School of Earth and Environmental Sciences
Colloquium Series

Dr. Ana Carnaval

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The City College of New York, CUNY

Wednesday, April 19th, 2023
12:15 – 1:30 PM
Location: Science Building, C-207

A multidisciplinary framework for biodiversity prediction in the Brazilian Atlantic forest hotspot

Our group uses a multidisciplinary approach to explain and predict of the distribution of animal and plant species in the endangered yet megadiverse Brazilian Atlantic forest. Through studies of climate and landscape, and their changes over the last 120,000 years, we aim at understanding how species have responded to repeated environmental shifts of the past. For that, we are combining data from Earth-orbiting satellites and meteorological stations, paleoenvironmental information from the fossil pollen record, and ancient precipitation data derived from the geochemistry of deposits found in caves. Contrasted with information on modern species ranges, patterns and levels of genetic and genomic diversity, and the physiology of target taxa, we use these environmental data to infer how the biodiversity of the Atlantic forest evolved over time.

Dr. Ana Carnaval

In this presentation, I discuss some of the novel methodological advances behind this integrative study, and how they and allow us to reconstruct the contemporary and historical factors influencing current biodiversity patterns in the Atlantic forest. Given a range of climate change scenarios, I introduce how these integrative methods are permitting the prediction of the distribution of diversity under future environments.

THIS IS A HYBRID MEETING
Zoom link for remote attendance:
https://us02web.zoom.us/j/82229858276?pwd=UkNzM2FNY2p6cG42YjBmeHg0dGxNdz09
Meeting ID: 822 2985 8276   Passcode: 515589