

## Abstract

This work is focused on describing the individual differences in physiology of honeybee *Apis mellifera* during its development. It also compares the differences between the individual caste.

A lot of complex rebuilding of the whole organism takes place during the development of *Apis Mellifera*. Because of that, especially in the early stages, it is important to ensure a great supply of energy. Larvae need to acquire an abundant source of nutrients, so they can grow fast and have a sufficient storage for the pupal stage, during which the new body reorganization takes place. Newly emerged bees then need to quickly get accustomed to the new environment and assume their role in the hive. Queens need a constant supply of energy, so they can lay eggs for as long as possible. Drones focus mainly on mating with the queen.

The life of *Apis mellifera* is also influenced by other factors, primarily by numerous diseases and pathogens.

The results of this work can give a comprehensive idea about the complex development of an individual bee and give a of further research. There are still a lot a lot of unanswered and unexplored realities in biology of bees, that could a topic of study and help us better understand their importance for nature.