

## **EDIBLE MINIATURE GARDENS FOR URBAN MICRO SPACES TO ENHANCE POLLINATOR SUPPORT**

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Urbanisation-driven environmental changes aggravate environmental issues, leading to the loss of habitats essential for pollinators. This study was conducted to investigate the potential of edible miniature gardens in semi-indoor and semi-outdoor spaces to support pollinating insects and to promote this concept as a strategy for enhancing environmental sustainability in urban micro spaces. Thirty clay pots were planted with a mix of edible and ornamental species, and nesting elements were integrated into each. Fifteen pots (miniature gardens) were arranged linearly during the dry season and pollinator visitation was recorded following a pollard walk. Data were subjected to the Mann-Whitney U test. A significant difference ( $p < 0.001$ ) was recorded in pollinator visitation, with semi-indoor spaces recording higher visitation (30.4) than semi-outdoor spaces (21.4). Higher visitation throughout the day was also recorded in the semi-indoor space, with two peaks. Higher visitation in the semi-indoor area may have resulted from limited food and nesting resources, as it was surrounded by buildings. In contrast, the semi-outdoor area might have offered abundant resources, possibly diverting pollinators from the miniature gardens, as it was in a home garden. Bare ground and bamboo substrates were the most preferred nesting material. Three species of ground-nesting bees and six wasp species were recorded. These findings highlight the influence of spatial context and environmental structure on pollinator behaviour and garden effectiveness. They also emphasise the value of the edible miniature gardening concept in supporting pollinators, while providing food and aesthetic benefits in urban micro spaces.

**Keywords:** Ground nesting bees, Miniature gardening, Pollinator habitats, Urbanisation, Urban micro spaces