

Contributory study to the assessment of bee's fauna in market gardening areas in northern Ivory Coast (case of Korhogo)

Authors:

**Yalamoussa Tuo¹,
Drissa Coulibaly¹,
Mouhamadou Koné¹,
Gèthème Felix Kouadio
Yao¹ and
Kouakou Hervé Koua²**

Institution:

1. Unité de Formation et de Recherche (UFR) des Sciences Biologiques, Département de Biologie Animale, Université Peleforo Gon Coulibaly de Korhogo. BP 1328 Korhogo, Côte d'Ivoire.

2. Unité de Formation et de Recherche (UFR) Biosciences, Département de Zoologie, Biologie Animale et Ecologie, Université Felix Houphouët-Boigny de Cocody 22 BP 1611 Abidjan 22. Côte d'Ivoire.

**Corresponding author:
Drissa Coulibaly**

ABSTRACT:

Bees are primordial in the conservation of plant diversity. They ensure food security through pollination services. Despite their great importance, very few studies are devoted to them in Ivory Coast, considered as country with an agricultural vocation. The databases on bees being rare or sometimes non-existent, the realization of many scientific studies including those relating to the pollination of certain crops becomes difficult. To overcome this scientific data deficit, this study focused on the assessment of bees' diversity and abundance in market gardening areas of Korhogo. Sampling was carried out in 2017 in nine market garden crops sites, covering the dry and rainy seasons of the year. A botanical survey allowed to identify plant species encountered in the study areas. Bees capturing was done using sweeps nets. Overall, 541 bee specimens belonging to 3 families (Apidae, Halictidae and Megachilidae) and 38 species were sampled. Also, the results revealed a high number of species in dry season (23 species) as opposed to rainy season (21 species). During the two seasons, Lorgokaha was the most species rich site (18 species). The prominent bee species were *Apis mellifera*, *Pachynomia atrinervis* and *Lipotriches* sp. Among the botanical family recorded in the study area, the flowers of Solanaceae, Poaceae and Malvaceae were the most visited by bees. The identification of bee species encountered in market garden crops is an important step in finding the most effective pollinators for these crops. This could improve the yield of these crops, which are prominent in the fight against hunger in rural areas.

Keywords:

Abundance, Bees, Diversity, Market garden crops, Pollination service.