

# COMPARATIVE STUDIES ON THE PERFORMANCE OF YELLOW AND BLACK COLOUR MORPHS OF *Apis cerana indica* F. AT SIRSI, KARNATAKA

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## ABSTRACT

*A. cerana* population in Karnataka is composed of two distinct colour morphs: the yellow morph and the black morph. The two populations are called as 'hill morph' which are black in colour and restricted to higher elevations and seen in Western Ghats ecosystem, and the other as 'plain morph' which are yellow in colour and restricted to plain areas of lower elevation.

The results of comparison study showed that the black hill morph and yellow morph performed on par with each other with respect to all parameters of foraging activities and brood rearing activities. There was no significant difference between both colour morphs when statistically analysed for number of outgoing bees, number of pollen gatherers and number of nectar gatherers activity. The brood rearing activity of both colour morphs was on par. Brood rearing parameters like pollen area and nectar area exhibited no significant difference between two colour morphs.

The bee plants identified in Sirsi include *Aporosa lindleyana*, *Ailanthus triphysa*, *Cocos nucifera*, *Careya arborea*, *Flacourtia Montana*, *Peltoforum ferrugenium*, *Sapindus emerginatus*, *Syzygium caryophyllaeum*, *Syzygium cumini*, *Tridax procumbens* and *Terminalia tomentosa* among 77 tree species, 10 shrubs and herbs. There were 19 species of plants which served as only pollen sources. The number of plants identified as only nectar source was 30 tree species and 27 number of plants was identified as both nectar and pollen source. Majority of bee plants identified had the flowering period from January to May. Among the 10 shrubs and herbs 2 are nectar yielders and 8 species are both pollen and nectar yielders.

On par performance of yellow colour morph with local black colour morph at Sirsi indicated that yellow colour morph can be successfully introduced to hill conditions in Western Ghat region of Uttara Kannada, where there are assured flora sources for pollen and nectar.