

P047

Double-origin of swarm-founding in the genus Ropalidia (Polistinae).

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The wasps in the vespidae subfamily Polistinae fall into two groups in terms of their modes of colony foundation. One is independent founding, in which a colony is founded by one to several inseminated females. The other is swarm founding, where a colony is founded by a swarm of workers associated with one to many queens. Swarm founding is considered to be more advanced mode of colony foundation than independent founding. *Ropalidia*, one of the largest genera in the Polistinae, consists of about 200 extant species and is widely distributed in Old World tropics and subtropics. They have the two way of these colony founding. Swarm-founding species of *Ropalidia* are divided into two groups based on their distribution ranges: Oriental species distributed from India in the west to Borneo, the Philippines and western part of the Lesser Sunda Islands in the east; and Papuan and Australian species. No swarm-founding species are distributed in Sulawesi, Moluccas and eastern part of the Lesser Sunda Islands. Phylogenetic analysis of *Ropalidia* wasps using molecular data shows dual origin of the swarm founding in *Ropalidia* in accordance with their distribution.