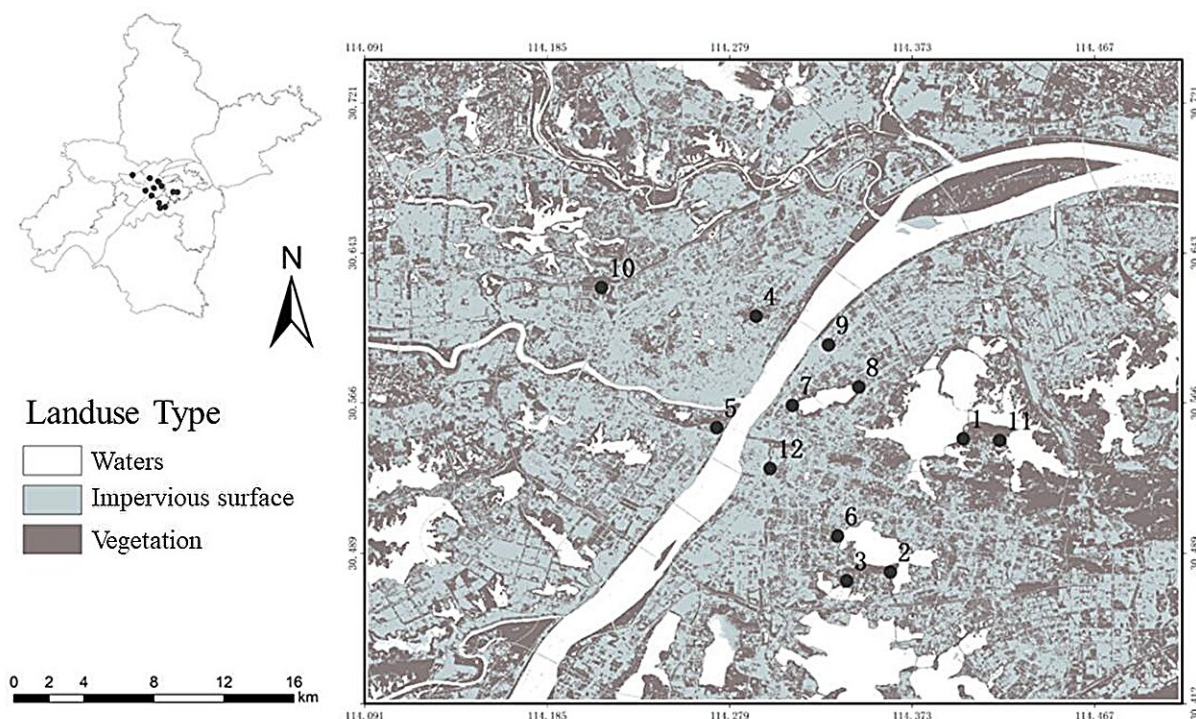


Complex floral traits affect pollinator attraction to urban green spaces

December 27 2023, by Zhang Nannan



Distribution map of research locations. Credit: Wang Hui

Pollinators are in decline globally and regionally. Building pollinator-friendly urban green spaces is an effective way to mitigate the negative impacts of urbanization on pollinator diversity and services.

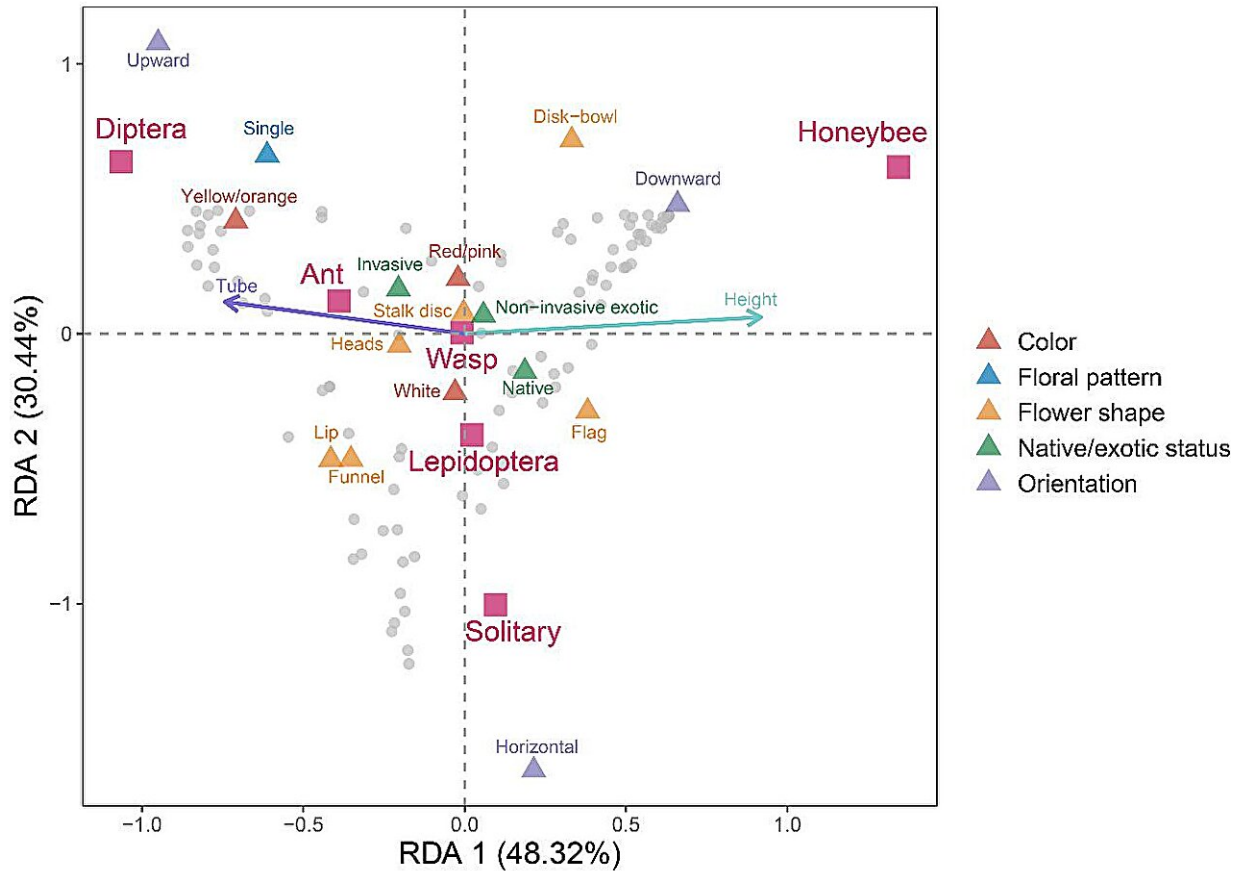
According to a study [published](#) in *Urban Forestry & Urban Greening*,

researchers from the Wuhan Botanical Garden of the Chinese Academy of Sciences and Huazhong Agricultural University have found that selective planting of attractive flowering [plants](#) can improve the conservation value of urban greenspaces.

Although some studies have proposed lists of pollinator-friendly plants for different countries and regions, the functional traits of flowering plants that influence pollinator preferences in [urban green spaces](#) require further investigation.

To find out, the researchers investigated various plant and flower traits, pollinator composition, and visitation frequency in a densely urbanized landscape in Wuhan, China, to examine the effects of green space area proportions and plant and floral traits on visitation frequency and to analyze the preferences of different pollinator groups for plant and flower traits.

The results showed that the flower shape, opening direction, and flower color significantly influenced pollinator preferences. Lepidoptera preferred funnel and head-shaped flowers; Diptera preferred upward-facing yellow and orange head-shaped inflorescences; bees favored biennial and perennial herbaceous plants with disk, bowl, and flag-shaped flowers; solitary bees showed a preference for horizontally opened labiate or flag-shaped flowers.



Flower preferences of different pollinator groups. Credit: Wang Hui

The study also suggested that native woody plants (such as *Nandina domestica*, *Thymus quinquecostatus*, *Lagerstroemia indica*, and *Tamarix austromongolica*) and some non-native plants (such as *Centaurea cyanus*, *Borago officinalis*, *Portulaca grandiflora*, and *Echinacea purpurea*) contributed to increasing urban pollinator diversity.

Due to the varying preferences of different [pollinators](#), it is recommended to increase the flowering plants richness when designing pollinator-friendly gardens to promote overall pollinator diversity.

More information: Hui Wang et al, Complex floral traits shape pollinator attraction to flowering plants in urban greenspaces, *Urban Forestry & Urban Greening* (2023). [DOI: 10.1016/j.ufug.2023.128165](https://doi.org/10.1016/j.ufug.2023.128165)

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