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# Biodiversity Record: First Singapore record of the owlfly, *Ascalaphus* cf. *prothoracicus*

R. **Shivaram**[*] & **Foo** Maosheng[1†]

[1]Lee Kong Chian Natural History Museum, National University of Singapore, Singapore 117377; Email:
Email: shivaram.rasu@gmail.com ([*]corresponding author), nhmfoom@nus.edu.sg ([†])

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**Subject:** Split-eyed owlfly, *Ascalaphus* cf. *prothoracicus* (Insecta: Neuroptera: Myrmeleontidae: Ascalaphinae).

**Subject identified by:** Foo Maosheng.

**Location, date and time:** Singapore Island, Upper Aljunied Lane; 19 September 2024; around 1330 hrs.

**Habitat:** Urban. At the ground floor void deck of a high-rise residential building, on a concrete pillar. The location was surrounded by a 200 m radius of high-rise residential buildings, some streetscape vegetation and cow grass (*Axonopus compressus*).

**Observer:** Shivaram Rasu.

**Observation:** An example of about 3.5 cm body length was observed perched on a concrete pillar about 1.6 m off the ground (Fig. 1). The subject remained completely motionless throughout the observation and remained undisturbed by the windy conditions. It did not react to being photographed at close range (around 7 cm) by the observer.



Fig. 1. Dorsal (left) and lateral views of *Ascalaphus* cf. *prothoracicus*, in-situ. Note the horizontal division of its compound eyes (Photographs by: Shivaram Rasu).

**Remarks:** Owlflies are fast-flying aerial predators that resemble dragonflies (Odonata: Anisoptera), but are readily distinguished from the latter by their long and club-tipped antennae. The antennae of dragonflies are heavily reduced and bristle-like. Although owlflies were previously thought to belong to their own clade (Neuroptera: Ascalaphidae), recent research has placed them in the same family as antlions (Neuroptera: Myrmeleontidae) (see Machado et al., 2019). The subject's well-developed compound eyes that are bisected by a median sulcus (Fig. 1) strongly indicates that it belongs to the tribe Ascalaphini (see Tjeder, 1992; Ardila-Camacho et al., 2019), commonly known as split-eyed owlflies.

Owlflies are among the most under-studied insects in Singapore, where two other species — *Ascalaphus placidus* and *Maezous* sp. have been recorded on the iNaturalist website. The species herein identified possibly as *Ascalaphus prothoracicus* constitutes a new record for Singapore. The species is known to occur in Thailand, India and Pakistan (Hassan & Liu, 2021).

**Literature cited:**

Ardila-Camacho A, Noriega JA & Acevedo-Ramos F (2019) New genera records of split-eyed owlflies (Neuroptera: Myrmeleontidae: Ascalaphinae) from Colombia. Papéis Avulsos de Zoologia, 59: e20195951.

Hassan MA & Liu X (2021) Taxonomic notes on owlflies from Pakistan (Neuroptera: Myrmeleontidae: Ascalaphinae). Zootaxa, 4970: 401–452.

Machado RJP, Gillung JP, Winterton SL, Garzón-Orduña IJ, Lemmon AR, Lemmon EM & Oswald JD (2019) Owlflies are derived antlions: anchored phylogenomics supports a new phylogeny and classification of Myrmeleontidae (Neuroptera). Systematic Entomology, 44: 418–450.

Tjeder B (1992) The Ascalaphidae of the Afrotropical Region (Neuroptera). 1. External morphology and bionomics of the family Ascalaphidae, and taxonomy of the subfamily Haplogleniinae including the tribes Proctolyrini n. tribe, Melambrotini n. tribe, Campylophlebini n. tribe, Tmesibasini n. tribe, Allocormodini n. tribe, and Ululomyiini n. tribe of Ascalaphinae. Entomologica Scandinavica, Supplement 41: 7–169.