

**Existence of *Apis mellifera* L. Spermatozoa in
the Spermathecae of *Apis cerana* Fab.
Reared in the Region Highly Populated by *A. mellifera***

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Four virgin queens of *Apis cerana* colonies that emerged in September successfully mated and laid eggs in the apiary of *Apis mellifera* in Suwon. There were plenty of *A. mellifera* drones and only a few *A. cerana* drones. The eggs from two mated queens, which were proved to have mated only with *A. cerana* drones, developed into normal *A. cerana* workers. The rest two queens laid the abnormal eggs, which were unhatched and removed by worker bees or hatched and developed into drone bees. The spermatozoa in the spermathecae of two groups of queen were identified by several polymorphic DNA profiles and mitochondrial CO1 sequences of ten amplified DNA strands per queen. The spermatozoa from abnormal egg-laying *A. cerana* queens were composed entirely of *A. mellifera* drones'. We collected another twelve queens of *A. cerana* in Chungju where two *Apis* species distributed sympatrically. All spermatozoa from these *A. cerana* queens were identified as *A. cerana*. It was concluded that *A. cerana* queens from a few colonies reared in circumstances with high population of *A. mellifera* could encounter interspecific mating without any mingle of conspecific drones.