

From: "Chris Jones" <nvca@bconnex.net>  
To: DILLON.VANCOUVER(42RJJP)  
Date: 1/11/00 1:42pm  
Subject: Re: Chironomids in Water Systems

Richard:

Some comments...

If there is a problem with "blood worms" in the water system there could also be more serious problems associated with smaller organisms (Cryptosporidium, bacteria, viruses, etc.). It sounds like the system is probably nutrient enriched since Chironomus is often a filter feeder and is capable of surviving in systems with little oxygen. In a weird sort of way, the Chironomus may be a good thing-they may be filtering out the really nasty stuff!

I am assuming this is a surface water source. Is there any way the community could go to a perhaps less contaminated groundwater source? Being a southerner, I am not sure of the implications of this in areas with permafrost.

Implementation of Best Management Practices that reduce nutrient inputs to their drinking water source may be a good long term strategy (sewage treatment, contaminated run-off, etc.)

From a human health point of view, there may be no other option than to go to some sort of filtration/purification system in the short term until the nature of the problem and a solution for improving water quality can be found.

I'm not sure if this is any help to you. If you could post more details about the water system you may get more constructive comments from members.

-C. Jones  
Monitoring Biologist  
Nottawasaga Valley CA

----- Original Message -----

From: Richard Pope <rpope@DILLON.CA>  
To: Multiple recipients of list BENTHOS-L <BENTHOS-L@mercury.cc.ucttawa.ca>  
Sent: Tuesday, January 11, 2000 4:14 PM  
Subject: Chironomids in Water Systems

- > Ladies and Gentlemen,
- >
- > A quick question for your consideration.
- >
- > An associate of mine just received a call from a small community in the
- > Northwest Territories. They are having a problem with "blood worms"
- > (Chironomus spp ?) in their water system. A very simple water system
- > that is not able to filter out these critters.
- >
- > -Has anyone hear of a similar situation occurring elsewhere?
- > -Are there potential health/environmental implications?
- > -Any simple solutions? (again keeping in mind that this is a small
- > community).
- >
- > Any information greatly appreciated.
- >

From: "Jeffrey M. Runde" <runde.1@nd.edu>  
To: DILLON.VANCOUVER(42RJP)  
Date: 1/11/00 1:29pm  
Subject: Re: Chironomids in Water Systems

Richard,

A colleague of mine did some consulting in this area early in the 90's. the chironomid adults got into the storage tower through the vents. i think this is very common, anyway i dont think he will mind if i direct you to him. contact Dr. Marty Berg at mberg@wpo.it.tuc.edu and he should have some comments.

good luck,

Jeff

Jeffrey M. Runde, Ph.D.  
Assistant Director  
University of Notre Dame Environmental Research Center

From: "Martin B. Berg" <mberg@luc.edu>  
To: Richard Pope <rpope@DILLON.CA>  
Date: 1/11/00 1:59pm  
Subject: Midges in water systems

Richard:

I have worked on approximately 20 such infestations in North America and Europe. Determining the species (or even genus) is very important in deciding what course of action one should take. There is no one easy way to rid a system of chironomid infestations, but the most successful approaches that I have used have been: flushing the system with very hot water (80C), using Btl (could pose some obstacles for potable water supplies), or using a food grade polymer to essentially cause the chironomids to become constipated. There are other possibilities but these have been the most successful. Again, knowing what species you are dealing with is essential. Even having a series of carbon filters does not prevent midges from invading a water distribution system. Contrary to manufacturers' claims, midges do very well in the actual column.

Midges in water systems pose no human health threat. The main problem is aesthetics. In order to come up with a possible solution for a small community, I would need to know: 1) whether the system has an open reservoir or is it entirely enclosed employing a water tower; 2) how big the system is (# of households/users or volume used per day), and other info. about the system. In some of these cases, midges are living their entire life cycle within the distribution system (esp. parthenogenetic species), and thus, preventing their reentry into the system is not an appropriate course of action. In other instances, midges must gain readmittance to the system after emerging and mating. The control measure(s) used is reliant on knowing this information.

Sorry I couldn't be of more help, but if the community can live with the midges, then let them be. They usually go through periods of population booms and busts. The one thing that is clear though is that flushing fire hydrants will exacerbate the problem (essentially it dislodges a lot of midges thereby increasing the "annoyance" of the problem).

If you or your friend have any further questions, please feel free to contact me.

Good luck!!!

Marty Berg

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**From:** Rich Merritt <merritt@pilot.msu.edu>  
**To:** DILLON.VANCOUVER(42RJR)  
**Date:** 1/11/00 1:58pm  
**Subject:** Midges

Dear Mr. Pope, we have worked on this problem before and one way to get rid of them is by running boiling water through the pipes. Another way is to use Bti which is a microbial larvicide and that will usually kill them. Some of these midges will actually breed inside the pipes without ever having to come to the surface or outside. I can send you a paper on these if you wish. Ultimately, if they are reinvesting the system from the outside, they need to put some type of screening over the top of the water tower or whatever to prevent them from getting in. Sincerely, rich Merritt, Professor

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