

Drones of *Apis dorsata* (Fabricius 1793) congregate under the canopy of tall emergent trees in Borneo.

ABSTRACT

The drones of *Apis dorsata* performed their mating flights at dusk. They took off simultaneously from the colonies. The flying drones produced a distinct hum which was clearly audible. By following this flight noise on several consecutive days, a drone congregation area (DCA) was located under the canopy of a high emergent tree. There, the drone's hum was regularly heard at the expected time and several *A. dorsata* drones were caught. Under the canopy the drones were attracted to a queen dummy impregnated with queen pheromone. Dummies outside the canopy or above the tree did not attract any drones. Further, drone attractivity showed a clear maximum several meters below the canopy. Under the canopy of other emergent tall trees three more DCAs were detected. At another place one observation on a slope of a mountain resulted in the detection of a DCA downhill in the valley. No drones were found under tall trees on the slope. In *A. mellifera* and *A. cerana* the factors that cause the drones to congregate at a distinct place are still unknown. So, the clear feature of the *A. dorsata* DCA in Borneo involving a landmark is unique. Observations from other parts of the extended natural distribution of *A. dorsata* in Asia are required to confirm whether the drones of this species generally congregate under the canopy of emergent tall trees.

Keyword: Reproduction; Flight; *A. dorsata*; Borneo; Drone congregation area.