



Volume #23 Issue #2
December 8, 2017

Current in the Creek

2018 Creek Camp Sessions:

I: June 24-29

II: July 8-13

Apply today!

[sites.allegheny.edu/
creekconnections/creek-camp/](https://sites.allegheny.edu/creekconnections/creek-camp/)

Hunt Road Clean-Up

April Claus, Fern Hollow Nature Center Naturalist, and the Quaker Valley High School Creekers recently had their big Hunt Road Clean-Up at the old mink farm. The Creekers removed roughly 45 tires! The group will return another day to continue their clean-up efforts to remove the rest of the scrap metal on the property. An Earth Day clean-up in collaboration with the Allegheny Land Trust is in the works!

Many people aided in the clean-up effort, and the watershed is healthier due to their willingness to make a positive difference in the environment. April said the group is “Looking forward to getting this all cleared up because Hunt Road is a beautiful tributary of our watershed.” Great job, QV Creekers, and a huge thank you goes out to all who helped out!



Above and below: Quaker Valley High School students help remove tires and trash from an old mink farm in the Sewickley area.



CLEAN WATER: Your Right to Know

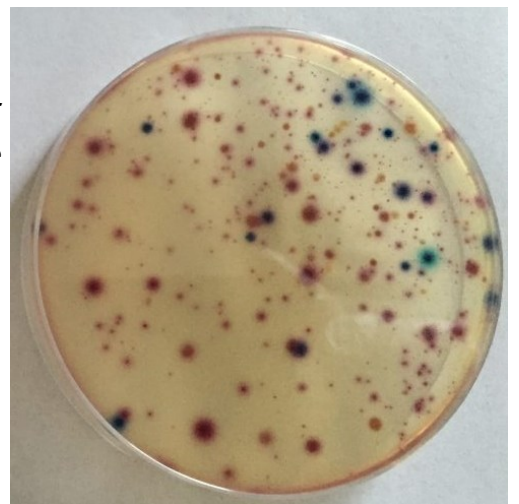
<www.iwla.org/conservation/water/clean-water-your-right-to-know>

The Izaak Walton League has been a protector of the environment for future generations since its founding in 1922. They have many resources that can help in your study of creeks/rivers. The organization prepared a document in 2016 on the health of streams, creeks, and rivers throughout the country. This document gives letter grades for each state's freshwater streams. You'll want to read the executive summary and introduction to understand the document (they're short and very helpful). The letter grades for all 50 states are in the executive summary, but you need to read the state reports for the real information. YOU are making a difference by performing regular water monitoring!

Testing Tip

By Mimi Zipparo, Allegheny College Student

When conducting water tests, it is important to always see what is living in the water to determine its health. However, you cannot always see everything present in the water with the naked eye. Completing a bacteria test can give you a good idea as to what exactly is in your water. Some bacteria can be good and found in the human body naturally, but others can be harmful or not desired in the water we're drinking. This is why it is so important to test your drinking water and drinking water sources for bacteria regularly. In our drinking water loaner module, we provide Coliscan Easygel plates and media to allow you to see the bacteria present within your water and identify any coliforms. While conducting this test, make sure to take photos of your results and send them to Ana Humphrey at colifind@gmail.com, or submit them to her website colifind.com. Ana is a high school student working to create an app to more easily read the number of coliform bacteria present in the sample. This app can help to raise awareness for water quality as well as creating an inexpensive and efficient way to test your water for harmful bacteria.



Feature Creature

By Bella Petitta, Allegheny College Student

I am native to the United States and Mexico. I have a domed shell that protects my body. On the bottom of my shell, I have hinges that allow me to crawl inside and hide from predators. I am an omnivore. I eat insects, leaves, and berries. I like to hide in logs and brush. I hibernate in the winter. I can live to be about 50 years old. I am a reptile. Who am I?

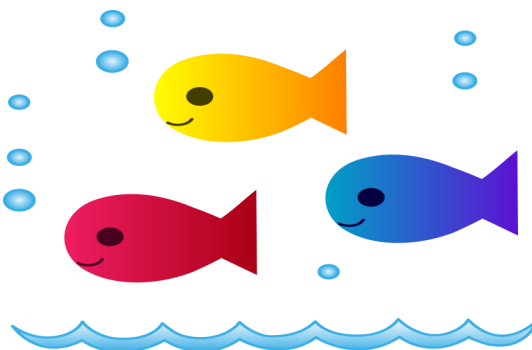
See back page of newsletter for answer.



Meet a Module

By Grace O'Malley, Allegheny College Student

This module is filled with many fun, educational activities, perfect for learning more about freshwater fish! One of the most popular activities is Fishy Freeze Tag, where students can engage in one of their favorite pastime games of freeze tag while learning about the predator-prey relationship that takes place every day in our creeks and rivers. Another activity included in this module is Turbid Vision, where students are able to understand the challenges fish have to go through when swimming through muddy water. Hooks and Ladders is another fun activity that looks at the life cycle of steel-head trout and examines their migration patterns. These are just some of the many hands-on activities included in this module that allows for active learning about fresh-water fish. Along with all these activities, many books and posters are included to increase learning opportunities. There is even a perch anatomy mount and a fish life cycle mount, allowing students to see what is being detailed in the books. If you would like to borrow this module, check out its availability on the Creek Connections website and complete the online request form.



Creek Critters and Aqua Bugs: An App Review

By Grace O'Malley, Allegheny College Student

Technology has made its way into our everyday lives. It seems to be creating a barrier between children and the outdoors. Thankfully, organizations have realized this and are developing tools, like apps, to encourage children to play outside again. The Audubon Naturalist Society and the Izaak Walton League have both released apps for identifying my favorites: macroinvertebrates!

I tested out both of the apps and really liked them; they each had pros and cons. The app "Aqua Bugs" (green icon) by the Izaak Walton League is free and very easy to use. When you come across a macro that you don't recognize, you start identifying it by picking from one of three categories: legs, body, or tail. These multiple starting points are helpful because many times, the animal does not have its entire body intact. After picking a category, you are led to only two more categories at a time, helping to eliminate confusion.

As you continue to select between the categories, you will eventually be led to one specific animal with pictures and a general description. If this is not your animal, there is a button to hit called "not my bug" that brings up pictures that look similar to the one you selected, so you don't have to start from the beginning again. If this is the correct bug, great! You are free to try to identify another.

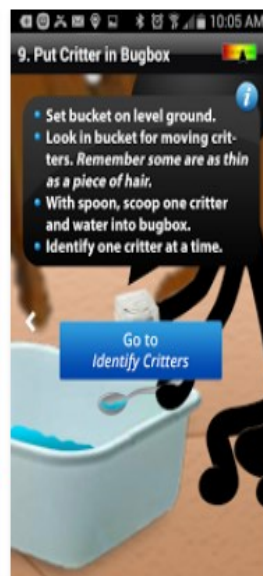
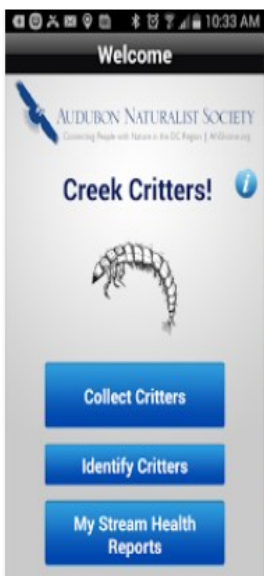
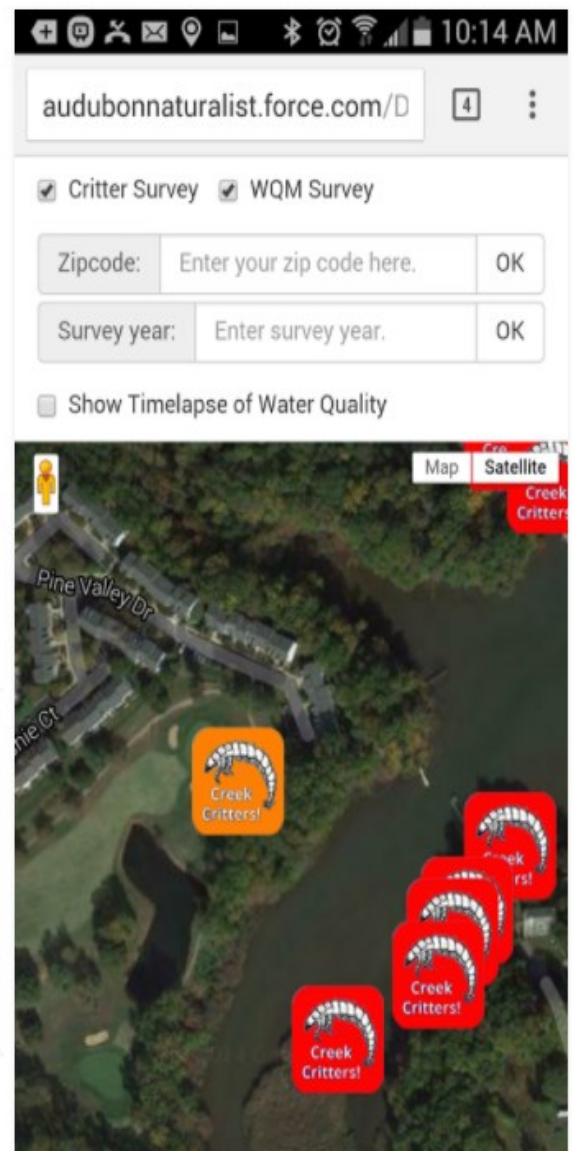
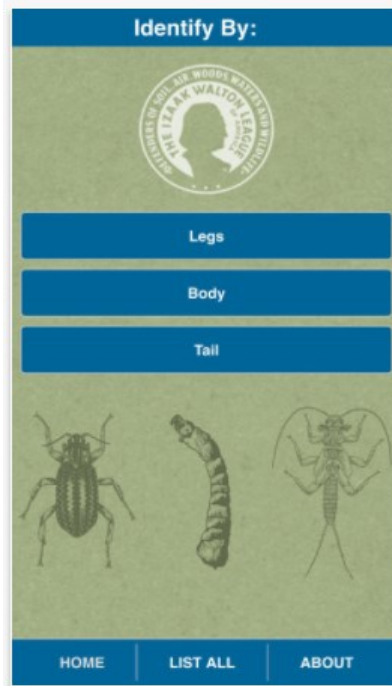
The pictures of the macros are all very clear, and the descriptions are easy to understand. Some of the words used are bug-specific, so you might have trouble figuring out those, but you will still be able to identify your animal if you are unfamiliar with these terms. This is a great app to have on hand if you are frequently around creeks or rivers with younger children, or if you are curious yourself to identify the critters that live around you! I feel the simplicity of the app is more geared toward younger children or for recreational use.

The Audubon app, "Creek Critters" (blue icon), is geared more toward teenagers and people who are interested in macroinvertebrates and citizen science. Like Aqua Bugs, it's free. You do have to register with your email and mark the location of the stream you are in, as well as how many people you are working with. When you are ready to start identifying the macros, you are given four categories to choose from: shell, wormlike, six legs, more legs. As you move through the identification process, you have multiple categories to choose from at any time, which could potentially be overwhelming to someone who isn't familiar with macros. When you arrive at one specific animal, there are pictures and a description provided that are also clear and relatively easy to understand. This app also provides a "might also be this animal" option if you are led to the wrong animal.

There are some aspects that make this app a great educational tool for high school or middle school students. The app creates a list of the animals that you have found, along with the date and location so you can reference this at a later time. This also is great for repeated sampling because you can compare what animals are present during different times of the year, for example.

I think the greatest feature on this app is that it calculates how healthy your waterway is based on the animals that you have found. This also allows you to observe the general water quality over an extended amount of time. This app would be perfect for a year-long project with students, or for someone who lives near a waterway and wants to monitor its health.

Download both of these great apps today to learn more about the fantastic creatures that are macroinvertebrates!





Above: Quaker Valley Creekers show off their hard work!

Feature Creature Answer from page 3:

Common / Eastern Box Turtle (*Terrapene carolina carolina*)
 information from www.boxturtles.com

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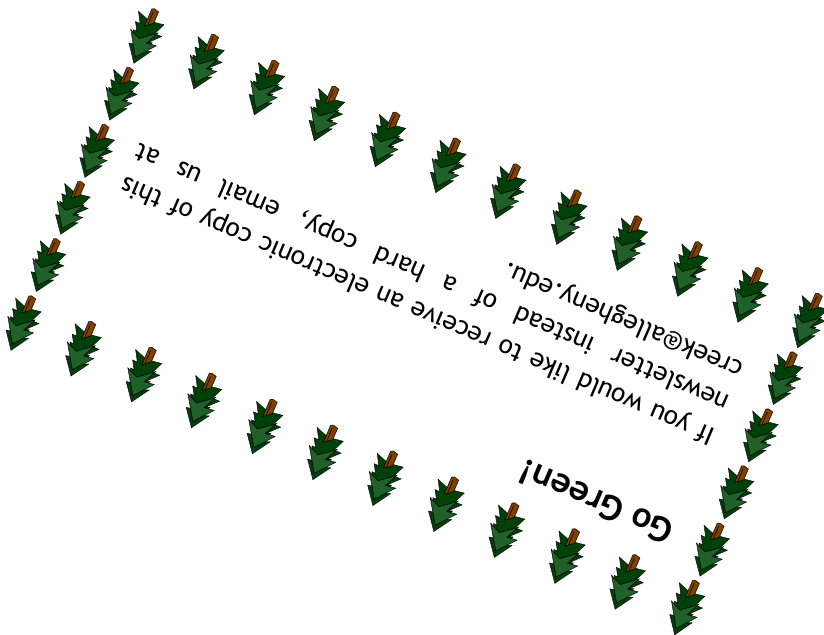
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