



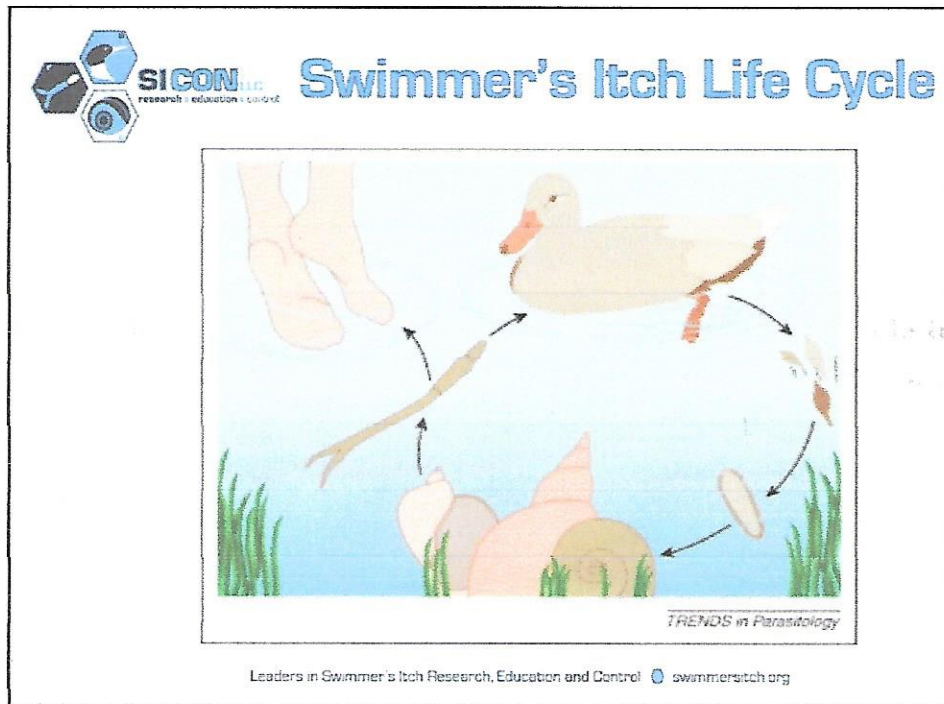
Annual Meeting - July 18, 2015

Higgins Lake Property Owners' Association

# The Higgins Lake TOP TEN List (of "Itch" Questions)

**Curt Blankespoor/Ron Reimink**

Leaders in Swimmer's Itch Research, Education and Control [swimmersitch.org](http://swimmersitch.org)



## Questions to which you probably already know the answers.

What is swimmer's itch?

What causes swimmer's itch?

How bad is the swimmer's itch problem on Higgins Lake this year?

POP QUIZ: This is a general life cycle of a parasite that causes swimmer's itch. In what 2 ways is it NOT a good representation of what's going on on Higgins Lake?

1. No weeds on Higgins/wrong snail species
2. Common mergansers, not mallards, are the carriers on Higgins Lake



### **Question 1: What is SICON, LLC?**

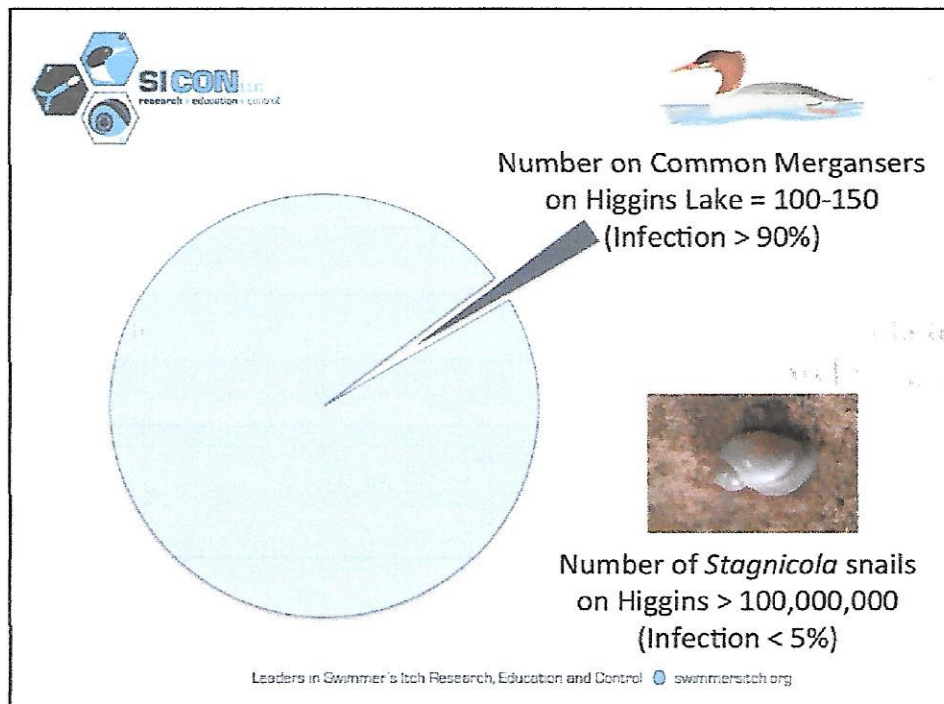
We are all educators with lots of experience and expertise in working with parasites. We started working on lakes in Michigan in 1983 and formed SICON, LLC in 1989. SICON, LLC is a business with a singular mission of helping riparians and lake associations control swimmer's itch



## Question 2: What are you doing to control SI on Higgins Lake this summer?

1. Avian Schistosome Species Assessment (i.e., ID the culprits that are causing SI on Higgins Lake)
2. Attempt to find and immobilize common merganser nests
3. Trap and relocate common merganser broods
4. Experiment with snail removal plots





### Question 3: If the snails are the problem, why do focus on catching the ducks?

IMPORTANT POINT 1: We are working with both ducks and snails

The science/biology of the parasite system says the parasite is more vulnerable in ducks

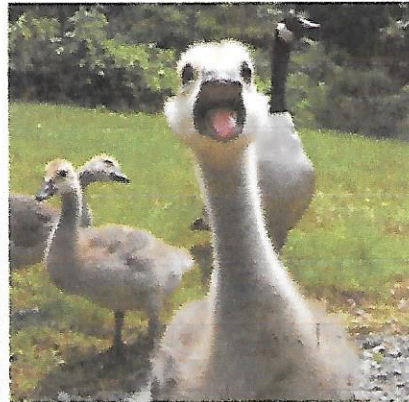
100,000,000+ snails < 5% infection rate vs. 100-150 COMEs > 90% infection rate

IMPORTANT POINT 2: Snails can only get the SI infection from ducks. Snails cannot pass SI to another snail

ANALOGY: We are going after the drug dealers more than the drug sellers



Number tested = 15  
Infection = 0%



Number tested = 16  
Infection = 0%

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#### **Question 4: Are you sure it's only the common mergansers that are the problem? What about the mallards and Canada geese?**

We can't find any of the right snails for the SI species in mallards or CG

All 15 mallard ducklings and 16 Canada goslings we checked so far were negative

We are not at all surprised by results, we expected this to be the case



## Question 5: Why not just shoot the common mergansers?

Answer this question with a question: Why shoot them? What's the benefit?

1. They aren't the problem...it's the SI parasite that's the problem
2. A wounded duck (there were 7 on Higgins this spring) is worse because it will stay on the lake all summer
3. Not a viable or sustainable long-term solution

For every duck shot, 100s more will take her nesting site

ASK: if your boat is constantly taking on water, which is a better long-term solution? constantly bail or fix the leak?



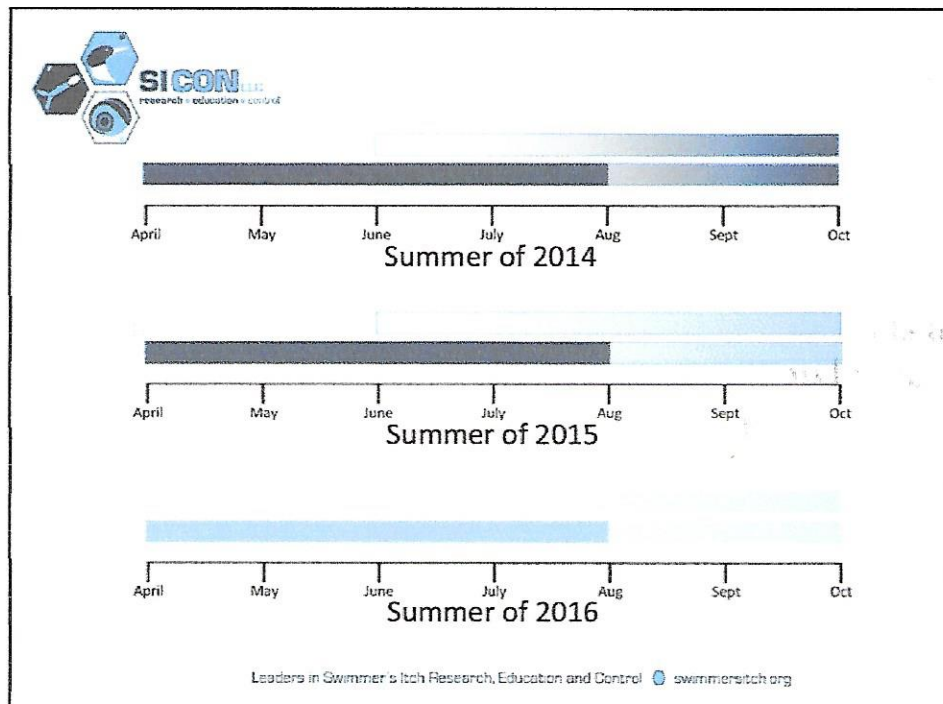
## Question 5 continued

Future federal permit acquisition is not a for sure thing

We can accomplish better results in a much more humane and sustainable way

We will and can only lethally take ducks for scientific purposes





### Question 6: Why won't we see a reduction in SI cases this year? Why will it take 3 years?

Again, the science/biology of the parasite system dictates there's no "quick fix"

Once a snail is infected with SI, it has it until it dies

Snails infected in 2014 pass SI infection until August 2015 when they die

Removing ducks this year only reduces SI levels in snails hatched this summer

Because of the complex SI life cycle, removing ducks pays it forward 1 year.

With respect to SI....Higgins Lake is very sick...it needs 24/7 care for a couple of years



### Question 7a: What about the various prevention methods: creams, lotions, immediately toweling off/ showering, vinegar spritzing, swimming in deep water, etc.?

If any of them work for you, keep doing it!!

I've never seen any scientific, clinical studies that convinced me these various products/home remedies work

The 411 (aka inside scoop) of toweling off

Only 2 of the 20 SI species "stick first, penetrate later"

Neither of those SI species is in Higgins Lake

The 411 (aka inside scoop) of swimming in deep water

It reduces your chances of getting lots of papules, but does not eliminate it.

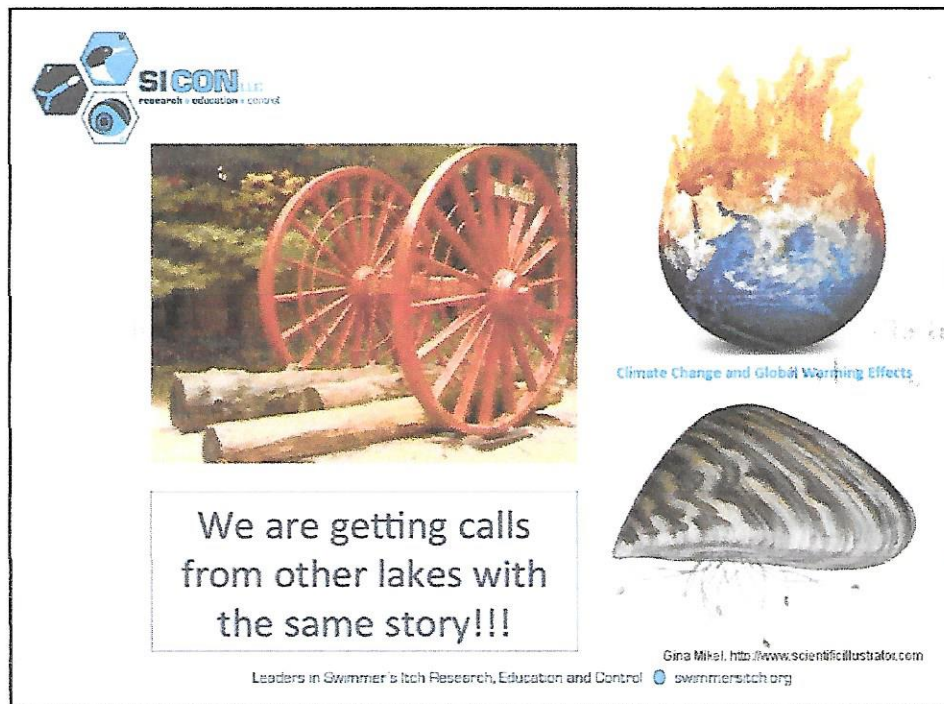
ANALOGY: Sitting in the first row at SeaWorld (good chance you'll get wet) or sitting in row 20 (not as likely you'll get wet)

### Question 7b: Is there ANYTHING I can do to reduce SI?

Be patient

Learn as much as you can about SI, mergansers, and snails

Contact us if you see a BROOD of common mergansers



## Question 8: Why has SI gotten so bad the last few years?

We have a few possible answers, but we don't know for sure

About 100 years ago logging stopped...maybe the trees are now mature enough to house common merganser nests

The effect of the introduction of zebra mussels on snail densities?

The effect of global climate change/warming on snail densities?

Merganser infection rates? Population size?

We do know that we've received several inquiries this summer from other lakes with the same question.



**Question 9: What are your long-term strategies to control SI on Higgins Lake?**

Step 1: Get rid of those nest boxes!!!

We want to decrease common mergansers numbers on Higgins Lake not increase their numbers



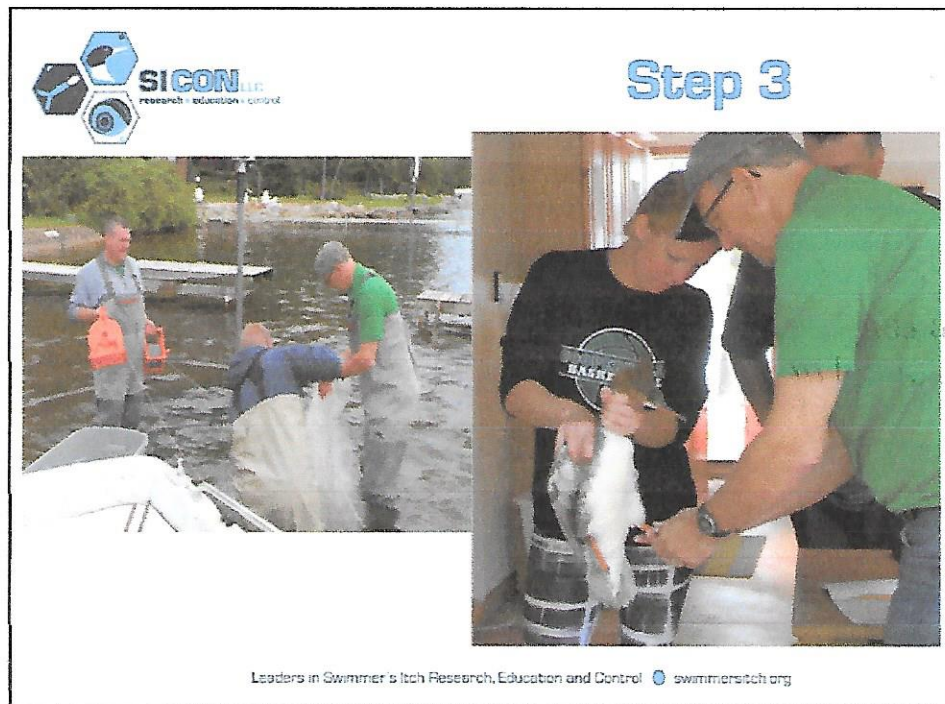


### **Question 9 continued**

The key is to focus on reducing the common merganser nesting sites.

Nests can be found if you watch for characteristic nesting flight-pattern of nesting hens

Shooting and harassing ducks in the spring makes that almost impossible because the ducks don't show those natural flight patterns when they are being scared by pyrotechnics or shotgun pellets



## Question 9 continued

Get the SI problem down to a manageable level

For the nests we don't find in a given summer, trap and remove the broods that come off the lake

Research and development on snail removal, AHY (after hatch year) duck removal  
Annual Check-up/Maintenance treatments (significantly less cost)



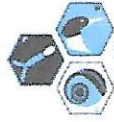
## Step 4



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### Question 9 continued

Broods are release in Lake Huron because the snails host species for the parasite are not present  
This breaks the SI parasite life cycle.



**SICON** LLC  
research • education • control

## What We Bring to Higgins

- A Control Program that is Proven & Unmatched
  - 80+ years of knowledge and experience
  - Identify SI parasites/Find nests/Trap & relocate birds
- Research that informs our control program
  - Snail removal project
  - Collaborations with U of Michigan & Oakland Univ
- Educational opportunities that inform the public
- An Assessment Plan

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### Question 10: What can SICON do for Higgins Lake?

#### Control (with Research and Education)

Things we offer that other's can't offer

Identify SI parasites among the other very similar parasite on Higgins Lake

Find common merganser nests

Trap common merganser broods

#### Education

Knowing is powerful and leads to money well spent

misinformation is frustrating and leads to money wasted

Knowing leads to unity and teamwork

misinformation leads to discontent and disjointed attempts at solutions

#### Research (which drives our control philosophy and techniques)

We discovered in 1983 that mergansers are the major SI players

...that has led to keying in on mergansers

We discovered that *Stagnicola* snails are the major player on northern lakes

...that is leading toward possible "hotspot" control

We discovered in the late 1980s that controlling merganser populations

on Glen Lake reduced the infection rate from 2.1 to .1 percent

#### Collaborative opportunities

Oakland University

University of Michigan Biological Station





## Our Goal for Higgins



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<http://www.zazzle.com/higginslakeonline>

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## Questions?



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