Geography of plants in the New World - from Humboldt to the Age of Big Data

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Plant geography seeks to describe the patterns of species distributions and understand the underlying mechanisms. The foundation of the field is attributed to Alexander von Humboldt following the broad-scale insights he gained on his explorations of the New World two centuries ago. Today, in the age of 'Big Data', advances in methods and data availability allow us to better assess the complex drivers of species distributions.

In this talk, I will give an overview of the legacy of Humboldt in the field of plant geography and present examples of macroecological questions we are now closer to answering thanks to big data efforts like the Botanical Information and Ecology Network (BIEN). Comparing the major insights and methods of Humboldt's time and of today, I highlight a few areas in which major changes have taken place relative to Humboldt, and areas in which his influence is still apparent. Finally, I discuss how the work and approach of 'old school' naturalists like Humboldt and many others relevant today for understanding ecosystem responses to environmental change.