

## Woodborer bee, *Lithurgus* sp., nesting at Sungei Buloh

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**Subject:** Woodborer bee, *Lithurgus* sp. (Insecta: Hymenoptera: Megachilidae: Lithurgini).

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

**Location, date and time:** Singapore Island, Sungei Buloh Wetland Reserve, Visitor Centre; 8 September 2018; 1400 hrs.

**Habitat:** A concrete building situated next to mangroves.

**Observers:** Kathleen K. L. Yap (bee) and Zestin W. W. Soh (additional nests).

**Observation:** A female bee, about 15 mm in length, was observed hovering towards and landing on an art piece made of painted wood cookies (see video: [https://youtu.be/IdTQFz\\_ap18](https://youtu.be/IdTQFz_ap18) recorded by Kathleen K. L. Yap). The bee then entered her nest, which is a small cavity of about 4 mm diameter, constructed in a wooden cookie (Fig. 1 and Fig. 2A). Other similar-sized nesting cavities containing yellow pollen, likely made by *Lithurgus*, were observed at other wooden cookies of the same art piece, and in a dry wood stump situated behind the art piece (Fig. 2B–C). Additional nests were observed five days later on 13 September 2018.

**Remarks:** Unlike most members of the family Megachilidae which make their nests in pre-existing cavities, species of the genus *Lithurgus* nest by boring into dead wood (Michener, 2007). While this is the first published record of their nesting in Singapore, various species of *Lithurgus* have been recorded elsewhere nesting in logs stacked out in the open (Rozen, 2013; Rozen & Wyman, 2014), on wooden structures (Rust et al. 2004), as well as dead branches on trees (Hannah & Maeta, 2007).

*Lithurgus* are known to exhibit relatively strict pollen preferences, with some species in the Old World specialising on pollen from Asteraceae, others on Malvaceae or Convolvulaceae (Rust et al., 2004; Michener, 2007). In Singapore, two morphospecies of *Lithurgus* have been recorded foraging from the flowers of Malvaceae such as sea hibiscus (*Talipariti tiliaceum*) and okra (*Abelmoschus esculentus*), and Convolvulaceae such as beach morning glory (*Ipomoea pes-caprae*) (The Biodiversity of Singapore, 2020; Soh, Z.W.W. personal observations). *Talipariti tiliaceum* is abundant in Sungei Buloh, and is likely to be a key pollen source of the individual observed. An example of this interaction is shown in Fig 3.

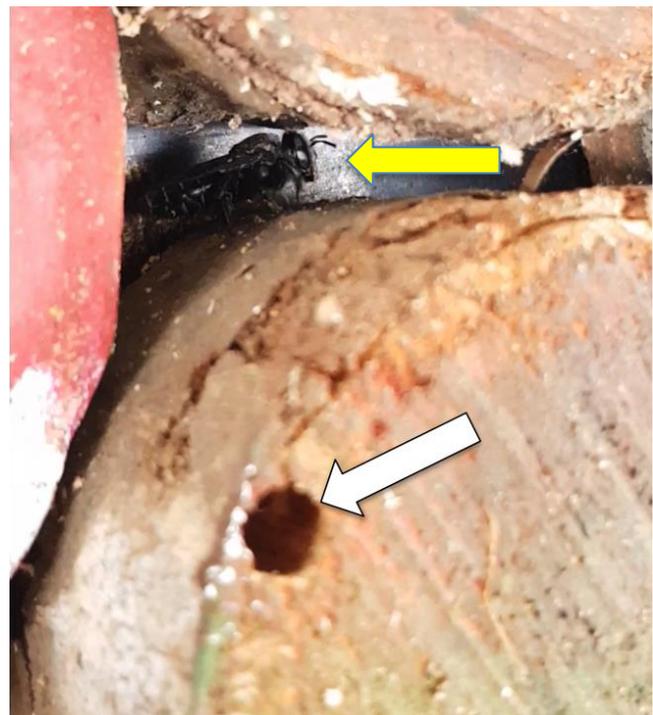


Fig. 1. Female *Lithurgus* sp. (indicated by yellow arrow) near her nest entrance (indicated by white arrow). Screen shot from video by Kathleen K. L. Yap

### References:

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Fig 2. Nests made by *Lithurgus* sp. at the Sungei Buloh Wetland Reserve's Visitor Centre. A. Close-up of the nesting cavity in a wood cookie that a female was seen entering. B. Additional nests in a tree stump. C. Nests made on a separate wood cookie. Photographs by Zestin W. W. Soh

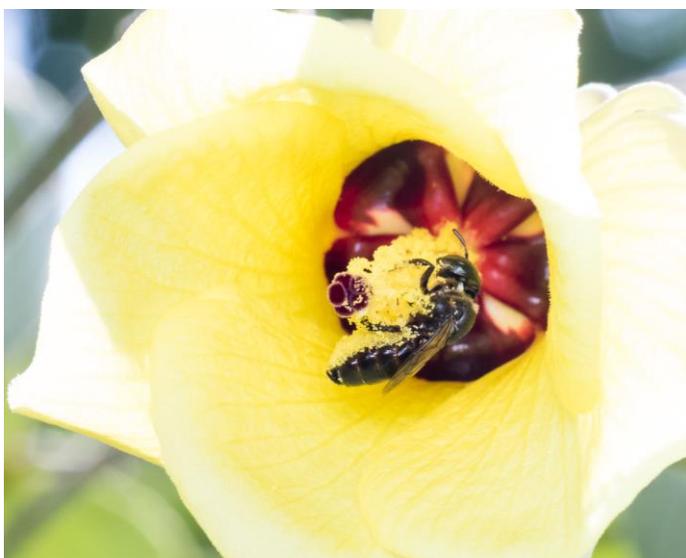


Fig. 3. A female *Lithurgus* foraging from a flower of the sea hibiscus (*Talipariti tiliaceum*) at Sembawang Park, Singapore, on 20 April 2017. Photograph by Zestin W. W. Soh