Research Week Abstract

Title - Analysis of the biodiversity of Misahuallí, Ecuador using trap cameras and iNaturalist.

Program of Study – Biology

Presentation Type – Choose one of the following: Physical Poster

Subtype – Choose one of the following for poster or oral presentation types: Theoretical Abstract

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Abstract:

The region of the Amazon Rainforest from Tena to Puerto Misahualli, Ecuador is known to contain one of the highest levels of biodiversity due to its equatorial location at the base of the Andes and edge of the upper Amazon. Unraveling this rich biodiversity is essential to monitoring the overall health of this unique ecosystem. Several ways to monitor biodiversity include collecting camera trap images of wildlife and conducting trail transect surveys of readily observed plant and animal species to create a living library of biodiversity to then use these images to assess species richness (e.g. species accumulation curves). In addition, an image and location database of wildlife documented from citizen scientists called iNaturalist will be used to further assess the species richness of this ecoregion. Camera traps will be placed on a missionary farm and areas surrounding biological research stations that are situated on a tributary of the Napo River along with the collaboration of local research statistics.

This project proposes to 1) collaborate with a missionary farm and the natural wildlife sanctuaries of Amazoonica and Jatun Sacha to establish camera traps (HP2X Hyperfire 2 Professional Covert IR Camera from Reconyx), 2) utilize these images, along with class biodiversity surveys and iNaturalist photo vouchers, to estimate the biodiversity of this ecoregion based on species abundance and total variety of species (species accumulation curves). As this location is considered a “gateway to the Amazon” or buffer region, monitoring the biodiversity of this equatorial location will add valuable insight into how these wildlife sanctuaries are able to support and sustain biodiversity.

Sources:

Blake, J., Mosquera, D., Loiselle, B., Swing, K., Guerra, J., & Romo, D. (2015). Spatial and temporal activity patterns of ocelotsLeopardus pardalisin lowland forest of eastern Ecuador. *Journal Of Mammalogy*, *97*(2), 455-463. doi: 10.1093/jmammal/gyv190

Cervera, L., Lizcano, D., Parés-Jiménez, V., Espinoza, S., Poaquiza, D., De la Montaña, E., & Griffith, D. (2020). A camera trap assessment of terrestrial mammals in Machalilla National Park, western Ecuador. Retrieved 17 February 2020, from https://www.biotaxa.org/cl/article/view/12.2.1868/19861

iNaturalist