

**TRAP NESTING WASPS AND BEES OF THE ROYAL BOTANIC GARDENS,
PERADENIYA**

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Bees and wasps that are likely pollinators of plants frequent areas with an abundance of flowering plants. The Royal Botanic Gardens, Peradeniya due to its high floristic composition is likely to attract many such species. Bees and wasps that nest in hollow stems are of particular interest as suitable nesting material can be provided for them. Hence, they are amenable to mass rearing for use in pollination. Use of trap nests is a method adopted to attract such species to nests. The objective of this study was to identify the stem nesting bees and wasps at the Botanic Gardens, using bamboo stems and wooden trap nests.

A total of 270 traps; 105, hollow bamboo stems (diameter 1-25 mm) and 165 wooden traps (diameter 3-25 mm) were made into bundles and placed in different locations of the Botanical Gardens by tying to vertical structures. Traps were examined fortnightly over a period of 7 months for nesting, as evident by the closure of the nest entrance by a plug. Nested traps were held until the emergence of adults. In order to determine what species of bees and wasps visit flowers during the study period, flower-visiting bees and wasps were collected using an insect net.

Four species of bees and 6 species of wasps nested in 46 traps that consisted of 26 bamboo (diameter 5-21 mm) and 20 wooden (diameter 3-16 mm) traps. The type of trap preferred, duration of development and the number of adults that emerged varied depending on the nesting species. Traps placed in locations where there were no plants in bloom were not nested at all. Thirty species of bees were recorded on 35 floral hosts. Among them were the 4 species of bees that are known to be stem nesters. Among the 43 species of wasps collected on flowers were 8 species of known stem nesters. Majority of the bees and wasps collected on flowers are known ground or hive nesters.

The study indicates that use of trap nests in areas with plants in bloom is a reliable method of identifying stem nesting bees and wasps. Furthermore, the stem nesting species were found to nest close to their floral hosts. The possibility of using trap nests to encourage and mass rear specific bee species would be explored in the future.

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