Brian O'Neill:

Animal movement in a human-altered environment

Human-altered habitats can have an effect on how animals move across the landscape. Given that the vast majority of habitats on Earth are highly modified by humans, it is important to understand what features may inhibit or encourage movement of animals, particularly vertebrates. I am interested in working with students who want to assess the use of manmade bridges by wildlife within La Selva. Students interested in working on these projects will learn how to use trail cameras and to identify animals from trail camera footage.

Andrea Romero:
Mechanisms and patterns of scavenging in tropical rainforests.

The scavenging communities of tropical rainforests are understudied, and little is known about how scavengers fit into the food webs of these ecosystems. Work from previous REU students found that beetles are important members of the scavenging communities, as these beetles will locate and bury a large proportion of carrion (dead animals) very quickly. Students interested in these topics will study the ecology and behavior of the burying beetles to look at how quickly beetles find carrion, how long it takes for them to bury the carcass, and what species of beetles are involved in doing this.

Carissa Ganong and co-mentor (Mark Mills (TBD)):
Effects of large woody debris on aquatic insect, shrimp, and turtle abundance

Abiotic habitat characteristics can play key roles in shaping aquatic communities. This project will focus on the communities of rainforest streams and whether organismal abundance varies with stream microhabitat (open stream channel vs. large woody debris). Students will learn (1) survey techniques for various aquatic taxa including insects, shrimp, and turtles and (2) basic identification skills for these taxa. This project will involve hiking to, and wading in, streams around La Selva to set and check traps.

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Pablo Muñoz Cambronero and Sofía Rodríguez Brenes:
Multimodal cues used by ant-following birds to aggregate.

It is known that vocalizations of obligate ant-following bird species are eavesdropped by other bird species to locate army-ant swarms at La Selva. In the highlands of Costa Rica , there is partial evidence that birds use colors from specific areas of their body as cues for joining mixed-species flocks. Therefore, multimodal cues (visual and acoustic) may enhance the localization of of army-ant swarms at La Selva. Students will (1) design a project using visual and sound playbacks to test a hypothesis based on multimodal signaling, (2) be able to identify bird species by different ways, (3) use sound analysis software.

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