

Tree diversity and structural array in Mayan traditional homegardens located in a precipitation gradient in the Yucatan Peninsula

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Project Description:

Mayan Traditional Homegardens (TH) have been recognized as biodiversity islands linked to the traditional use of the living and visitor species. Trees and perennial species are the main sustaining his biodiversity in these domestic spaces. TH are often established by the selective subtraction of trees from pristine areas, tolerating those species with economic, cultural, or ornamental value, while also introducing new species for food, medicine, forage, bee feeding, or other cultural uses. These hybrid systems (part jungle, part plantation) protect some species that are already extinct in the wild, due to their traditional use by local families. We are interested in understanding the plant interactions that allow the successful survival and growth of tree individuals in TH. Our results show that some species are incompatible when established next to another species, while others result in benefits when they share the same space. These interactions, predicted by mathematical models, align with traditional knowledge shared by families, enabling us to document which species are suitable for establishing new multi-species orchards that preserve traditional knowledge and link it with mathematical models that predict tree-to-tree interactions.

Project Notices

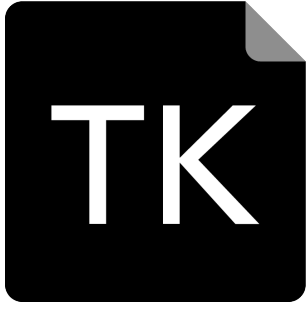


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