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

ASK CHUCK: PONDKEEPING Q&A

by Chuck Rush



We just bought a new house. One of the reasons we bought it was the wonderful pond in the backyard. I went to the backyard to look at it after a short weekend getaway and the water looked like split pea soup! What did I do wrong? Is there something I can add to kill it?

Algae is one of my favorite topics and controlling algae is probably the most frequently asked question and really deserves an article all to itself. But to be brief, if it comes in a bottle to control algae, it's best left in the bottle.

Algae is just a plant. You can *control* it by regulating the things a plant needs to grow. In a pond, that's done by blocking sunlight with floaters — plants and pond plant leaves that float on the water. Lilies are perfect for this. You need enough lilies to cover 60% to 75% of the pond surface. Water hyacinths and water lettuce will also work, but they are illegal in many southern states. The other thing to do is add submerged grasses to use up the nutrients the algae is using to grow. These grasses are anacharis, *Elodea, Cabomba* and many others. You can find them at any pond shop. A good quantity is one bunch for every 1 to 2 square feet of pond surface area. The last thing to do is keep your pond bottom clean. That decaying stuff on the bottom is where a lot of your nutrients are coming from. ••

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.

Koi Keeping

by Pam Spindola

New Koi Disease?

Since this past June, many Koi have died in California. Almost entire ponds have been wiped out. Reports have also been received from Illinois, Oregon, Colorado, and Georgia of similar events.

The culprit has not been traced to any particular source or geographical area. Of the cases reported, the fish seemed healthy, eating vigorously one day and gasping for oxygen the next. There is a wide range of symptoms. Some Koi had no visible abrasions or other signs of trouble. Others had reddish splotches or a yellowing of the skin which was rough in texture. The fish acted listless, often sitting on the bottom of the pond or floating near the surface.

Most treatments have been ineffective since discovery of the disease was often too late. Most fish had irreversible damage by the time the infection was noticed. Because most of the fish in question had extensive gill damage, this disease is being referred to as 'Fulminating Gill Rot." It is believed that the cause is either viral, bacterial, or a combination of the two. Many experts are working on the source of the problem as well as on a preventive vaccine. Since the outbreak began in June, the beginning of the summer, it

is thought that the sudden rise in water temperature may have been the trigger. Other links to the transmittal of this gill disease are

raccoons and herons, high pH, high protein food, or contaminated fish from other countries. All is speculation. There is no cause for panic. These pathogens have not been traced to any one source.

There are several precautions a hobbyist can take. First, maintain good water quality and healthy nutrition for your Koi. Isolate all new Koi in a holding tank for at least thirty days — others recommend up to ninety days. This holding tank should have adequate filtration and be running 24 hours a day to ensure good water quality. All pond equipment such as nets, tubs, and air stones are to be used for your pond exclusively and should not have contact with fish from other ponds. Your fish may not be resistant to strains of bacteria from another fish. It is advised not to participate in Japanese-style Koi shows in which your fish come into contact with other Koi. Growing in popularity is the English-style Koi judging. Each owner's fish are collected in one or two large holding tanks and are not distributed according to size and variety with other people's fish. Each participant brings his own nets and tubs to eliminate possible contamination.

These types of outbreaks have happened in the past. Many believe that the worst is behind us. Although not meant to be alarming, the Koi community must stay informed and knowledgeable. Remember to quarantine new fish and to maintain good water quality and healthy nutrition for your Koi. There is more information available through the Associated Koi Clubs of America website: www.koiusa.com/research/index.htm '*

Cooking with Marilyn

Suet Balls....for the birds

by Marilyn Cook

Suet balls complete your backyard bird-feeding stations. Inexpensive vinyl-coated wire cages are available wherever birding supplies are sold. Suet balls can also be posted on a stick or smeared within the cavities of pine cones. My husband made a suet feeder in the shape of a bird with a four-inch center hole and a small dowel to hold the suet.

I've made this recipe for years. The peanut butter, corn meal, and bird seed attract nut-eating and seed-eating birds. Add a cup of raisins or other dried fruit to attract fruit-eating birds. Throughout the year, cut the fat from your meats and store it in the freezer. You can also purchase suet in the grocery's meat department. Bon appetit! 30

Suet Balls

2 cups chopped suet1 cup creamy peanut butter1 cup corn meal1 cup bird seed1 cup raisins (optional)

Melt chopped suet over low heat in a 3-quart sauce pan. Stir as it melts. Strain out the cracklins and throw away. Mix in peanut butter. Stir in corn meal and bird seed until mixture is thick. Add more ingredients if necessary. Add dried fruit, if desired. Refrigerate until mixture has cooled. Shape into balls of desired size. Keep frozen until used.

From our Readers...

Hummingbirds

Dear Helen,

I just read your article on Hummingbirds, and, yes, they do feed at *Canna*. I have many plants that are supposed to attract the small jewels, including *Monarda*, but my Cannas are the only plants that reliably bring them to the yard. It is enjoyable to watch them dart back and forth sipping on the nectar. I have never seen a hummingbird at any of my other plants during periods when the Cannas are blooming. There have been seasons when it was the only plant I ever saw them visit. It is the sole reason that I faithfully set aside time from my busy schedule to dig and store Cannas to replant the following season.

I have one flower bed reserved for growing Cannas, and I do include a pot of Cannas in my water garden. I use a pot with drainage, but block the drainage holes with cloth or coffee filters to prevent the soil from washing out. My schedule keeps me from attending to garden chores as regularly as I should, so I set the pot in a shallow area of the waterfall (more like a mountain stream than a waterfall), so that I don't have to find time to water it. It happens to be a shadier spot than the bed with my other Cannas, so it's 'later-in-the-season' flowering time extends my enjoyment of the "Jewels" coming to visit.

I still need to remember that the Canna is going to *increase* dramatically in size over the growing season. I have tried this twice, and the pots are always bulging and appear to be ready to explode by the end of the season. Just out of curiosity, I plan to lay a bare root in a shallow spot next season, hoping it may not need a pot. I suspect that it will need some means of support to keep the wind from playing havoc with it. Maybe a couple of well placed rocks would do the trick. I enjoyed the article.

Sincerely,
Alicia Ellis
President, Genesee County
Master Gardener Association
Michigan

Ed. note: Alicia is responding to the hummingbird article included in P & G's website, pondandgarden.com, that was printed in P & G's second issue.

The Dirt Digger

by Bruce Zaretsky

You have finally decided to replace that retaining wall. But after the last fiasco, you need to know that the product being installed will last. How do you know that it will be installed properly? How do you know that ten years from now you won't be spending the money again?

By asking the right questions, that's how. So here are the questions that need to be asked.

1. How much base material will you be using?

This depends on how tall the wall will be. If a wall will be more than four feet tall, we recommend using a segmental system (i.e. versa-lok). These are the most structurally sound. Base material is Crusher Run. The depth will vary based on the height of the wall. Over four feet, we will use a base of six to twelve inches, depending on soil condition. Also, we need to bury at least one course of block per four feet height of wall. If you see a wall that has settled, it usually means that the base was not properly compacted and prepared.

2. What are you using for drainage?

18

All walls need to be backfilled with crushed stone. Solid walls such as segmental and timber need a four-inch perforated pipe to channel the water away. The stone allows water to quickly drain from behind the wall, minimizing frost heave. If you see a wall that looks 'pregnant,' it usually means that there is insufficient drainage.

3. What are you using to tie the wall into the hill?

With timber walls, we use a deadman. It runs perpendicular to the face of the wall into the slope. With taller walls, we rebar the deadman down into the ground with three-foot rebar.

With segmental systems, we use a product called geogrid. This ties into the wall and lays back into the slope. It extends beyond the retained material, into the area of the slope that will not be held by the wall. Picture a 45-degree angle from the bottom of the wall up and back from the wall. Between this line and the wall is what the wall is actually retaining, in general. Beyond this line, the slope is self-retaining.

Geogrid is critical in segmental walls. Deadmen are critical in timber walls. Natural stone walls usually have no tieback, but we usually don't go higher than four feet with them. It you see a wall leaning out, it usually means that the wall has no, or insufficient, tie-backs.

Ask the proper questions when building a retaining wall. Get the right product built. This should be a once-in-a-lifetime installation. You won't be sorry you asked.

"The dirt Digger" is excerpted from landscape designer Bruce Zaretsky's newsletter, Dirt Digger. You can learn more practical and professional landscape tips from nationally acclaimed Bruce at his website: Www.bzli.com, or you can reach him and partner Sharon Coates at 1787 Route 250 in Penfield, NY 14526 or 716-377-8330.

Pond & Garden

The Magical Kitchen Counter

Victoria Update

by Kit Knotts

The kitchen counter has magical qualities. Our Victoria seeds live there happily nestled between the orchid-laden pot/sculpture of our Lipizzan, Marc, a dish of chocolates, and the sink. The kitchen is bright, airy, and stays at 76-78F year-round. It has turned out to be ideal storage conditions for many of the Vic seeds!

There's nothing scientific here. It began as a purely practical place to watch, rinse (weekly or more often with city water) and do the final cleaning before cooler storage downstairs in the guest room. No fancy temperature control for us! The small guest frig doesn't work very well and just happens to malfunction perfectly at 55F. It now overflows with seeds and tubers — guests are out of luck.

We have been brainstorming with Nancy Styler, Rich Sacher, and Joe Summers about how best to store each type of seed. 'Longwood Hybrid' (*cruziana* x *amazonica*) sprouts itself silly at 76F. It needs to be stored at 55-60F. This has led to the thinking that all Victoria seeds should be stored at that temperature. We think we are killing some of them with coldness!

Amazonica, we think, suffers the most with 'Adventure' (*amazonica* x *cruziana*) a close second. They are difficult to germinate after cold storage, even with the improved sprouting techniques described in P&G, Vol. 1, Issue 4, pg. 25. We hope that room temperature storage will improve germination.

The F2's of both 'Adventure' and 'Longwood Hybrid' sprout like crazy unless stored cooler. We are watching *cruziana*, more recently collected, to see if there is over-zealous sprouting on the counter. Last year we had a batch sprout in the frig, so we are very unsure of what *cruziana* really wants.

When the counter gets so full of seeds that there is no room to cook, we box them up and ship them off to Nancy Styler who maintains the Victoria Conservancy Seed Bank. They are available from her, free to botanical gardens and at a small charge to individuals, all proceeds to Victoria research. Her address is 6583 East Ida Ave., Greenwood Village, CO 80111.

Since the time to start baby Victorias is coming up soon, we hope our magical kitchen counter, as well as similar enchanted spots selected by Nancy, Rich, and Joe, will contribute to greater success for everyone who wants to grow Victoria. For a glimpse of magic, have a look at www.iwgs.org/Victoria/vmain.htm. 30