

Divide & Conquer

PLANT PROPAGATION

by Paula Biles

Birds do it ... bees do it ... Koi definitely do it ... and so do plants. In fact, the three types of aquatics — floating, marginal and submerged plants — all reproduce very freely. As you know, the big difference between plant and Koi reproduction is that with plants, there's not much movin' and a shakin' goin' on. However, aquatics do use multiple reproduction methods, and sometimes the same plant uses several at once.

When it comes to propagating their plants, water gardeners utilize the simplest approach and the one that works for the majority of aquatics — division. It also happens to be the easiest, and the quickest way to get more full-

sized plants. Plant propagation is NOT difficult, although it's a bit messy and definitely gets dirt under your fingernails. (Very neat water gardeners use latex gloves — the extra long ones work best.) Of course if your Koi have spawned, you already know the meaning of messy.

The factors which influence how long a plant can go before dividing are plant variety, container size, soil, fertilizing, amount of sun, and pest damage. Overgrown plants become stunted and sometimes fall prey to pests, so dividing a plant can be good for it. In Northern areas a plant may need dividing every other year. In warmer climates, where the growing season is longer, annual division may be necessary.

The time of year that's best for propagation depends upon where you live, with spring being the most accepted, in both warm and cool climates. Any new plants created by dividing or other reproduction methods will then have a full season to develop. However, water gardeners sometimes divide overgrown plants in late summer or fall, after they have gotten to full size or outgrown their pots.

Some procedures to follow when propagating aquatics will make the job quicker and less stressful, for both you and the plant. **Most importantly, work in**

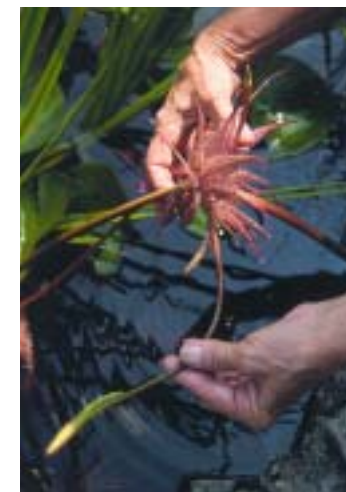


The conspicuous seedpod produced in the center of lotuses bears seeds that remain viable for extraordinary lengths of time.



Members of the *Nymphaoides* family, such as this 'yellow fringe,' send out many runners from which develop plantlets of invasive proportion.

the shade whenever possible, especially when dividing or repotting water lilies. Lily pads wilt and die very quickly when out of the water. When dividing a potted plant, such as a clump of iris, take it out of the pot and then hose all the soil off the root ball. Even though soil is lost, it



The easiest way to propagate lotus is by root runner division. Ordinarily occurring within soil, this runner escaped its pot and displays its manner of growth.

becomes easier and neater to pull apart sections of the plant. Once the roots are exposed, gradually pull or cut the clump apart. Trim off the older growth and keep the newer sections for repotting. Unwanted, extra plants should

never (I repeat, never) be discarded into the wild, especially in warmer climate zones. The potential for damage to local ecosystems is extremely high. If other Club members cannot use them, put them in your compost bin. Repot the separated plants, with the older section towards the outside edge of the pot. This allows more room for the new growth and extends the time until repotting is necessary.

Helping your water plants to multiply is actually quite simple. Once you understand how to divide them, you'll have more plants than you know what to do with. The hard part is making yourself do away with all the extra plants, but just like with Koi, you can't raise them all.

Let Me Count the Ways

Methods of Aquatic Plant Reproduction

Unlike Koi, plants have more than one way to produce offspring. In fact, it is common for aquatics to use multiple reproduction techniques. Certain tropical water lilies, *Nymphaea* var., are excellent examples. They produce seeds from the flower, offshoots from the tuber-like root, and new little plants from the leaves.



Echinodorus, commonly called marble sword, sends out long stems that produce plantlets. When the plantlets have acquired roots, you can snip them off for repotting.



Upright-growing marginal plants, such as *Scirpus*, are most easily propagated by root division. Simply cut the rinsed root ball into sections and repot them.

Since they reproduce so prolifically, they could be called *Nymphaemaniacs*.

For hobbyists, the aquatic plant propagation method most often used is 'division.' However,



New plantlets of sweet flag, *Acorus calamus*, are formed along a surface-running rhizome. Rooted sections can be cut away and repotted. Keeping the running rhizome submerged in water encourages necessary root production for propagation.

for more curious voyeurs, here are all the techniques water plants use to reproduce, right under your noses.

Division of rootstock - For convenience, this

is the recommended method of aquatic propagation. Frequently used for marginals, the root masses are separated by pulling or cutting. This type of reproduction guarantees a second plant just like the parent, plus quick development of the offspring to maturity.

Seed - This is the easiest way to get LOTS of plants from waterlilies, lotus, and marginals. However, it takes the longest to produce full-sized plants. (A 2000-year-old lotus seed found in Egypt actually sprouted and grew.) Not all lilies will produce seeds and even if they do, sometimes the seedlings are not exactly like the parents.



The mop-like heads of members of the *Cyperus* family naturally lean over to touch the water. This allows new plantlets to generate from the submerged flower heads.



Hardy water lily rhizomes produce eyes that develop into individual plants, if cut from the mother rhizome and repotted. Be sure the eye has some root growth to ensure its survival.

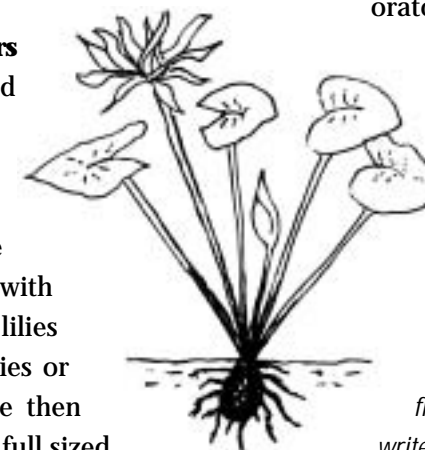


Some water lilies will produce an elusive seed pod. We say 'elusive' because the pod quickly breaks down and disperses its seed, often without the pond owner ever knowing it happened.

Offshoots from tubers & rhizomes - Water lilies and some marginals can be propagated by cutting or breaking off the new eyes or side shoots that develop on the parent rootstock. It occurs with both the tubers of tropical lilies and the rhizomes of hardy lilies or marginals. The little buds are then potted and will develop into a full sized plant, usually within the growing season.

Cuttings - Some fleshy aquatics can be propagated by stem cuttings, just like with terrestrial

Tropical water lilies produce small tubers around the base of the mother rhizome. In tropical day-bloomers, these tubers are around the outside of the parent; in tropical night-bloomers, these tubers are buried inside the mother rhizome.



plants. Often used with watercress and parrots feather, it also works with some submerged plants like anacharis. It is a very quick way to get more plants.

Runners -

Some aquatics freely send out runners with lots of new little plants. Water hyacinth is a well known example, which has overtaken tropical waterways and become an enormous problem.

Viviparous - This unusual method of plant parenthood is characteristic of certain tropical water lilies. New plants grow from the lily pads, piggy-back style. They can be potted and will quickly develop into full-sized lilies. Some varieties of the papyrus family also have this ability and produce new little plants from the mop-head top of each stalk.

Tissue culture - Utilized primarily in the laboratory, this is the same reproduction process used for orchids. Also called cloning, it will only work with particular varieties of marginal aquatics, not for submerged plants or water lilies. ♡

This article is reprinted with permission from KOI USA magazine. Paula Biles writes regularly for KOI USA, as well as teaches water gardening and aquatic plant classes at Selby Botanical gardens in Sarasota, Florida, and around the U.S. She most recently gave a presentation at the annual AKCA Seminar in Springfield, Missouri. She is president of the Florida West Coast Koi & Water Garden Club.



Many day-blooming tropical water lilies reproduce viviparously with small plantlets produced from the mother plant's leaves.

No Special Plan... Just a Lot of Love

by Nancy Oyler

Wally and Nancy Oyler

never intended to create a 'garden'....

After spending a weekend touring ponds and gardens in our area, it became very evident that people have so many different levels and interests in gardening. Unlike Wally, I never grew up with flower gardens, ponds, and the like. My family loved their yard, and we always spent a lot of time there, but I don't remember it being a daily interest...more of a weekend project.

I remember at a very young age, maybe 6 or 7, planting forget-me-nots in front of the evergreen shrubs that lined the foundation of our home. Since that time, on and off I would plant flowers (annuals) in the spring, but never with any plan in mind. When Wally and I met, he brought out a creative side



A special "find," the Oylers' celtic cross is set within a perimeter bed and highlighted at night with a garden spotlight.

of me and helped me to really appreciate landscaping.

We were so proud of our first home together, and Wally did a beautiful job landscaping it only in time for us to move after the first season. We never got to enjoy it once it began to mature. When we moved into our present home, we bought it for the floor plan. Neither of us really liked the exterior. Wally was sure we could make it home by adding a little landscaping here and there. I never would have believed our yard would end up giving us the privacy it does.

Our backyard had three very old and half-dead sweet gum trees. That was it. We stared at the back of the neighbor's garage as the back fence had fallen down. The first thing Wally did,

with the help of a very good friend, was to put the privacy fence back up and plant some pines and arborvitae for privacy. When discussing plans for future



Wally enjoys tending his comet goldfish, a couple Koi, and even two baby turtles in his pond.

plantings, Wally wanted to use ornamental grasses, Russian sage, "but no flowers," he said. Low maintenance with an oriental theme was his idea. (I had others!) Once he did the initial plantings both in the front and back yards, I began planting the seed in his mind for a pond. Wally's parents had two beautiful ponds with water lilies, irises, and goldfish that were featured in the *Louisville Courier Journal* newspaper. Wally and I talked for two years before I was able to convince him that we needed one, too.

In the meantime, Wally left town for a week in the spring. It was my opportunity! I rented a roto-tiller and began planting a perennial garden. Really not sure of what I was doing, I was able to read enough to get the bed ready and then went about buying perennials with two criteria: they had to grow in full sun and the pictures on the tags had to meet my fancy. I was so excited for Wally to come home and see my completed project, but somewhat apprehensive as well, unsure of how he would accept all those soon-to-be flowers he said he didn't like. He loved it! In fact, we ended up adding a rock gar-

den, as Wally would label it, a second perennial bed for me. We never color-coordinated anything, never really planned on blooming times. We once again bought things we liked. Somehow we got lucky. We have beautiful blooms from spring to fall and a little of every color – yellows, blues, purples, pinks, and with a couple of additions this year, red and orange. The most amazing thing that grew from all this is our realization that we enjoyed working in the yard together.

So you see, our garden was built out of love



Wally's pond is 8 x 11' and 30" deep. A 12 x 2' creek recycles the pond's water over a 2' high waterfall with a 1650 GPH pump. He made his own in-pond filter. His gargoyle, Dido, watches over the pond.



Because Nancy and Wally were married in Hawaii on a lava cliff overlooking the Pacific where mother whales showed off their calves, the whale weathervane holds very special memories.

of a hobby — not a detailed well-laid out plan, organized by blooming time and colors. Every year we try to add one object, planting, or improvement that means something special to us.

For example, Wally loves gargoyles, I don't. On a trip to California, we found a neat little garden shop where we found "Dido" our friendly gargoyle and our whale weathervane. The whale is special because we were married in Hawaii on a beautiful lava cliff. The background was the ocean at sunset, full of female whales showing off their new calves.

Another highlight in our gardening adventure has been the "Fred Wiche"



Sissy assumes her characteristic pond-side position.

garden show each February. To us, it is a sure sign spring is on its way. Every show we buy one thing to add to our

yard. Special rocks etched with frogs and Koi have been purchases the last two years. Another trip to a local salvage yard uncovered a couple of old chimney caps. One serves as a stand for a lovely copper bird feeder purchased at a local art show, the other as a plant stand.

Today our yard is about as full as it can get without cutting into the space reserved for our



In past years, Wally used water dye to help control green water algae. This year, however, he reports the use of Microblift bacteria has done the job.



Wally's famous last words: "No flowers."



A special vignette created on their patio includes the stone commemorating their garden's inclusion in the annual pond tour hosted by the Greater Louisville Koi and Goldfish Society.



A "find" at a local salvage yard produced an old chimney cap that serves as a stand for a copper birdhouse. Every year there are baby birds peeking from the house.

three Labradors. Wally's initial plan of 'no maintenance' hasn't exactly been the outcome. Instead, our yard is a reflection of our life. No special plan, just a lot of love – a love of nature and love reflected in the special memories of our life together. ♡



(inset) Recent additions to the Oyler garden include a carved frog stone.

(above) Although Nancy and Wally's pond is a water garden, they still appreciate Koi.

Nancy and Wally Oyler live, love, and garden in Louisville, Kentucky. For those of you who think Wally's name is familiar: yes, he was drafted to play NFL football for the Atlanta Falcons. Wally now is a successful insurance agent for Underwriters Group in Louisville. Active in youth programs, Wally is the President of the Johnny Uritas Golden Arm Educational Foundation, a non-profit foundation that provides scholarships to student athletes in the Louisville area.