

## Now You See Me, Now You Don't

By Linda Wang

Freshwater Biology, Fall-2016, University of Maryland

As you pull your net out from under the water, you peer inside to see a pile of dead leaves and rocks. "There's nothing here!" you wonder to yourself but, your keen-eyed partner stops you before you dump the contents back into the stream. They push aside a stack of leaves in the corner of the net to reveal a small stonefly larva resting on a stick.

The aquatic insects of Fishing Creek and other streams and rivers are small and serve as food sources for predators in the higher trophic levels. To protect themselves from predators, these insects must be well adapted to their environments. Some can fly, some can bite, some can taste bad, but many simply rely on blending in with their surroundings.

If you look closely at the photo, you'll see a leaf...and something else! The Fishing Creek location is known for its abundance of different families of

stoneflies. Those that thrived in piles of freshly fallen leaves tended to be more striated and light brown in color while those that hid away in the deteriorating leaf packs were more dark brown in color. In fact, most if not all of the aquatic insects we have encountered so far have been in this color range. It must be highly advantageous to these insects that the plant matter substrate they feed and grow on and the rocks and sediment that cover the bottoms of the streams are all of similar color. Knowing that many of these insects have life spans of up to two years, it makes sense that their camouflage abilities must be in tip top shape.

When I hold an insect, it's fascinating to think about how I'm holding the direct result of hundreds of millions of years' worth of natural selection in the palm of my hand. Everything about the insect is that way for a reason, no matter how small of a difference it makes. The next time I'm out hunting for bugs and can't seem to find anything, rather than being upset, I should congratulate nature on a job well done.

