

Genesee Valley Pond & Koi Club Newsletter

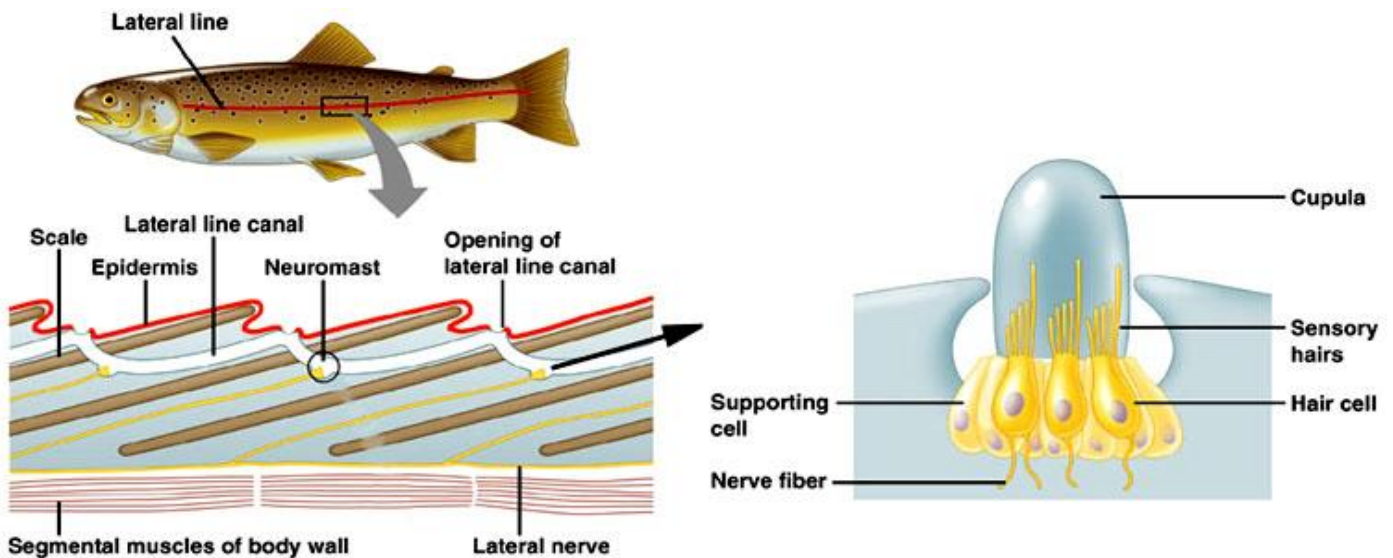
Volume 14 Issue 03

March 2010

The Midwest Pond and Koi Society 17th Annual Koi & Goldfish Show The Winner! Grand Champion - Bay Bateman



Lateral Line in Fish



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“News From Norm”

Renewal Time

If we have not received your renewal yet, a renewal form is attached. The end of 2009 brings the start of 2010 and another year for the club. We hope you've had a fun and educational time as members of the club and will renew your membership for another year. If you received a complimentary membership for hosting a pond tour stop last year, we hope you will consider joining the club. On your renewal forms, please make note of any areas of interest that you'd like the club to cover in 2010 during our meetings or in this newsletter. This really helps us plan for presentations that meet your needs.

Treasurer's Report

An annual income of \$1100 is needed to reserve meeting space at The Castle, publish the newsletter, and support other activities such as the Pond Tour picnic and Christmas Party. Current membership dues bring in around \$600. In the past the annual Plant Auction and subsequent monthly raffles, primarily of the donations from Ray Lucas' vendors, has made up the balance of our income needs. Ray Lucas is no longer serving as a rep for the vendors, so we will need to find a way to replace the income those donations helped us raise in the auction and raffles. We are working on various ideas to address this situation, and we would also appreciate your ideas on the matter. The end of February bank balance is

\$2,731.43, which should allow us to keep the club going for several years. □

February Presentations

If you weren't at the February meeting, you missed a wide ranging discussion by Eric Warren on reptiles and amphibians. He answered questions about turtles and salamanders. Thank you, Eric, for a fascinating presentation. □

Newsletter via email Option

Several people have expressed an interest in receiving the club Newsletter by email. Some people like to eliminate the extra paper in their household, some prefer to file their old newsletters on their PC and some would like to see all pages (with more color photos) in color on their PC monitor. The electronic version also allows the club to save money on copying and postage, which is a significant part of our club's annual expense. If you would like to receive your newsletter via email, please send your email address to: newsletter@gvpakc.org, or call Norm James at 334-3536. You can send more than one address if you use multiple email addresses. Rest assured that this is an optional choice on your part. If you take no action, your newsletter will continue to be copied and mailed to you in hardcopy format. However if you wish to help the club reduce costs and receive your newsletter via email, just let us know. We appreciate your time in consideration of this option. □



What is a lateral line in fish?

The lateral line is a sense organ that consists of a row of scales that most fish have along their sides, extending from their head to tail. Under these scales are a system of fluid-filled canals and specialized cells, which transmit vibrations to the brain of the fish. The lateral line helps fish to detect movement and vibration in the surrounding water including predators and prey. *See color page for detailed picture.*

Often described as a fish's sixth sense, the lateral line detects vibrations that are conducted through water alerting the fish to moving objects and the direction from which they come. When a koi is spooked or startled by a knock or a bang around a pond, the fish is alerted to this potential hazard by its lateral line sensing the vibration. As a line runs on either side of the fish's body, it can determine the direction from which a movement is occurring.

Koi have a single lateral line running along the midline of each flank. Other freshwater fish may have up to 7 lateral lines on either flank while the blind cavefish uses its lateral lines to detect solid surfaces, preventing it from hitting otherwise 'unseen' objects.

If ice forms over a pond in winter then it is out of respect for the sensitive lateral line that the ice should not be broken by smashing a hole. It is better to prevent the ice from completely covering the pond by using a low-wattage pond heater.

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Identification:

Lateral lines are usually visible as faint lines running lengthwise down each side, from the area around the gill covers to the area near the base of the tail.

How the Lateral Line Works:

There are receptors in the line, called neuromasts, each consist of a group of hair cells, these cell hairs are surrounded by a protruding cupula (an organ that gives an animal a sense of balance). Neuromasts may occur singly, in small groups called pit organs, or in rows within grooves or canals, when they are referred to as the lateral line system. The lateral line system runs along the sides of the body onto the head, where it divides into three branches, two to the snout and one to the lower jaw. These neuromasts are usually at the bottom of a pit or groove in the fish, which is large enough to be visible.

The lateral line system, found in many fishes, is sensitive to differences in water pressure. These differences are thought to be due to changes in depth or to the current like waves caused by approaching objects. When pressure waves cause the gelatinous caps of the neuromasts to move, bending the enclosed hairs, the frequency of the nerve impulses is either increased or decreased, depending on the direction of bending. A swimming fish sets up a pressure wave in the water that is detectable by the lateral line systems of other fishes. It also sets up a bow wave in front of itself, the pressure of which is higher than that of the

wave flow along its sides. These near-field differences are registered by its own lateral line system. As the fish approaches an object, such as a rock or the glass wall of an aquarium, the pressure waves around its body are distorted, and these changes are quickly detected by the lateral line system, enabling the fish to turn or to take other actions. Because sound waves are waves of pressure, the lateral line system is also able to detect very low-frequency sounds of about 100 Hz or less. □



GVPAC CLASSIC

The following article originally appeared in the March 1999

GVPAC newsletter.

Don't Scrub That Pond Liner!

By Greg Crane from www.koicamp.com

Honey, you always complain that I don't show enough interest in the fish pond. So while you were at work, I cleaned it out for you. Scrubbed it good too! That rubber liner shines like the day you bought it. And while I was at it, I cleaned the filter as well. You won't have to clean those pads again for weeks, because I soaked them in bleach all day. Aren't you proud of me?

Do you scream in bloody anger, or burn sole marks in the carpet as you head out the back door, road runner style, to check on your pets that you so fondly value as much as your children.

Well, this is definitely grounds for exile if not divorce, and in fact a

true story. I have to laugh as I write this because I know that there are those of you out there calling your wife or hubby right now and saying "come here and read this", so that you can remind their already sore pride of all the frantic rushing around figuring out what to do about the ammonia and nitrite levels, that is if the he or she who cleaned the pond remembered to add the declor before adding your prized collection back to the squeaky clean pond. If not, the undertakers have to make a living too.

Nitrosomonas and Nitrobacter are the two primary bacteria that live in your pond to biodegrade fish waste products. These two bacteria are naturally occurring and need surface area to grow on and good water circulation to thrive. N1 and N2 are very efficient at consuming waste products if there is enough surface area for them to grow on in significant quantities (billions) to support your fish load. What most folks do not realize is that the filter that they bought at the store that said it was good for 2000 gallons, might mechanically filter 2000 gallons as long as there are only a few fish living within (the filter will go unnamed, but applies to most depot type filters). But what the marketing people rely on is naturally occurring bacteria to cycle the pond, which normally takes from 4 to 6 weeks. Does this bacteria grow on the filter? Yes. Depending on the size of the pond, only about 1% of the bacteria needed, will grow on their filter. Where does the rest of it grow? You guessed it. On the liner and inside the pond

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plumbing. That awful slime coat, as some people call it is the very life support system for most ponds. I call it green gold.

When draining and cleaning your pond, never scrub the liner with a bristle brush. Simply use a garden hose set on about a 1 to 2 foot diameter spray pattern, and let the hose run full force to wash down the liner of the pond. The bacteria is fairly resilient, so you do not have to treat it as if it were going to die at the least disturbance. As long as the bacteria is not killed by excessive drying or chemical cleansing, it will regenerate very rapidly even from a stunted state. If you keep large numbers, or expensive fish, in your pond, it is best to use a well designed biological filter system that contains within it, media that provides significant surface area for billions of bacteria to grow on, and be biological sentinels for the waste products that your pond produces. Most good filter systems are not cheap. I supposed that one could also say that all expensive filter systems are not good either. But I would always tell you the factual truth about any system that

you were to inquire about. Buying a filter system is like buying an insurance policy. There are inexpensive policies that protect you on a limited basis, and assure you that whatever is being protected, will at least not vanish from disaster. And there are more expensive policies, which give you great assurance that your tangible life will not be greatly affected by a disaster. Whichever you choose, be educated about the

function of bacteria, and rationalize on how much effort you want to put into maintaining a filter. There is a rule of thumb that applies to most filter systems. You will either expend time or money on a filter system. On the one hand, you can purchase a reasonably inexpensive (*there's a relative term for you*), filter system and spend quite a bit of time cleaning or changing filter pads (I actually know folks today that have to clean their filters daily to keep them from clogging up). Or you can spend a bit more initially, and have a trouble free system that you only have to sweat over for a whopping 5 or 10 minutes a week (depending on which brand of filter you buy).-----

Back to the liners > Although you do not generally want to scrub your liner. Depending on the level of maintenance you perform on your pond, you may want to scrub portions of your liner in a cycle, if it has been more than a season since your last major pond cleaning. A septic condition can occur on a liner or the bottom of a concrete pond where new colonies of beneficial bacteria and algae grow over old colonies as they die off. This can cause fungus and detrimental bacteria to grow in the septic anaerobic thin layer. This condition is quite common in ponds, which receive little cleaning and are not in direct sunlight. One of the most common types of problems from this condition is the proliferation of Branchiomyces, which generally occurs in water over 80 degrees. The symptomology of Branchiomyces is the fish will

swim around slowly, isolated from the other fish. Sometimes the fish will hang around the waterfall, and frequently gasp for air. Although this is a common characteristic behavior of most any fish suffering from pathogenic organisms, a dead giveaway to Branchiomyces is that the fish's gills will have macroscopic (visible to the naked eye) green striations within the red gill villi. If you ever suspect Branchiomyces in your pond, you can easily clear it by lowering the water temperature to around 70-75 degrees and treat the pond with formaline.

If you would like to maintain a healthy slime coat on your pond liner, simply scrub small portions of the liner at a time to break up any anaerobic conditions that might exist. Never scrub the entire liner unless you have a very good fully cycled biological filter. Remember, most smaller ponds get greater biological filtration through exposed water contact surfaces, rather than a small supposedly biological filters that come from depot type stores. I wish you much success in your search for a filter at a price that fits your budget. Typically I will suggest that you intend to spend about half of what you spend on your pond, including stone and liner, for a pump and filter system. Any "pond wise" pond installer will tell you the very same. And as you may have to catch your breath at the price of some filters, remember, its either time, or money, and the filter is the most important part of your pond. □

Genesee Valley Pond & Koi Club
140 Winslow Ave,
Rochester NY 14620



If you would like to write an article for the newsletter or have an idea you would like to have researched, please send your article or your ideas to Norm James at gvpakc@rochester.rr.com

Board Members 2009

President: Bob Wheeler
Vice President: Larry Hursh
Secretary: Jo Anne James
Treasurer: Les Saiers
Pond Tour Chairperson: Les Saiers & Norm James
Refreshments: Yvonne Wheeler
Newsletter Editors: N James, B Wheeler and L Hursh,
Webmaster: Norm James - gvpakc@rochester.rr.com

Purpose of the Club

- To promote, create and enlarge the hobby of keeping, breeding, appreciating and exhibiting koi and goldfish.
- To promote and appreciate the hobby of water gardening.
- To disseminate information about koi, goldfish and water gardening.
- To socialize and have fun.

We meet in a very friendly atmosphere at 7:00 pm, the first Friday of every month, at the Rochester Civic Garden Center (the Castle), 5 Castle Park, off Reservoir Ave., in Highland Park. Parking is free. Anyone interested in water gardening and/or Koi is welcome to join us. We ask that you consider joining the club after your third visit.

For more information call Bob Wheeler. (585) 461-5315 or e-mail BobWheeler58@gmail.com or visit the club website at <http://www.gvpakc.org>

Calendar of Events

March 5 2010, Meeting: Friday 7PM, GVPAKC meeting at Warner Castle. Our speaker will be: Larry Nau : on the, "International Waterlily & Water Gardening Society (IWGS) 2009 Symposium held in St Charles, IL"

March 11-14, 2010: GardenScape 2010, The theme: "Eye of the Garden" – Over 20 creatively landscaped gardens will evoke the energy, excitement and charged atmosphere of a powerful storm. The backdrop for GardenScape 2010, "Eye of the Garden" concerns electricity, magic, illusion and discovering the unexpected! Beauty is in the eye of the beholder!

April 9 2010, Meeting: Friday 7PM, GVPAKC meeting at Warner Castle. Norm James will present "Photographing Ponds and Fish."

July is National Water Garden Month

"Naturally Green" - A live gardening show every Saturday from **9-10 am** on **WYSL 1040 AM**.