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## Global patterns of plant diversity and their evolutionary drivers

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Spatial patterns of plant diversity follow the well-known global latitudinal biodiversity gradient, however there is little consensus about the underlying causes for this pattern. Here we present a spatial analysis of a complete checklist of the world's seed plants, integrated with a comprehensive plant Tree of Life. This combination allows insights into the evolutionary drivers of plant species richness patterns, specifically current plant biodiversity patterns, and the diversification processes that shaped them. Our study provides a comprehensive global species richness map and relates the observed species richness pattern to speciation rates derived from phylogeny, and with environmental variables, which are hypothesized to impact speciation rates. Initial results show that tropical rain forest regions, although being areas that contain among the highest numbers of species, are regions with comparatively low speciation rates, contradicting the widespread notion that rainforests are "cradles" of biodiversity. This finding seems further supported by contrasting association of environmental variables, like precipitation and temperature, with speciation rates and species richness.