

A fallen nest of night hornets, *Provespa anomala*

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Subjects: Night hornet, *Provespa anomala* (Insecta: Hymenoptera: Vespidae).

Subjects identified by: Authors.

Location, date and time: Singapore Island, Central Catchment Nature Reserve; 21 August 2017, around 1000 hrs.

Habitat: Young secondary forest.

Observers: Authors.

Observation: A fallen nest of *Provespa anomala* was observed lying on its side on the forest floor partially damaged and exposed to direct sunlight (Fig. 1). At least 30 hornets, each around 2 cm in length, were observed at the surface, mainly at the damaged parts of the nest, beating their wings vigorously (Fig 2). A video of this behaviour can be viewed at <https://youtu.be/SMiZhi8sSjU>.

Remarks: *Provespa anomala* is a true wasp that is seldom seen during the day. It is considered to be a relatively uncommon species in Singapore that inhabits forested areas, but its biology seems to be poorly known (Lee, 2012). Although it forages at night, it is attracted by artificial lights, and known to enter buildings. The nests, constructed of fibrous plant material, are founded by a queen with around 50 worker wasps. Any disturbance to the nest will cause the adult wasps to rush out onto its surface (see Woo et al., 2011).

It is interesting to note that despite the compromised position of the nest, it was still being occupied by the hornets. The hornets on the outside were observed rapidly beating their wings in a collective manner. This behaviour seems to be a means of regulating the nest temperature under the hot sun (see Jones & Oldroyd, 2006).

References:

- Jones, J. C. & B. P. Oldroyd, 2006. Nest thermoregulation in social insects. *Advances in Insect Physiology*. 33: 153-191.
- Lee, J. X. Q., 2012. *NSS Pocket Guide Series. A Field Guide to the Bees and Wasps of Singapore*. Nature Society (Singapore). 18 pp.
- Woo, H. P. M. Y. W. Jong, T. Lim & W. K. Soo, 2011. True wasps. In: Ng, P. K. L., R. T. Corlett & H. T. W. Tan (eds.). *Singapore Biodiversity. An Encyclopedia of the Natural Environment and Sustainable Development*. Editions Didier Millet and the Raffles Museum of Biodiversity Research, National University of Singapore. p. 493.



Fig 1. Fallen nest exposed to the sun with the lower portion apparently damaged. Hornets seem to be concentrated at the damaged parts of the nest. Photograph by Robin W. J. Ngiam



Fig. 2. Close up of hornets fanning their wings apparently to assist in nest thermoregulation. Photograph by Shaun Spykerman