

Asian Bees and Beekeeping: Issues and Initiatives

Guest Professor

Part 1

Overview of Asian Bees and Beekeeping

is an important component of rural development programmes in many countries. The role of beekeeping in multifarious economic and biological systems in many parts of Asia cannot be overestimated. It has always been looked upon as a key natural heritage. At the local level, beekeeping is an additional generating activity. This, being a non-polluting activity, does not compete with other stimulating components of farming in the crop fields, pollination activities are an important, as they could boost crop productivity.

The Asian Honeybee, *Apis dorsata*

Genetic diversity

Based on the morphometric characteristics and mitochondrial DNA analysis, three subspecies of *Apis dorsata* have been identified in the Himalayan region. These included *Apis dorsata cerana*, *A. dorsata himalayana* and *A. dorsata indica* (Veerak, 1992; KUMODI, 1994). Similarly, five subspecies of *A. dorsata* including *A. dorsata cerana*, *A. dorsata himalayana*, *A. dorsata indica*, *A. dorsata sinensis* and *A. dorsata indica* representing different eco-geographic zones have been identified in China's Himalayas (Chen-Ming et al., 1993). These subspecies also have further locally adapted populations. The ecotypes that differ from each other in phenological and economic characters. For instance, there are three ecotypes of the subspecies *A. dorsata himalayana* that correspond in geographic distribution to the Naga and Mizo hills, the DeoBharpur valley and Khasi hills, and the foothills of the northern Himalayas (Singh et al., 1990). In China subspecies *A. dorsata cerana* has five ecotypes namely Guangxi-Guizhou type, Hainan-Hakka type, Yunnan type, North China type and Chungshichuan type (Zhang-Ming et al., 1992). In some parts of the Hindu Kush-Himalayas, *A.*

Genetic Diversity in Asia

Apis dorsata is the richest in the world in terms of genetic diversity. At least five subspecies of *Apis dorsata* are found. Among these, *Apis dorsata*, *Apis florea*, *Apis laboriosa* and *Apis cerana* are native. *Apis mellifera* has been introduced for commercial beekeeping. *Apis florea*, *Apis laboriosa* and *Apis laboriosa* are wild in nature and cannot be kept in the hives. *Apis cerana* and *Apis mellifera* are only honeybee species that can be kept in the hives for honey production and crop pollination.