Absconding Behavior and Management of Apis cerana F. Honeybee in Chitwan, Nepal

S Pokhrel
District Agriculture Development Office

RB Thapa
Institute of Agriculture and Animal Sciences, Chitwan, Nepal

FP Neupane
Institute of Agriculture and Animal Sciences, Chitwan, Nepal

SM Shrestha
Institute of Agriculture and Animal Sciences, Chitwan, Nepal

DOI: https://doi.org/10.3126/jiaas.v27i0.699

Keywords: Apis cerana, absconding, brood mite, pollen substitute, colony management

Abstract

Twelve colonies of five-framed Apis cerana F. with about equal brood, hive storage and colony strength were prepared in November 2004 and the colony development parameters recorded. One-third of the colonies absconded in summer and about one-sixth in rainy season, while non-absconded colonies also slowed comb building, brood rearing, colony strength and hive storage in summer and rainy seasons. Feeding sugar candy and pollen substitute prevented absconding in May and July. Three weeks feeding in May resulted higher comb building (15.0%), higher brood rearing (158.8%), stronger colony strength (15.0%) and higher hive storage (171.2% honey, 270.9% pollen) in June. Those colonies having higher brood mite (Varroa jacobsoni Oud.) in winter absconded earlier. Key words: Apis cerana, absconding, brood mite, pollen substitute, colony management J. Inst. Agric. Anim. Sci. 27:77-86 (2006)
Abstract: To study the life history combs of A. cerana were collected and studied in the laboratory. General external morphology including head, thorax, mouth parts, antennae, legs and abdomen of A. cerana was measured and different body parts were listed. Pollen gathering activity and brood rearing activity were studied throughout the year. The number of pollen gathering bees was the highest in the months of November to January. June to August proved to be the most unfavorable periods for pollen collection. The time of initiation and cessation of pollen gathering activity of A. cerana was rec Apis cerana is an endemic species of honey bee in Asia. A. cerana is believed to have better adaptation to scattered nectar sources than Apis mellifera, which implies that honey can be harvested from A. cerana colonies, but A. mellifera will starve at the same location. We hypothesize that there are differences in foraging performance, worker longevity, and daily sugar consumption between A. cerana and A. mellifera workers. Apis cerana, or the Asiatic honey bee (or the Eastern honey bee), are small honey bees of southern and southeastern Asia, such as China, India, Japan, Malaysia, Nepal, Bangladesh and Papua New Guinea. This species is the sister species of Apis koschevnikovi, and both are in the same subgenus as the Western (European) honey bee, Apis mellifera. In the wild, they prefer to nest in small spaces, such as hollowed out tree trunks. Like the Western honey bee, they are sometimes domesticated and used in apiculture, mostly in wooden boxes with fixed frames. Other than defensive behaviors such as these, much of their behavior and biology (at least in the wild) is very similar to that of A. mellifera.