RESEARCH NOTE

Is bougainvillea a more preferred host to leaf cutter bee, Megachile sp. (Hymenoptera : Megachilidae) than rose?

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ABSTRACT: Incidence of leaf cutter bee was observed on ornamental plants viz., rose and bougainvillea mainly grown for roof-gardening in the urban and peri-urban areas of Varanasi, Uttar Pradesh during summer season, 2014. Critical observation revealed the serious infestation of this bee mainly in bougainvillea as compared to well-known rose. Pliable and bigger size bougainvillea leaves and leaf-surface chemistry might be responsible for its preference over harsh, turgid and smaller size rose leaves.

Keywords: Bougainvillea, Megachile, preference, rose

Bougainvillea is an evergreen shrubby vine and popular for its long-lasting, colourful flower bracts which appear at regular intervals almost throughout the year. It provides hedges, barriers, slope coverings and had an excellent ground cover and there by choke out the weed growth. Beside these, Bougainvillea is also used as an accent plant, a specimen plant, in hanging baskets, in containers, and for bonsai. Recently (May – June, 2014) a serious incidence of leaf cutter bee (Megachile sp.; Hymenoptera : Megachilidae) was observed in the urban areas of Varanasi, Uttar Pradesh where bougainvillea is widely grown as an ornamental pot plants used for home decoration. The leaves of the plants were cut in characteristic semi-circular fashion (Fig.1) from the margin of the leaf keeping the mid rib intact. A maximum three such cutting were noted from a single leaf measuring diameter of 1.5 – 2.8 cm. Critical observation also revealed that adult female leaf cutter bee (Fig. 2) cut the leaves and sometimes flower petals in a typical semi-circular fashion by their large, scissor like mandibles resulting the aesthetic value of the ornamental plants is greatly depleted. However, economic damage to the plants due to this is not very significant. According to Kumar et al., (2012) leafcutter bees in spite of devouring the cut pieces of leaves carry them back to their nest and they provision each leaf-lined cell with a mixture of nectar and pollen for their offspring. As per literature, leaf cutter bee is considered as a major pest of rose (Stroom et al., 1997; David, 2001). However, in our observation where rose and bougainvillea both were maintained in the same place for roof-gardening, the serious incidence of this bee mainly noted from bougainvillea where leaves of rose were mostly untouched. Soft, pliable and bigger size (16.99 cm²/leaf) leaves of bougainvillea leaves during this period might be

Fig. 1. Bougainvillea leaves typically cut by the leaf cutter bee, Megachile sp.

Fig. 2. Adult leaf cutter bee
responsible for its preference over harsh, turgid and smaller size (15.15 cm²/leaf) rose leaves. Beside these, leaf surface chemistry could also be one of the reason for its selectivity as Eigenbrode et al., (1999) documented that leaf-cutter bees make more cuttings on leaves of *Cercis canadensis* (Fabaceae) with crystalline adaxial surface wax than on glabrous leaves. So, our present observation indicates the preference of leaf cutter bee during summer season towards leaves of bougainvillea than the well-known rose.

**REFERENCES**


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