Wildlife monitoring:

Description: Contribute to long-term data collection on native wildlife populations in threatened coastal dry forests.

Project background: Ceiba is monitoring wildlife populations to assess the impacts of human activity and restoration of habitat on wildlife in the Lalo Loor Dry Forest Reserve and other forest remnants in the coastal ACUS (Conservation and Sustainable Use Area). By using cameras trap and observational techniques, we gained knowledge on the status and health of the animal populations in the area and how are they affected by the change in habitat use and the resulting forest fragmentation. We share this information with local landowners that we work with, so they can learn about wildlife on their property and promote conservation. Wildlife Monitoring Interns will participate in:

1. Camera trap monitoring: The use of camera traps to study terrestrial mammals and birds has increased in popularity because it is a noninvasive method that can be used to inventory species present at a site, study their habitat use and temporal activity patterns, and compare communities in different land uses. To date, we have recorded the presence of a surprising number of large vertebrates in the reserve and the Conservation Corridor, including ocelot, jaguarundi, margay, deer, raccoons, tayra, peccary, and many more. We have also conducted surveys to determine how native species interact with different land uses (forest, reforestation plots, agroforestry plots, cattle pastures) in the region. We will continue doing these surveys in areas around the Lalo Loor Dry Forest Reserve, especially in the areas categorized as priority for the Conservation Corridor.

2. Monkey demographic and behavior study: A large population of Mantled Howler Monkeys (*Alouatta palliata aequatorialis*), a critical endangered subspecies, makes its home in the Lalo Loor Dry Forest Reserve. Ceiba as part of the Group of Primate Specialists of Ecuador, is one of the pioneers in primate research in the coast of Ecuador and one of the few organizations that make a census on the howler population every year. Interns will collect data on the demographics and ecology of howler monkey groups in the reserve. Interns will spend full days in the forest following monkey troops to record data on troop size, gender, age and activity. Encounters with the rarer Ecuadorian White-fronted Capuchin (*Cebus aequatorialis*) will also be recorded. Data collected will be entered into the database and used to generate an annual population estimate for howler monkeys in the Lalo Loor Dry Forest Reserve. Interns may also create educational materials about the biology of these two monkey species. At the moment information collected during the last 10 years is being analyzed for publication and to inform local actors about the importance of protecting the last patches of forest.

3. Sound recording: Students interested can have access to a sound recorder to start developing a protocol and make trials in the forest to start incorporating this new method.

What will you do?

- Learn the sampling protocols used to collect monkey data
- Collect demographic and ecological data on howler monkeys
- Estimate current howler monkey population size in the reserve and compare to previous estimates

- Identify and map trees the howlers are utilizing for food and rest
- Update howler monkey educational display for the nature center
- Record any observations of capuchin monkeys in the reserve
- Set up camera traps, install cameras at field sites, and collect data (2-4 weeks later).I Identify species captured, and enter into database (if timing permits)
- Collect data on forest structure and characteristics to analyze preferred habitat for different species
- Create informational material for stakeholder audiences.

What will you learn?

- Standard methods and experimental design for monkey surveys
- Standard methods and experimental design for terrestrial wildlife surveys using camera traps
- Geographic data collection and processing using GPS and GIS
- Field identification of neotropical animals
- Data organization, management, and analysis

What do we seek?

We seek interns who have knowledge or experience in wildlife ecology or interest and willingness to learn. Interns must be willing to hike long distances in rugged conditions and conduct field work, often in hot weather. Knowledge of Excel and organization and attention to detail are useful.

The results of this investigation will be published in a scientific journal and/or a report targeted to local stakeholders, including landowners, schools, and local governments. The goal is to share information on the region's biodiversity to generate awareness, and to provide science-based recommendations to support protection and restoration of the tropical deciduous forests on Ecuador's coast.