

The dwarf crow butterfly, *Euploea tulliolus*, in Singapore

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Subjects: Dwarf crow, *Euploea tulliolus ledereri* (Insecta: Lepidoptera: Nymphalidae: Danainae).

Subjects identified by: Gan Cheong Weei & Yi-Kai Tea.

Location, date and time: Two localities featured.

1. Pulau Ubin, Sensory Trail; 11 August 2002 at 1030 hrs and 24 August 2002 at 1015 hrs.
2. Singapore Island, Central Catchment Nature Reserve, along path next to Bukit Kalang Service Reservoir; 4 January 2003; 1230 hrs.

Habitat: Rural area on Pulau Ubin. Woodland adjacent to secondary forest at Bukit Kalang.

Observers: Gan Cheong Weei, Yi-Kai Tea & Simon Chan Kee Mun.

Observations: The rediscovery of the dwarf crow in Singapore was based on the three records featured here. Examples were observed and photographed on two separate occasions on Pulau Ubin, and once on Singapore Island at the Central Catchment Nature Reserve.

1. One example was observed on the morning of 11 August 2002 at 1030 hrs near the herb garden along the Sensory Trail on Pulau Ubin. It was feeding on the flowers of the introduced snakeweed (*Stachytarpheta indica*) (iNaturalist, 2002a; Fig. 1).
2. Again on Pulau Ubin, several individuals were seen feeding on dried parts of the Indian heliotrope (*Heliotropium indicum*) along the mangroves of the Sensory Trail, on 24 August 2002 at 1015 hrs (iNaturalist, 2002b; Fig. 2).
3. On Singapore Island, one specimen was observed feeding on the flowers of *Bridelia tomentosa* on 4 January 2003 at 1230 hrs. It was along a path next to Bukit Kalang Service Reservoir at the eastern edge of the Central Catchment Nature Reserve (iNaturalist, 2003; Fig. 3).

Remarks: The nymphalid genus *Euploea* is represented by eight species in Singapore (Khew, 2015). With a forewing length of between 30 and 35 mm, *Euploea tulliolus* is noteworthy for being the smallest. It is regarded as a 'moderately rare' butterfly in Singapore (Khew, 2015: 64). Previously assumed to be extinct in Singapore, the dwarf crow was re-discovered in the country since 2002 (Jain et al., 2018: 222) based on the records featured here.

Euploea tulliolus is a resident species (Jain et al., 2018: 222) that is regularly observed on Pulau Ubin. It is most frequently sighted around Butterfly Hill on the southern side of the island, as well as along Sensory Trail, on the south-eastern part. It seems to have a fondness for the flowers of *Heliotropium indicum*, *Ageratum conyzoides* and *Praxelis clematidea* (personal observations).

Curiously, the species seems to be rare on the main island of Singapore. However, on Pulau Ubin, it appears to have a healthy population, and utilizes the burny vine (*Trophis scandens*) (iNaturalist, 2018; Fig. 4) as its larval host plant. While commonly found growing on Pulau Ubin, *Trophis scandens* seems to be absent on Singapore Island. It is not known if the dwarf crow use more than one species of larval host plant, or if its caterpillars are monophagous. If so, the apparent absence of the burny vine on Singapore Island could account for the scarcity of the dwarf crow there.



Fig. 1. *Euploea tulliolus* feeding on the flowers of *Stachytarpheta indica* at Pulau Ubin on 11 August 2002. Photograph by Gan Cheong Weei

References:

- iNaturalist, 2002a. Dwarf Crow (*Euploea tulliolus*). Observed: Aug 11, 2002. Submitted: Nov 4, 2018. <https://www.inaturalist.org/observations/18091633>
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- Jain A., S. K. Khew, C. W. Gan & E. L. Webb, 2018. Butterfly extirpations, discoveries and rediscoveries in Singapore over 28 years. *Raffles Bulletin of Zoology*. 66: 217–257.
- Khew S. K., 2015. *A Field Guide to the Butterflies of Singapore*. 2nd edition. Ink On Paper Communications Pte Ltd., Singapore. xxv + 375 pp.



Fig 2. *Euploea tulliolus* feeding on dried parts of *Heliotropium indicum* along the Sensory Trail at Pulau Ubin on 24 August 2002. A shows a ventral view of the wings. B illustrates a dorsal view of the wings. Photographs by Gan Cheong Weei



Fig. 3. Ventral view of *Euploea tulliolus* on *Bridelia tomentosa*, at Bukit Kalang, Singapore Island, on 3 January 2003. Photograph by Gan Chong Weei



Fig. 4. *Trophis scandens*, a large woody vine from the fig family (Moraceae), is common throughout Pulau Ubin, and is the larval host plant of the dwarf crow butterfly. Photograph by Gan Cheong Weei