FLORISTIC PATTERN AND FORAGING BEHAVIOUR OF HONEYBEES IN ENDANE BIODIVERSITY CORRIDOR IN SINHARAJA FOREST COMPLEX

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Identification of the flowering pattern of foraging plants of bees is an important prerequisite to ensure the year-round honey and pollen production. The study was conducted in one-month intervals to evaluate the flowering patterns and to monitor the plant species visited by honeybees in Endane Biodiversity Corridor. Number of honeybees found in three square meters transect in each plot were counted. Pollens of the flowering plants and the stored beebread and honey from bee colonies were also collected for pollen analysis. A total of 160 plant species were recorded, from which a pollen calendar was prepared. Out of them, 51 (31.8%) species were weeds and 109 (68.12%) species were woody species. Among them, 75 (46.8%) species produced flowers. Out of flowering plants, 34 (45.3%) species were weeds and 41 (54.6%) species were trees. Among the flowering plants, 26 plant species were bee plants and of which, 14 (53.8%) species were trees, and 12 (46%) species were weeds. The abundance of the honeybees was significantly different among the studied plots ($p=0.03$). The highest abundance of honeybee was recorded in marginal tea lands and it was followed by scrubs and woodlands according to the honeybees visited the weeds. *Bidens pilosa*, *Tithonia diversifolia*, *Mimosa pudica*, *Ageratum conyzoides*, *Oxalis barrelieri*, *Lantana camara*, *Commelina diffusa* and *Chromolaena odorata* were recorded as the best honeybee foraging weeds. The pollen concentration of bee breads was significantly different among the colonies ($p=0.0001$). The highest pollen concentration was recorded from *Memecylon umbellatum*, *Gliricidia sepium*, *Trema orientalis*, *Spondias dulcis*, *Cocos nucifera* and *Elaeocarpus serratus*, respectively. The identified plant species are recommended to establish in the corridor in support of beekeeping and this study needs to be continued to develop an annual flowering calendar.

Keywords: Abundance, Beekeeping, Flowering calendar, Flowering plants, Pollen concentration