

## Carpenter bee-flower interactions and biodiversity

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Among wild bees, *Xylocopa* bees are recognized as potential pollinators. They live throughout the world wherever woody plants occur, especially in forested regions. Since these bees occur year-long and are also multivoltine, they need to track the floral resources and shift to different species that satisfy their nutritional requirements. When there are many plants in flowering at the same time, the bees will look for those that offer most, qualitatively and quantitatively, or that agrees to their senses. Based on floral forms and richness of floral rewards, these bees use different foraging behaviors for efficient harvest of the rewards. The carpenter-bee flowers show certain characteristic features in morphology and floral rewards. The 12 plant species observed in the field for foraging activity of *Xylocopa pubescens* and *X. latipes* included *Solanum carolinense*, *S. surattense*, *Cassia alata*, *C. siamea*, *C. occidentalis*, *C. fistula*, *Peltophorum pterocarpum*, *Moringa oleifera*, *Crotalaria laburnifolia*, *C. verrucosa*, *Pongamia pinnata* and *Tecoma stans*. Almost all species were medium-sized, non-tubular, zygomorphic and odourless. The floral reward was either pollen, or nectar or both. The nectar volume ranged between 1 $\mu$ l to 17 $\mu$ l, and the percent sugar concentration 20% to 60%. Arginine and phenylalanine were the common essential amino acids in all nectars, and in addition to these, histidine, leucine and iso-leucine were common in the pollen of all plants. Protein content ranged from 21% to 55% of pollen dry weight.

### Biography

Rashda Zafar is presently perusing her Ph.D in Environmental Sciences from Andhra University. She completed her M.Phil from the same in the year 2005 and later served as a lecturer & Head of the Department, Environmental studies at TSR & TBK College, Visakhapatnam. She has published more than 15 papers in reputed journals, and is also an alumnus member of board of studies for St' Josephs College for Women, Visakhapatnam.

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