



Beehive

Written by Jitka Petřeková

Illustrated by Tomáš Tůma

B4U PUBLISHING

Model of an
BEEHIVE
inside

The bees that live in a hive

In a hive the queen is kept company by between 40,000 and 60,000 bees, which take complete care of how the hive is run. In spring and summer between 300 and 600 drones are born in a beehive, although they do not remain in it for long.



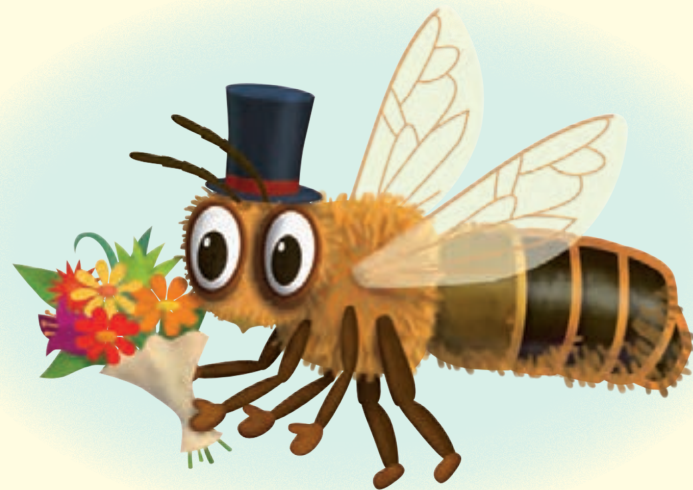
Queen (mother) bee

At 20—25 mm long, she is the biggest of the bees. Ordinarily only one queen bee is hatched per year, to replace a missing queen. She plays the most important role, throughout her life laying eggs that hatch into workers and, as necessary, drones and young queens. She lives for 2—3 years.



Young queen/female

20—25 mm long. Hatches from a queen cell – a special cell in the honeycomb, and the largest. After the nuptial flight she becomes a queen (mother) bee.



Drones/males

15—17 mm long. Drones are hatched once a year and take part in the nuptial flight. They are found in the hive only from spring to autumn. They live for 6—8 weeks.



Cleaner

It's awfully hot
here today...



Gatherer - forager



Guard



Young worker



Nurse



Builder

Worker

10—14 mm long, workers are hatched throughout the year. They take on jobs such as guard, gatherer/forager, cleaner, builder, nurse and young worker. They live for 6—8 weeks.

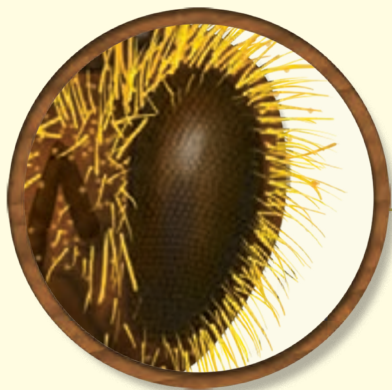
Anatomy

HONEY BEE

A bee is 10—17 mm long, the queen 25 mm long. A bee's body consists of several parts (head, thorax, abdomen) and is covered in fine hair, to which pollen adheres.

Compound eyes

Composed of several tiny lenses, these enable a bee to see at distance and give it great breadth of vision.



Three small eyes

are located on the forehead. These are for near vision and seeing in the dark.



Actual
size



Antennae

These are equipped with highly sensitive sensors. Not only are they the organ of touch, smell and hearing, they serve for orientation in flight and in the dark.



HEAD

THORAX

Mandibles

The mandibles serve for the processing of wax, pollen, propolis and food. Bees use their long tongues to suck in nectar.





Wings

There are two pairs of wings, front and hind. In flight the wings hook together at the edges.



Stinger

Retractable stinger with a series of hooks and a venom sac. When a bee attacks its stinger is pulled out, and the bee dies. The queen's stinger is not barbed; she uses it only when laying eggs. A drone has no stinger at all.



Leg with pollen basket

Bees have three pairs of legs. The pollen basket on the hind legs is used to transfer gobbets of pollen.



Wax-producing glands are located at the bottom of the abdomen.



Did you know that a bee's heart is in its abdomen?




The queen has no pollen baskets, wax-producing glands, pharyngeal glands, or any other organs adapted for gathering.





Builder bees at work make live chains and bridges out of their bodies.



In the baskets on their legs **worker forager bees** bring nutritious **pollen** into the hive. Sweet nectar from flowers and honeydew secreted by other insects are important raw materials for the production of honey.



If more than one queen
is born, a ruthless battle
is fought for supremacy
in the hive.

School




Within a few days of its birth
a young bee is working as
a **cleaner**, and by the fourth
day it is helping feed its
younger siblings.



I'm not going
to be a cleaner
when I grow up!



The background is a large, golden honeycomb pattern. In the top left, a wooden shelf holds three jars of honey. Bees are shown working on a honeycomb structure, mixing honey in a bowl, painting flowers, and tending to potted plants. A thermometer is also visible. A text box on the left contains the following text:

In this class everyone's
a worker, because the
drones are on holiday
again.