Observations on multiple mating flights of Apis dorsata queens

ABSTRACT

This observation is aimed at providing information for a reasonable comparative study on reproductive biology among the honeybee species. The research was carried out in 1996 in the submerged Melaleuca forest of southern Vietnam, where low-nesting colonies on man-made supports, rafters, allowed us to make detailed observations on the queens. Flights of six newly emerged queens were observed and after their final mating flights, queens were dissected to count the sperm number. The five investigated queens took their first flights 6 ± 1 (mean ± SD) days after emergence. Four queens took orientation flights of less than 3 min. One queen flew to mate without any orientation flight. Mating flights happened around sunset and lasted 15.4 ± 4.3 (n = 14) min. A queen undertook two to four mating flights and after fully mating, she had 5.5 ± 0.9 (n = 5) million sperm in her spermatheca. This study indicated the extreme polyandry in A. dorsata.

Keyword: Apis dorsata; Queen flight; Vietnam; Sperm number.