Apiculture /Bee Keeping

In India, four species of honey bees are found,, with three being indigenous and one being an exotic/foreign species. The three indigenous species are Apis dorsata (rock/giant bee), Apis Indica (Indian oriental bee), and Apis Florea (little bee) while the exotic species is called Apis Mellifera (Italian/European bee). Honey bees are often attacked by natural predators like wasps, wax moths, mites, black ants, and king crows, and diseases like the Nosema disease caused by the protozoan Nosema Apis and the Acarine disease caused by the parasitic mote Acarapsis woodi. Honey bees are social insects and live in colonies. There are three categories of bees in each colony, the queen bee, the worker bees, and the drones.

Species of bees in India

In India, four species of honey bees are found, with three being indigenous and one being an exotic/foreign species. The three indigenous species are Apis dorsata (rock/giant bee), Apis Indica (Indian oriental bee), and Apis Florea (little bee). The Apis Dorsata is very large, very ferocious, and is generally found in the wild as it is very hard to tame. Apis Indica is very gentle and can easily be domesticated but is sometimes found in the wild as well. The Apis Florea is very small and docile, a low-yielding species thus considered very uneconomical. The exotic species known as Apis Mellifera (Italian/European bee) is very easy to control and yields good quality and quantity of honey, thus preferred by apiculturists for commercial honey production.

The bee colony; caste system

The queen bee is the fully developed functioning female in the hive with a well-developed female reproductive system, large in size with small shriveled wings capable of laying eggs at the rate of 800-1500 a day and has a life span of 3-4 years. The queen bee is also capable of laying two types of eggs; fertilized eggs which produce sterile female workers and a

fertile new queen, and unfertilized eggs which produce fertile males called drones. The worker bees are the sterile females which are approximately 200,000-300,000 in a hive, have strong wings for flying, and possess a well-developed mouth path for collecting nectar and an abdomen with the sting and wax glands.
Worker bees perform duties like cleaning the hive, feeding the larvae and the queen, guarding the entrance of the hive, and collecting the food (nectar and pollen from flowers). The drone bees are the fertile male bees that mate with the queen bee and lack sting and wax glands. One common function performed by both drone and worker bees is that they can sense temperature variations; if temperatures are too high in the hive they move air with their wings and if too low they start shivering to generate heat.

Importance of bees

Honey bees are best known for their two important products, honey and beeswax. Honey is a universally accepted food having many medicinal benefits by being an important ingredient of some Ayurvedic preparations. Honey is also considered a versatile food. Bees construct their hives by secreting a waxy substance from their wax glands which can also be used to prepare candles, cosmetics, creams, ointments, paints, polishes, etc. Honey is a food of high nutritive and medicinal value, a laxative, blood purifier, and expectorant.