

Twelfth International Symposium on Pollination (ISPXII)

16 - 20 October 2023

Kirstenbosch Botanic Gardens, Cape Town, South Africa

Native bee communities in agroecosystems of the lower Mississippi Alluvial Valley, United States

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ABSTRACT

Native bees (Hymenoptera: Anthophila) were sampled across the Delta region of Mississippi, part of the lower alluvial valley of the Mississippi River, to determine the biodiversity of native bees. Collections were made in commercial agricultural fields of cotton, corn, soybeans, along with additional samples taken from semi-natural habitats including former agricultural land enrolled in conservation programs. The native bee communities found in agricultural fields was dominated by generalist pollinators in the genera *Agapostemon, Augochloropsis, Halictus,* and *Lasioglossum* (Halictidae), and *Melissodes* (Apidae). We compared common species and communities of native bees between crop habitats under conventional agricultural management practices for the lower Mississippi Alluvial Valley region, including often heavy insecticide usage and tillage regimes, and habitats considered to be natural or semi natural with no little anthropogenic activities. Nonmetric multidimensional scaling (nMDS) indicated some differences between communities, but they were not significantly different. While cropland is generally highly managed and disturbed within the landscape, our data suggest that a community of common generalist native pollinators persists. Many of these common and frequently encountered species are also found in other cropping systems across North America.