This summer, I had the amazing opportunity to study public health abroad with my Bass Connections project team: Environmental Epidemiology in Latin America. The first leg of our trip was in Peru, where we spent the majority of our time in the San Martin region. We visited a small community of about 10 families that was situated in a malaria-endemic region. Our team, along with a public health worker from the Tarapoto Department of Public Health set out to capture mosquitoes in the hopes of collecting a decent sample of Anopheles (with the community’s permission, of course). It was really exciting and enriching to get hands-on experience with this type of fieldwork. We learned how to properly set up a CDC light trap and how to capture mosquitoes using aspirators and a Shannon trap.

We returned to the lab in Tarapoto where we separated out the Anopheles mosquitoes and got to look at them under a microscope. Juan, the public health worker that was working with us, explained to us the defining characteristics of the Anopheles mosquito and showed us how to distinguish Anopheles mosquitoes from Culex mosquitoes (another genus that is very common in that region).

We then stayed in the small town of Soritor where we collected slides with blood samples of malaria patients from the local health post to bring back to Duke. We also went around the town with a local health worker to inspect the backyards/gardens of residents for standing water that could possibly serve as a repository for the larvae of the mosquitoes that transmit dengue, while advising residents to be vigilant of standing water.
We spent the last part of our time in Peru at a 2-day leishmaniasis conference in Lima, where a bunch of scientists from different disciplines within leishmaniasis research exchanged ideas and joined forces to create a grant proposal to fund additional research for this disease in Peru. It was interesting to watch all of the scientists bounce ideas off of each other and combine their disciplines, as well as see the process of how to go about creating a grant proposal (much more complex than I thought!).

I also had the opportunity to go to the Ecuadorian Amazon to learn how malaria is affecting the Achuar indigenous communities that live on the banks of the Pastaza River. We set up CDC light traps in and around the community of Sharamentsa and used aspirators to catch Anopheles that were lurking around our cabin. We also visited several nearby communities (via canoe!) to conduct questionnaires related to any behaviors that might give us a hint as to how malaria is spread in that region (particularly how often they travel to other communities). It was a very enriching experience for me, not only because of the field experience I acquired, but also because I loved spending time with the Achuar people and learning about their way of life in the dense Amazon region. And, since I’m half Ecuadorian, it was really nice to explore that region of Ecuador that I hadn’t been to before.

I learned a lot this summer about fieldwork in environmental epidemiology and got to work with really amazing people! I’m so grateful for the time I got to spend in Peru and Ecuador and am excited to continue this Bass Connections project throughout this year!