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SOME CHARACTERISTICS OF THE BEE FAMILY

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Annotation
The article presents the unique features of the bee family, the life of bees is a very complex family, and each individual performs a certain task. Therefore, it is reported that a mother bee that gives birth, a female bee without offspring, that is, a worker bee, and male bees (truten) appear in the family, and they differ from each other according to their structure and physiological characteristics. This article will serve as a basic resource for young beekeepers today on keeping and breeding bees.

Keywords. Truten, Polymorphism, propolis, khartoum, mother bee, worker bee, beeswax.

The natural climatic conditions of Uzbekistan have favorable opportunities for increasing the productivity of agricultural crops, raising bee colonies based on modern advanced technologies, and increasing the production of beekeeping products.
Among beekeeping products, honey, wax, pollen, propolis, bee milk and venom are very necessary products, and they are very unique raw materials for human health, medicine and pharmaceutical industry. No other animals can take the place of bees in coordinating the ecological state of nature. Also, the yield of agricultural crops pollinated by bees is much higher.
The life of bees is an extremely complex family, and each individual performs a specific task. Therefore, in the family there is a mother bee that gives birth, a sterile female bee, that is, a worker bee, and male bees (trutenes), which differ from each other in terms of their structure and physiological characteristics. This is called polymorphism. Polymorphism usually arises from the fact that each individual performs a certain task in the family, that is, the distribution of the work performed is directly related to their morphological difference.
The queen bee is the only female individual in the family with well-developed sexual organs. It does not perform any other task than laying eggs. The length of the queen bee is 18-20 mm, the average weight is 0.25 g.

Its abdomen is longer than its wings, and when it is at rest, the folded wing part does not cover the abdomen. The queen bee does not have a pollen basket on her 2 hind legs. Abdominal joints do not have wax windows. Khartoum is shorter than that of worker bees.

In the body of the mother bee, the organs for performing work in the hive and collecting juice are not developed. Due to the limited ability to perform work in the family, its brain is underdeveloped compared to the brain of worker bees.

A queen bee cannot live more than 2-3 days without worker bees. After mating with the male bee, the mother bee begins to lay two types of eggs: fertilized and unfertilized. Fertilized eggs will later produce queen bees and worker bees, and unfertilized eggs will produce male bees. In spring and early summer, the mother bee lays up to 1,500 eggs per day. The weight of this egg is equal to the weight of the body. The mother bee is always in the nest during her life, she flies out only in the first days to familiarize herself with the environment, mate with the male bee, and finally flies out when she reaches the natural colony (royal). The queen bee is constantly supplied with food by worker bees. It also excretes waste in the hive, which is cleaned and removed by worker bees. The queen lays eggs from early spring to late fall. A good quality queen bee can lay 100-150,000 eggs throughout the spring and summer.

Worker bees are the main part of the bees in the apiary. They are female bees and have underdeveloped genitalia and ovaries, so they cannot mate with male bees. In a typical family with a mother wasp, they do not lay eggs, but do the general work of the family. In some cases, if they lay eggs, only male wasps will develop from these eggs.

Worker bees clean the hive, guard it, normalize its air, build a dense layer, feed the worms, collect juice and pollen, process the juice, i.e. turn it into honey, raise and lower the temperature, provide air humidity, they perform tasks such as bringing water and propolis.

All workers in the hive can be divided into two classes. Somewhat younger (14-20 days old) bees form the class of worker bees in the hive, while bees older than 14-20 days make up the class of flying bees. Worker bees fly out in the middle of the day on fine weather to empty their hindguts and explore their hive surroundings. The worker bees, who make up the second class, also go out of the field on good weather days to transport nectar and pollen. Worker bees bred in spring and summer can live for 35-45 days on average, and those bred in autumn can live until next spring (4-6 months in Central Asia).

Table 1 Body size indicators of bees

Body parts	**Weight of bees**		**Body size**
Name	**Worker bee**	**Mother bee**	**Male bee**
1	**2**	**3**	**4**
His body length	**12-14 mm**	**18-20 mm**	**15-17 mm**
Weight	**100 mg**	**250 mg**	**200 mg**
Complicated eyes	Head part of	**Chief part of on the side**	**Head part along the side are attached to the back**
Simple eyes Location	Head part of the brain	**Chief on the side part of**	Forehead in the middle part part of in the middle
Belly of rings the number	**6**	**6**	7

The body length of worker bees is 12-14 mm, the average weight is 1 g, that is, there are 10,000 worker bees in 1 kg. Their brain is well developed compared to that of the mother bee. Since worker bees perform various tasks in the family, the mother and male bees play a major role in the formation of economic and genetic traits.

Male bees breed in the spring and summer months when good conditions are created in the family. It is easy to distinguish the male bee from the worker bee, because it is larger than the worker bee, and its weight is on average 0.2 g, that is, 2 times heavier than the worker bee. Male bees do not do any work in the family. The task of the mother is only to father the mother bee. Therefore, in spring and summer, each bee colony produces several hundred male bees. However, on average, 6-8 of them mate with the queen bee.

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