

## Urban high-rise nesting by the solitary resin bee *Megachile disjuncta*

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**Subject:** *Megachile (Callomegachile) disjuncta* (Insecta: Hymenoptera: Megachilidae).

**Subject identified by:** Zestin W. W. Soh.

**Location, date and time:** Singapore Island, Macpherson Estate near the Pan Island Expressway; 8 July 2018; 1445 hrs.

**Habitat:** Urban. 17<sup>th</sup> storey of a high-rise concrete residential apartment building.

**Observer:** Max D. Y. Khoo.

**Observation:** A female *Megachile disjuncta* (Fabricius, 1781) was seen using a small drain hole of 25 mm horizontal width and 5 mm vertical length at the base of a window on the 17<sup>th</sup> floor as a nesting site (Fig. 1).

**Remarks:** Solitary bees of the genus *Megachile* are known to nest opportunistically in pre-existing cavities in urban environments (Ascher et al., 2016), but observations of nesting have largely been at or near the ground level. In Singapore, previous exceptions to this have been the record of *Megachile fulvipennis* and *Megachile disjuncta*, nesting in a bench on the third floor of a building at Kent Ridge by Soh (2014); and *Megachile umbripennis* nesting on the window sill of the 5<sup>th</sup> or 6<sup>th</sup> floor of the Pasir Panjang Waterfront Fragrance Hotel (Ascher et al. 2016). The present record is interesting as it shows that resin bees are also able to exploit cavities for nesting much higher than that.

Cities play an increasingly important role for pollinator conservation (Hall et al., 2017). Research suggests that Singapore's rooftop gardens may have an important role in providing several bee species with pollen and nectar (Roscoe, 2015). This observation shows that urban high-rise habitats may also support bees by providing them nesting sites as well.

This record additionally suggests that more poorly known native *Megachile (Callomegachile)* species that are restricted to high-quality forest habitats, such as *Megachile ornata* and *Megachile tuberculata*, may also exploit nesting sites at or near the canopy level (Ascher et al., 2016).

### References:

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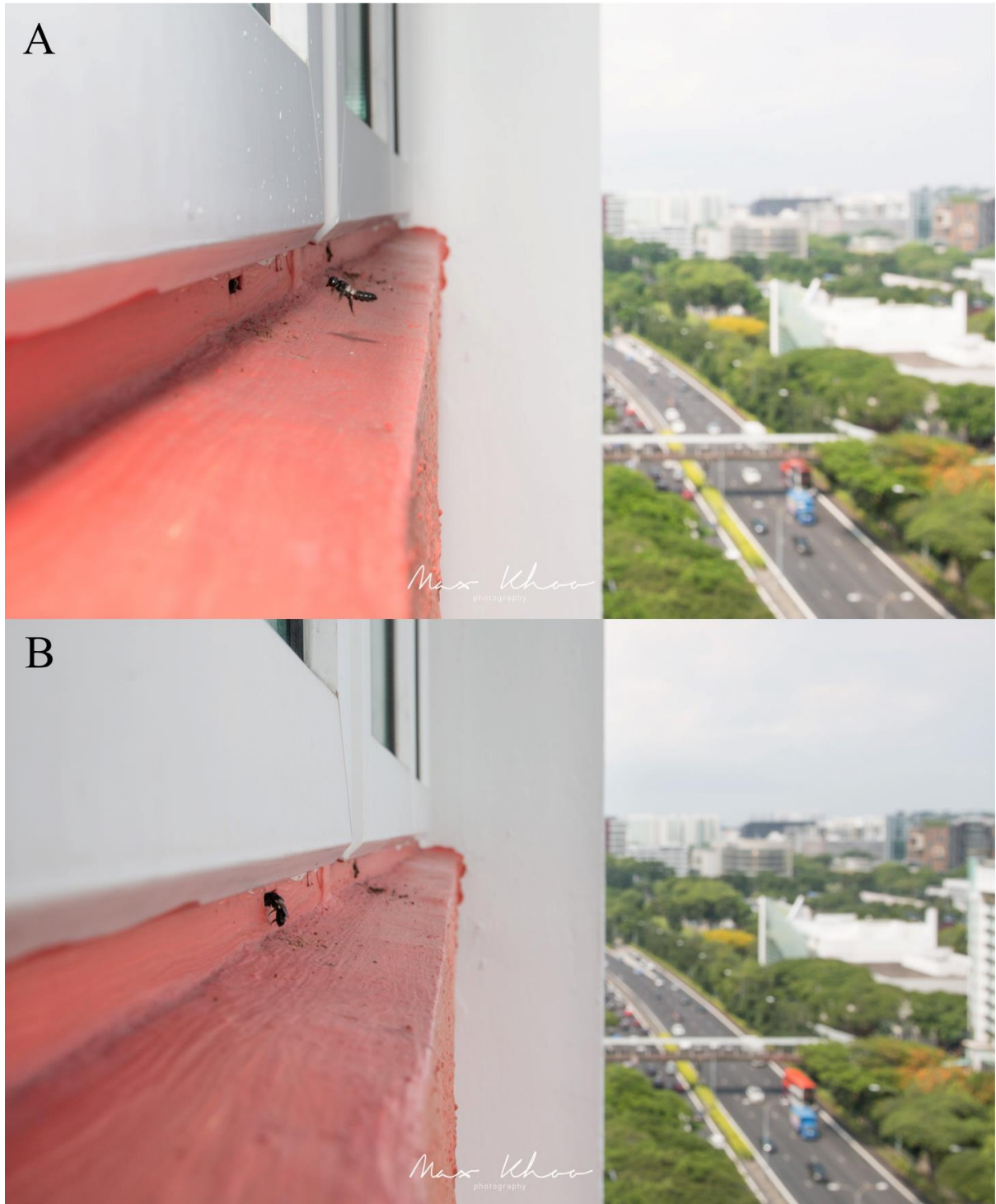


Fig 1. A female *Megachile (Callomegachile) disjuncta* on the 17<sup>th</sup> floor of an apartment building at Macpherson Estate, with the Pan-Island Expressway in the background. A. Bee hovering outside the nest hole. B. Bee entering the nest hole. Photographs by Max D. Y. Khoo