

# Bass Connections: Malaria and Leishmaniasis in Loreto and San Martín, Peru



## Loreto and San Martín, Peru



### Essential Partnerships

Characterizing the epidemiology of malaria and leishmaniasis in Peru is a complex task that requires the joint effort between a group of partners invested in studying infectious disease in the region. A team of Duke students from different disciplines and academic levels has collaborated with regional partners to better understand these diseases in the context of Loreto and San Martín, Peru. Our partners include the US Naval Medical Research Unit-6 (NAMRU-6) and the Peruvian Ministry of Health.

### Malaria

**Objective:** Evaluate the effectiveness of insecticide-treated bednets in preventing exposure to malaria vectors.

**Methods:** Households received an untreated bednet to serve as a control for the first 2 nights. The next two nights, participants received either a deltamethrin or permethrin treated bednet. CDC light traps and a mixture of water, sugar, and yeast were hung next to bednets each night and used to attract and capture mosquitoes and sandflies inside the home. Insects were then sorted and counted to determine the effect of the insecticide on insect count.



### Leishmaniasis

**Objective:** Determine occupational risk factors for leishmaniasis in the San Martín region through a case-control study.

**Methods:** Matched a control subject for every case of leishmaniasis based on gender, age, and date of visit to the health post. Surveyed all participants regarding household and occupational variables, and took GPS positions of households.



### Cultural Experience

By living at the health posts, eating in locals' homes, and experiencing the typical food and festivities, we had a good taste of Peruvian *campesino* culture. During down time, we had the opportunity to explore villages and develop friendships with local kids. In fact, we organized volleyball and soccer games in the community and had children spend time with us at the clinic to help them practice English.



### Oral Hygiene

**Objective:** Implement community outreach program to distribute supplies and educate primary school children on oral hygiene.

**Methods:** Team distributed donated toothbrushes and toothpaste to children and used MINSA materials to give short “charlas” on oral hygiene and how to brush teeth

