

## NESTING BEHAVIOUR OF GIANT HONEYBEES (*Apis dorsata*) IN SELECTED AREAS IN ANURADHAPURA DISTRICT, SRI LANKA

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The giant honeybee (*Apis dorsata*) is a key pollinator with distinct nesting behaviour. As they colonize close to settlements posing a threat, their colonies are often destroyed by humans. This study investigated the nesting behaviour of *A. dorsata* in selected areas in Anuradhapura, Sri Lanka, representing 21 *Grama Niladari* divisions. Randomly selected transects (2 km) in different locations were walked in one direction to observe colonies. The height of the colony, texture, and colour of the substrate, plant species, and nest orientation were measured. The images of nests were taken using a digital single-lens reflex camera for calculating the nest shape index. A total of 177 nests were observed during the study, and the majority of the nests were found on buildings (64.4%) and water towers (26%), with the lowest occurrence observed on trees (9.6%). Tall buildings were the most preferred locations for colony aggregations ( $p < 0.05$ ), with a mean number of colonies per aggregation of  $8 \pm 1$ . During the survey, 80 abandoned and 97 live colonies were found, with a mean height from the ground level of  $13.5 \pm 0.3$  m. The orientation of the nests was not significantly varied; however, locations between North and East on supporting structures were favoured ( $p < 0.05$ ) by the bees. Further, the vertical semi-ellipse nest shape was the predominant type ( $p < 0.05$ ). The highest number of nests were found on brown and grey substrates with rough surfaces on both man-made structures and trees. *A. dorsata* showed a strong preference for structures that offered protection from adverse weather conditions, and they left their nests most likely due to shifting wind directions with the onset of monsoonal rains. Further, it was found that trees belonging to *Ficus* species attract *A. dorsata* with great interest. These findings help to create strategies to protect *A. dorsata* while encouraging harmony between humans and bees.

**Keywords:** Conservation, Colony destruction, Giant Honeybees, Pollinators, Nesting habitats