Title: Comparing flora flowering data between iNaturalist and historic data bases.

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Do flowering times differ between historic datasets and the iNaturalist dataset? Are these changes in flowering time tide to changes in climate patterns? We know that climate is driving changes in how plants and animals experience their life history. iNaturalist is a unique tool available to scientists that allows for the for the accumulation of large datasets without the need for difficult fieldwork. Research projects like this are important to better understand how species are adapting to changes in climate over long periods of time and will help us in predicting how species will fare in the future.

These data will be available by my PI Dr. Daijiang Li and through an open source website called iNaturalist. https://www.inaturalist.org/

I will be comparing flowering times within species, geographic conditions, weather conditions. I will use RMANOVA analyses to see if and how flowering time changes over time. I plan to construct phylogenetic trees in R using the databases. I also plan to use a GIS program to visualize the species within their geographic range.