Getting the Timing Right: Plant Phenology and Mismatch in our Changing Forests

Though small in stature, most species in temperate forests are understory wildflowers, often far outnumbering trees. The seasonal timing of leaf out, flowering, and seed production is especially critical for these wildflowers that depend on a relatively short period of high light in the spring, before being shaded out by tree leaves. But this period of high light in the forest understory is changing due to the phenological impacts of climate change and invasive shrub species. Combining natural history observations first initiated more than 160 years ago by Henry David Thoreau, insights from the museum's collections, and current field and laboratory experiments, Mason will share his ongoing research on some unexpected impacts of climate change and non-native plants on the future of ecologically important (and beautiful!) forest wildflowers.

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Mason Heberling is the Associate Curator of Botany at Carnegie Museum of Natural History. He is a botany curator and plant ecologist studying the functional ecology of understory plant species in temperate forests, especially in the context of climate change and introduced species invasions. As a museum curator, he seeks to facilitate and broaden the use of natural history collections by students, researchers, and the public. As a museum-based researcher, he uses herbarium specimens, field experiments, and observational data to understand basic plant function and complex ecological interactions. His research program explores a diverse range of topics under the umbrella of global change biology and museum collections.