

HOTWGPS Newsletter

Volume 11 Issue 5

May 2019

Meeting

Our meeting this month will be May 21 at 6:30 PM. We will meet at Susan & John Peitsmeyer's home.



Invasive Spotlight: Spotted Knapweed

(*Centaurea stoebe* ssp. *micranthos*)

Spotted knapweed is an herbaceous biennial or perennial plant that readily invades open areas. It begins as a basal rosette of deeply lobed, pale, grayish green leaves approximately 8 in. (20 cm) long. In its second year it produces the flowering stems, which are 1-4 ft. (0.3-1.2 m) tall, stiff, hairy, and branched. Stem leaves are alternate and may be slightly lobed or linear. Leaves become progressively smaller and less lobed toward the tip of the stem.



Note dark tips of the bracts. Credit: Chris Evans, University of Illinois, Bugwood.org



Credit: Joseph M. DiTomaso, University of California - Davis, Bugwood.org

The small purple-to-pink flowers bloom in the early summer at the ends of the branches. Bracts around the flower head have distinctive vertical veins below a black triangular shaped spot on the bract tip that gives the flower heads the spotted appearance that gives the species its name (see photo). The fruit is an erect, slender green pod that turns pale brown when mature. The copious seeds are wind-dispersed.

Spotted knapweed invades a wide variety of habitats including pastures, open forests, prairies, meadows, old fields, and disturbed areas. It displaces native vegetation and reduces the forage potential for wildlife and livestock. It is native to Europe and western Asia. It was accidentally introduced into North America in contaminated alfalfa and clover seed in the late 1800s.

This invasive species occurs on the noxious/regulated plant lists of 16 states.

So far, spotted knapweed has been officially [found in only two Texas counties](#), but it likely occurs in more. Please be on the

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lookout for it. If you are an Invaders of Texas citizen scientist, please report it using the Texas Invaders mobile app as you have been trained. If not, please [report it here](#), including your contact information, the location of the plant(s) (GPS coordinates if possible), and photo(s) that can be used to identify the plant.

Follow [this link](#) for more information on spotted knapweed.



This from the International Waterlily and Water Gardening Society Water Garden Journal; P. 8 Vol. 34, No. 1

Tadpoles in Your Water Garden

by Mike Gannon

I learned while researching this topic of tadpoles that the ancient Egyptians used the image of a tadpole in their system of hieroglyphics. I thought it was pretty cool that the tadpole made it into the sacred carvings of this ancient culture. The image of a tadpole was drawn to represent the number and quantity of 100,000. I wondered why would a tadpole be used to represent this massive number? How did ancient Egyptians relate such a massive number to a puny tadpole? And then I remembered the plagues.... The Egyptians endured some doozy-like plagues, including a plague of frogs. I realized that Egyptians must have experienced absolutely massive numbers of tadpoles filling the shorelines of the mighty Nile, and it made a bit more sense how a single tadpole could represent such a massive number; as well as representing

fertility and proliferation. Tadpoles just got even cooler to me! Tadpoles, or pollywogs as I called them as a kid in Georgia, are the metamorphic offspring of frogs and toads (salamanders, and newts too!). Tadpoles congregate in huge schools as they develop and can easily take over some ponds for a few weeks every year. A tadpole is the larval stage between egg and adult frog. It can vary in sizes quite a bit depending on the type of frog or toad. They only live in the water during this stage and breathe with gills, but are still considered amphibious. Tadpoles have large heads in proportion to their bodies with two eyes and a small mouth, no legs or arms, and a long broad tail that they wiggle to propel themselves through the water. Their coloration can range from deep-black to grey-green and their skin is very slick. And there is no mistaking them when you see them. For backyard pond keepers, frog egg sacks will typically be found along the edge of your pond. Egg sacks are rounded and look like clear tapioca with little black dots. Once they hatch, tadpoles can be found in your pond just about everywhere. I've seen them embedded in algae growth, hanging around lily stems, and free swimming. They mostly stay in schools in shallower areas and crowd into the edges of ponds. Tadpoles enjoy basking in the sun, but they will be quick to scatter, with some pretty impressive bursts of speed. You'll see them sitting in lily pots and other plant containers. Large koi and other large pond fish may try the "pollywog du jour" for an occasional meal, but they won't make an impact on population counts.

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The other usual suspects such as the heron, raccoon, and snakes will also make meals of the tadpole when the opportunity is there. Pond keepers should enjoy this incredible fleeting display of nature happening in your backyard. Pond keepers should also be paying attention during this time for filter intakes getting plugged up (yikes), or tadpoles getting sucked into pumps (yucks). They can even get into skimming systems, but like fish, they seem to know not to go there. They don't need any special care or feeding in a backyard pond setting, tadpoles are fully self-sufficient. The tadpole stage of a frog's metamorphosis begins at about one to three weeks when the frog egg hatches. After hatching the tadpole will live off of the egg yolk for a week or so, and then begin to swim and live off of algae growing in the pond. Around eight weeks old they are developing legs and arms, at the same time the long tail is getting smaller and smaller. Tadpoles look really cool at this time being more like a tiny frog with a long tail. By 12 weeks they have become frogs and begin leaving the water, develop lungs, tougher skin, and that big ol' frog mouth!

For pond keepers that enjoy having all these proto frogs and pollywogs bopping around the pond you may be disappointed that of the hundreds, maybe thousands, of eggs laid in your pond only a very small fraction of adult frog would reside at your pond. Frogs are mostly solitary critters, they move on; or have other fates like making that once in a lifetime mistake of asking a blue heron for directions. Tadpoles have been around for millions of years and today's pond keepers

are helping that to continue. We often hear about the massive habitat loss and die off of frogs around the globe; of course these losses extend to tadpole, but tenfold. Tadpole season is a multi-week experience that signals spring is here, but summer is coming soon! Backyard pond keeping is an effective way to help increase habitat and conserve numerous local species; so enjoy the tadpoles and share the pond keeping lifestyle with your family and friends.

About the Author

Mike Gannon is owner of Full Service Aquatics located in Summit, NJ. Mike is an award-winning pond, water garden, and water feature builder. Mike is the creator of "The Pond Hunter" video series seen on YouTube and has made several television appearances on networks such as HGTV and the DIY Network. He also hosts the Pond Hunter Radio Broadcast. You can contact Mike at the LOVEYOURPOND blog at <http://fullserviceaquatics.com>.



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This from the Pond Guy 4/20/19

How do I know how many fish I can have in my pond?



ASKED BY: Lynn of Leitchfield, KY

A: Fish are like potato chips: It's hard to have just one. When you visit your local pet retailer or water garden center and see those goldfish and koi staring up at you through the water, how can you not take them home!

Too many fish in a pond, however, can create an unhealthy environment for your fish and a breeding ground for algae. The more fish you have, the more waste they produce – and that waste can turn into algae fertilizer unless you have the filtration power to pump it out.

Before you start buying bucket-loads of finned friends, figure out how many you can comfortably keep in your pond. Here's how in five simple steps.

Calculate Pond Size

First, determine the square footage of your pond's surface area by measuring its length and its width, and multiplying the two numbers. We recommend no more than 1 inch of fish for every square foot of surface area, so if your pond is 250 square feet, that's a maximum of 250 inches of adult, fully grown fish. If you need help with the math, use our [online calculator](#). You'll just need to know your pond's length, width and average depth.

Allow Room to Grow

If you're starting with young or adolescent fish, don't max out your fish volume right from the start. Remember that those little guys will grow – a 2 inch fry will turn into a 10 inch adult in no time – and they'll produce more waste as they develop. Skip the guessing game of growing fish by stocking adults, such as those included in our [koi packages](#). You'll enjoy instant gratification and a pond full of colorful fish!

Add More Slowly

Whether you're starting with young fish or adults, add just a handful at a time. Your pond will need time to "season," or build up its biological filtration system (a.k.a. beneficial bacteria), to handle the new influx of fish waste. Introduce a few fish, and then wait several weeks before adding more.

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While you're waiting, give your biological filter a boost with DefensePAC® Pond Care Package. It contains Nature's Defense®, Clarity Defense® and Muck Defense® – all of which promote the growth of those beneficial microorganisms.

Keep Up with Routine Maintenance

Once your fish have moved in, help them feel right at home. Use natural bacteria to break down fish waste, uneaten food and other debris. Provide shade, habitat and safety with floating and submerged aquatic plants. Feed them a healthy diet, like The Pond Guy® Staple Fish Food, which has the right amount of protein to keep them healthy without producing a lot of excess waste. Provide a healthy ecosystem and tasty food, and you'll have a pond full of happy fish!

Share - or Upgrade!

If your pond is overpopulated already, you have two options: Share some of your fish with a friend (or two!), or do some upgrades in either your filtration system or your pond itself.

An external pressurized filter like the AllClear™ can handle excess waste, thanks to its powerful combination of biological, mechanical and ultraviolet filters. Its backflush option makes it easy to clean, and it's easy to install in an existing pond because the plumbing doesn't need to be run through the liner.

Or if you want to upgrade your entire water feature, check out one of our Pond Kits. Available in several different sizes, they contain a pump, pressurized filter or waterfall filter, pond liner, underlayment, plumbing, foam, hardware and beneficial bacteria to jump-start your biological filtration. All you'll need to add is fish!



Words of wisdom

"Life is an opportunity, benefit from it.

Life is beauty, admire it.

Life is a dream, realize it.

Life is a challenge, meet it.

Life is a duty, complete it.

Life is a game, play it.

Life is a promise, fulfill it.

Life is sorrow, overcome it.

Life is a song, sing it.

Life is a struggle, accept it.

Life is a tragedy, confront it.

Life is an adventure, dare it.

Life is luck, make it.

Life is life, fight for it."

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“Spring is the most delightful season of the year. The bluebells, sweet smelling lilac and yellow crocus awaken the spirit within, and we thank the creator for this exhilarating display of beauty.”

Gerald Mullen, Leetonia, Ohio



A lot of growing up takes place between “it fell” and “I dropped it”



Service is love in action.



Happiness held is a seed...happiness shared is a flower.



It takes backbone, not wishbone to make success.

Pond Vac

As a reminder, this is a “Members Only” benefit. You can rent this super-duper pond cleaning machine very reasonably! John Enders is the “official pond Vac keeper”.

Call him 254-848-9596 or send him an email at jnenders@aol.com to schedule your time with the machine. One note of caution when using the pond Vac, watch how much water you are removing from your pond!! It works so well sucking up the “yuk” that one can easily forget how much water is also being removed! That is the voice of experience talking!!



On the Lighter Side



What is the difference between a cat and a frog? A cat has nine lives, but a frog croaks every night.

*Candy Thompson
Kingwood, West Virginia*



Look Out for the Lion

When my grandson Shelby was 5 years old, his house lost electrical power during a severe storm. The next day, a lineman from the utility company arrived to assess the damage. Talking with Shelby's dad, he mentioned that a power line was out. Shelby heard every word.

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Immediately rushing into the house, he announced in wide-eyed excitement, "Don't anybody go outside, it's very dangerous. There is a power lion out there."

TOM MUNSELLE *Richardson, Texas*



Saint Bunny

A Sunday school teacher asked her 3- and 4-year-old pupils, "Do you know who Peter was in the Bible?"

The room was silent. Finally a small voice in the back called out, "I think he was a rabbit."

NORMA VARNER
Vilonia, Arkansas



The Perfect Gift

With another birthday looming ahead for me, my husband took our 5-year-old granddaughter, Kaylee, into town to shop for my birthday gift. They went into Old Navy, where Kaylee picked out a lovely pair of socks for me. After I opened all my gifts, Kaylee's mom asked her where she had found such an adorable present for 'Grandma. Kaylee replied, "at the Old Lady store!"

LAURA HOBBS
Lakewood, Colorado



Funny Foothills

Two people were staring at the foothills of the Great Smoky Mountains when one started to laugh uncontrollably. The other asked, "Why are you laughing? Are these mountains funny?"

He paused and then replied, "They're hill areas."

BRAD WESNER
Simpsonville, South Carolina

Please support these businesses who have agreed to give our members a discount at their stores

<p>Bonnie's Greenhouse</p> <p>Sandra & Johnny Killough</p> <p>5198 Orchard Lane Waco, Texas 76705</p> <p>254-799-7909 254-799-5411 Fax sandrakillough@hotmail.com Bonniesgreenhouse.com</p>	
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