

Biodiversity Record: Flowering and fruiting of *Pittosporum ridleyi* at Sembawang

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Subject: *Pittosporum ridleyi* (Angiosperms: Apiales: Pittosporaceae).

Subject identified by: Herbarium team, Singapore Botanic Gardens.

Location and dates: Singapore Island, Sembawang, patch of forest south of Ottawa Road; 22 March 2023, 11 April 2023 and 9 April 2024.

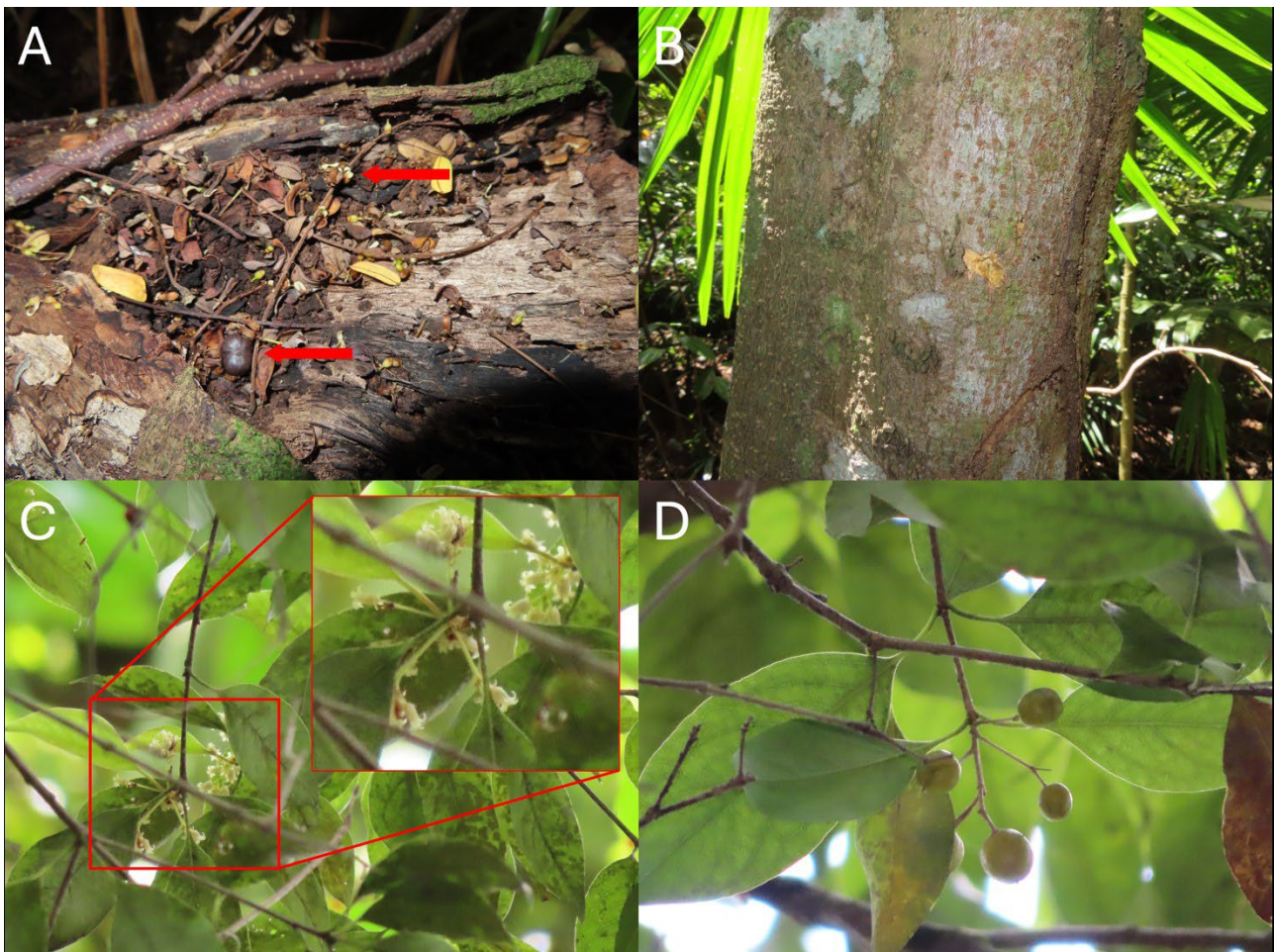


Fig. 1. *Pittosporum ridleyi*. A. Flowers and fruit (indicated by red arrows) on a fall log. B. Light brown inner bark scrap. C. Flowers with five cream-coloured petals in the tree canopy. D. Orange-green fruits in the tree canopy (Photographs by: Sherry Ming Xuan Hung).

Habitat: Secondary forest dominated by *Falcataria falcata* and exotic vegetation associated with an abandoned village in the understorey and undergrowth.

Observers: Badrul Amin Mahmud, Sherry Ming Xuan Hung and team.

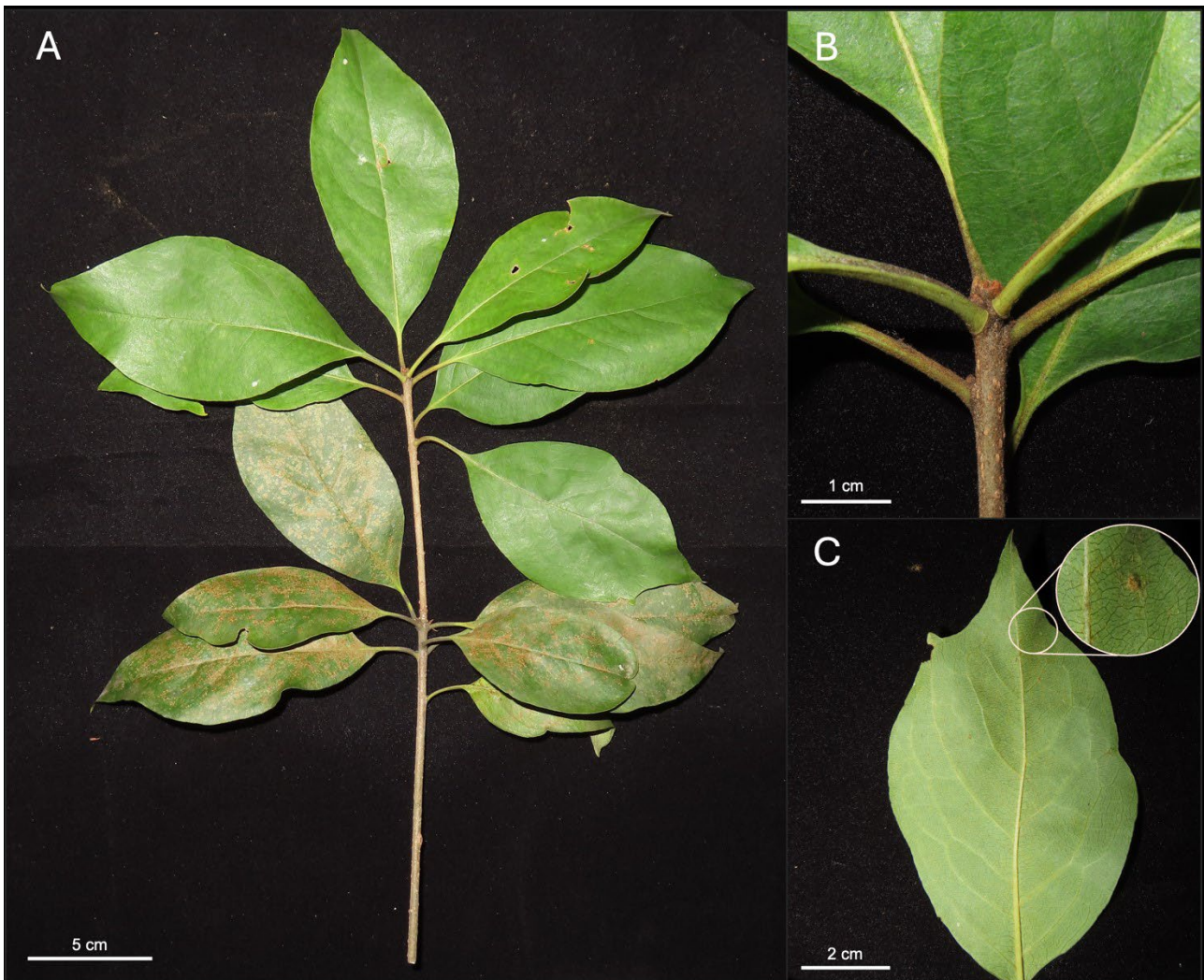


Fig. 2. *Pittosporum ridleyi*. A. Leafy branch. B. Exstipulate leaf petioles and apical bud covered with rusty-brown hairs. C. Abaxial surface of leaves with rusty-brown hairs that rub off (Photographs by: Badrul Amin Mahmud).

Observations: On 22 March 2023, some cream-coloured petals, and a dark brown-coloured fruit (Fig. 1A) on a fallen log were spotted by Sherry Ming Xuan Hung and team. These originated from a flowering and fruiting *Pittosporum ridleyi*. The tree was determined to be medium-sized, with an estimated height of 10 m and trunk diameter of 19.1 cm. It produced five-petaled, cream-coloured flowers (Fig. 1C), and orange-green fruits (Fig. 1D). The bark scrap was light brown (Fig. 1B). No other mature specimens or seedlings of this species were found nearby.

During a second visit on 11 April 2023, Badrul Amin Mahmud and team collected leafy specimens of the tree by throwing a line. The tree had stopped flowering and was only fruiting. No seedlings of *Pittosporum ridleyi* were found nearby. The leaves collected are exstipulate (Fig. 2B), spirally arranged (often pseudo-whorled) towards the end of the twigs (Fig. 2A). The leaves are simple, acuminate, glabrescent, and coriaceous with undulate margin (Fig. 2C). The midrib on the leaf underside is raised with six to eight pairs of slightly raised secondary veins. The collected material was deposited in the Singapore Herbarium, Singapore Botanic Gardens (SING).

A third visit was made the subsequent year on 9 April 2024 by Badrul Amin Mahmud and team. The tree was neither flowering or fruiting. No sprouting of *Pittosporum ridleyi* seedlings were observed.

Remarks: *Pittosporum ridleyi* is uncommon and regarded as a vulnerable species in Singapore (Davison et al., 2024). Even though this species has been used in the landscaping industry, wild examples in Singapore appear to be confined to the coastal forests of the Southern Islands: the Sisters' Islands, Pulau Tekukor and St. John's Island (Hung et al., 2017a; 2017b; 2017c). From its estimated size (Cayzer & Chandler, 2018; Ummul-Nazrah & Kiew, 2010) and ability to flower and fruit, the featured tree appears to be the first mature wild specimen of *Pittosporum ridleyi* to be found outside of coastal forest in Singapore. Despite the site's proximity to the seafront, there are no remnant coastal forests. Since the early 1940s, the area has constantly been disturbed by anthropogenic activities such as naval base operations and housing (National University of Singapore Libraries, 2024), which suggests that the featured specimen had only established itself recently. Such an encounter with opportunistic recruitment in degraded habitats could inform us about the current state of our secondary forests and associated seed dispersers.

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