Welcome Back Creekers!  

By Creek Connections Staff

Another great year with Creek Connections is underway. Students from area schools and Allegheny College students are having a great time sampling local waterways to determine water quality by testing chemistry and taking macroinvertebrate counts for the fall. Creeker Project Assistants have been busy every school day so far this year visiting more than 16 area classrooms. Creekers are getting great ideas about what to do their symposium project on. Remember the Student Research Symposium is a short six months away.

Students from Mrs. Jacobs’ classes at Conneaut Lake Junior High perform the Pollution Tolerance Index at Inlet Run. They found lots of interesting macroinvertebrates as well as salamanders and fish.

Creek Connections Project Assistant, Nicole Scatena, demonstrates the watershed model to Mr. Hayden’s class at Meadville Area Middle School.
Keep an Eye Out For the Invasive Wood Wasp: It Might Next be found in a Tree Near You!

By Jessica Perryman, Allegheny College Student

An invasive species is any non-native species to the ecosystem under consideration whose introduction causes or is likely to cause economic or environmental harm or harm to human health. The European wood wasp (Sirex noctilio) is one such species. The wood wasp naturally resides in Europe and North Africa. It has been introduced in Australia, New Zealand, Uruguay, Brazil, Chile, and Argentina. Recently, the wood wasp has appeared in the United States. The wood wasp most likely traveled to the United States by boring into a wood pallet or other solid wood packing material that was headed to the US by boat or train. Adult wood wasps have membranous wings and are metallic blue in color. Females are identified by their pointed projection at the rear of the abdomen; and a broad orange band covering most of the abdomen identifies males. The larvae are creamy white with a dark spike at the posterior end.

The female wood wasp favors pines, Douglas firs, and larch for drilling to create egg deposits. She drills up to five holes in the tree. The first hole is for depositing the eggs and the last hole is packed with spores of fungus (Amylostereum areolatum). While drilling the holes, she leaves toxic mucus behind. She then leaves the eggs to mature and moves on to create more offspring. The toxic mucus wilts and yellows the foliage of the tree creating perfect conditions for the spread of the fungus. The fungus dries the tree and the larvae emerge. As the female larvae mature, they collect fungus from the tree and store it in their abdomen for later use. The larvae feed on the trees insides while developing. Upon maturation, the male wasp bores out of the tree leaving an exit hole. The female then utilizes this exit hole and travels to find a mate and repeat the egg deposition process.

At this point, the tree is most likely to die from the fungus and the lack of moisture. The problem created by the wood wasp is that one wasp can kill a tree while creating several new offspring that will continue the tree destroying cycle. On February 19, 2005, a European wood wasp was collected by the New York State Cooperative Agricultural Pest Survey National Exotic Wood Borer and Bark Beetle Survey. Then, on February 23, 2005 the Systematic Entomology Laboratory in Beltsville, MD confirmed that it was a Sirex noctilio. Previously, one female was found in a warehouse of the Otis Elevator Company in Bloomington, IN in 2002.

In other countries, biological controls have been implemented to manage the wood wasp. For example, South Africa has introduced the nematode Deladenus siricidicola, a wood wasp attacking parasite and other parasitic wasps, Ibalia leucospoides and Megarhyss nortonii. These introduced species tend to effectively control the spread of the wasp and do not spread invasively. If you ever find a wood wasp or think that you have found a wood wasp, contact the USDA Bureau of Forestry nearest you.

Resources:
Creek to Creek: Images from your creeks. Fall 2005.

Above: PENNCREST and Crawford Central students practice with the PTI Bag of Bugs activity before heading out in the field.

Above: PENNCREST and Crawford Central students perform the PTI at Woodcock Creek just below the reservoir.

Above: Maplewood seventh graders search for macroinvertebrates in a pond during their field day at the Erie National Wildlife Refuge.

Above: Maplewood seventh graders work on their field journals after searching for macroinvertebrates in a pond during their field day at the Erie National Wildlife Refuge.

Above: A Maplewood seventh grader hunting for macroinvertebrates in a pond at the Erie National Wildlife Refuge.
A student from Conneaut Lake Junior High School shows off one of the monster crayfish the class found in Inlet Run.

Students from Seneca Valley Intermediate High School demonstrate how waders are essential sampling equipment.

A North Hills student proudly shows off her catch from Pine Creek.

Mrs. Milliken’s North Hills students found a small turtle at a pond near Latodami Nature Center in North Park.

North Hills High School students spent part of the day examining water quality in and around the lake in North Park.

Mr. Brunner’s Shady Side Academy Middle School class takes their work seriously when running water chemistry tests.
Testing Tip

By Perry Bruno, Allegheny College Student

Keeping Our Environment Clean

What if a few years from now you went to test a stream and it was so polluted and dirty you couldn’t even test it? That is what you are helping to prevent by cleaning up when you test. If people haven’t cleaned up after themselves for years you might not even be able to do your tests today. So cleaning up your waste is very important and shows respect for your environment.

To properly dispose of the liquids after testing, you need to use the designated waste container (this container should be clearly labeled “Waste”). When you are done running a solution into the waste bottle. Then when or your teacher can flush it down the drain with lots of water. Only in the special case of the Nitrates test do Allegheny College. During the Nitrates NitraVer 6 Nitrate Powder Pillow to the solution to be produced. The solution with placed in a specially marked container for should not be dumped down the sink. container to Allegheny College at the end All the chemical packets and other material garbage should be placed into a sealed bag labeled “trash”, which can then be emptied into a garbage can back at your school.

Thanks for cleaning up so we can always enjoy our local waterways and environment.

Feature Creature

By Sarah Dippold, Allegheny Student

I am not native to Pennsylvania. I am a hybrid between a golden trout and a rainbow trout. I am stocked in Pennsylvania solely for sport fishing. I am very golden in color, but I have pinkish sections possibly on my fins, lateral line or cheeks. I can grow up to 45 inches in length, but the biggest most anglers will see is about 24 inches. The species in Pennsyl-act similarly to a rain- stocked in areas well. I am very visible in the water and am often preyed upon by anglers, great blue heron, osprey, bald eagles, and many other predators. You will never see a fingerling of my species in a stream because I can’t reproduce. I am not found naturally so I am raised in hatcheries. What am I? See page 6 for answer.

Source: sites.state.pa.us/PA_Exec/Fish_Boat/pafish/fishtms/chap16.htm
2005-2006 Creek Connections Staff

From left to right: standing: Wendy Kedzierski (Project Coordinator), Tara Fortier, Sarah Culver, Sarah Dippold, Jim Palmer (Project Director); Sitting: Perry Bruno, Lindsay Herendeen, Jackie Stallard, Carrie Kean, Emily Ricotta, Matt Knittel; Not Pictured: Laura Beanby (Pittsburgh Field Educator), David Cass, Dan Conant, Cassandra Hamilton, Jessica Perryman, Nicole Scatena.

To see a full color version of this newsletter go to http://creekconnections.allegheny.edu/newsletters.html

FEATURE CREATURE ANSWER:
This issue’s Feature Creature (pg. 5) is a palomino or golden rainbow trout (Onchorhynchus mykiss).

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