

A year in the hive

You do not expect to find bees in your garden in the middle of winter. The flowers, where the bee finds its food, are present only in the warmer times of the year, so it is during the spring and summer that the bees are out and about. As the summer approaches, more and more bees are raised, until the greatest number is present in the hives about the middle of June. This large number is kept up until about August, when the number drops off again. All this time the bees fly out, whenever the weather is good enough, to collect food from the flowers.

As the days become colder, the bees stay in the hive and cluster on the combs to keep themselves warm. They do not sleep through the winter as the dormice do. All through winter they eat their stores of honey to keep themselves alive. As the warm days of spring come round the bees venture out again.

But, you might say, you have seen bees flying near their hives on a mild day in the middle of winter. They do fly on very good days, and the reason is that they go out to empty their bowels, as they will not soil the hive if it is possible to avoid this. Sometimes the sun shining on snow tempts the bees out as if it were a summer day, and when this happens many bees are caught in the cold and die.

1. Winter. Bees stay in the hive
2. Spring. Bees venture out to find early flowers
3. Summer. Many bees to many flowers. Honey stored in top part of hive
4. Autumn. Few bees flying. Honey removed for sale



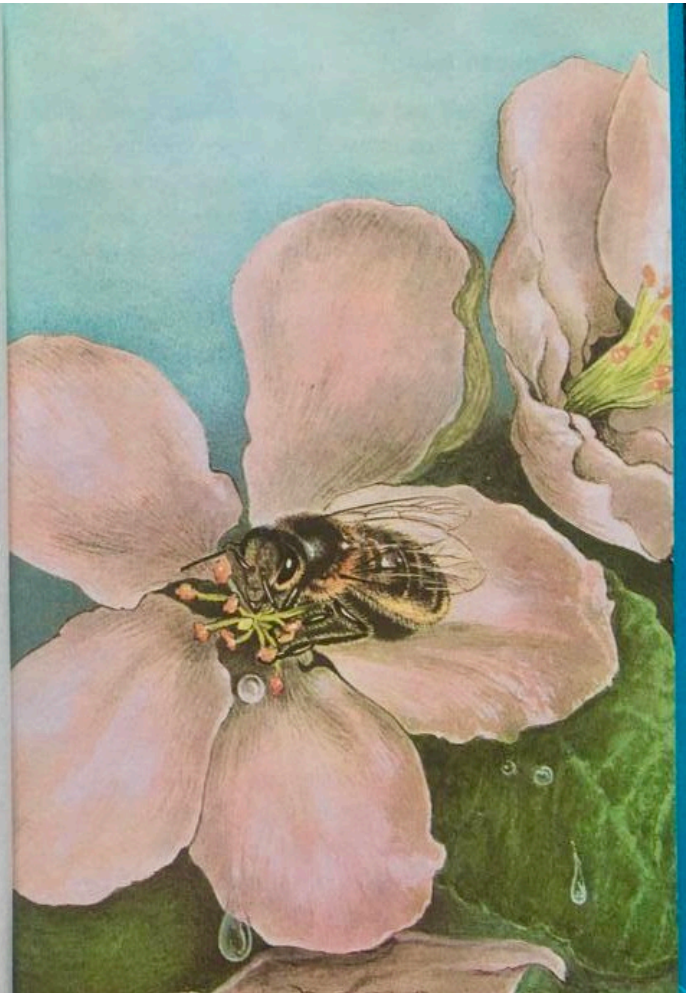
'A Year in the Hive' Questions

1. What time of the year are you likely to see the most bees? Justify your answer.
2. What reason is there for a bee to leave their hive during Winter? What might happen to them if they do leave?
3. The author mentions that bees do not sleep through Winter like some other animals do (for example, dormice). What word do we use to describe when an animal sleeps through Winter?
4. **Challenge!** Can you research an animal that does sleep through Winter and explain why they do this?

The worker bees

Of the three types of bee in a hive, worker bees are the ones you are most likely to see. They are the ones which go out to the flowers to gather nectar and pollen. They are females by nature, but cannot lay eggs except in very unusual circumstances. Their work is caring for the eggs and larvae in the hives, building combs, feeding the queen bee and keeping her spick and span, guarding the hive against intruders and searching for nectar and pollen from many kinds of flowers. The life of the worker bees can be very short, only four to five weeks in the height of the summer when they are doing a great deal of flying. But the workers which survive winter may live for more than six months.

The worker is the smallest of the three types of honey-bee in the colony, but workers make up for their small size by numbering about 98% of the bees in the colony. They can, of course, sting. They do this only when the colony seems to be in need of defence, or if they are trapped: if you hold them in your hand, for example. After stinging a human being, a bee usually dies. This is because it cannot pull out the sting from our flesh: in attempting to do so, the sting is torn from its own body.



'The Worker Bees' Questions

1. Can you name three tasks carried out by Worker Bees?
2. '*... keeping her spick and span*'. What does this phrase mean? Can you write a sentence using this phrase?
3. Why would a Worker Bee sting a human? Justify your answer using evidence from the text.
4. **Challenge!** Can you draw your own Worker Bee? How would you like it to look now that you know lots about it? Would you emphasise any of its features?

The queen bee

There is only one queen bee in a hive, unless the circumstances are unusual. She is bigger than the other bees, having a long abdomen. Her wings appear rather short, but in fact they are slightly longer than those of the workers. Her thorax is broader than that of the worker bee. Her legs are brighter in colour, and somewhat orange-brown. Very often she looks smoother and shinier than other bees, and moves among them quite slowly and 'majestically'. She can live for three years or more.

The queen is the only bee that can lay eggs which will produce worker bees or more queens. In fact, this is the only task she has. The workers feed and clean her, so that she can spend as much as possible of her time laying the precious eggs. She is fed with special food from glands in the heads of the workers. This helps her to lay up to 2,000 eggs per day. She flies only on her wedding flight and when the colony swarms.

Like the worker bee, the queen has a sting, but it is curved, unlike the straight sting of the worker. She is unlikely to use it against human beings, but keeps it almost entirely for use against rival queens, as you will read later in this book.



'The Queen Bee' Questions

1. Can you list as many physical features of the Queen Bee as you can? I can find seven!
2. The adjective, 'majestic' has been used to describe the Queen Bee. We have used this word a lot in our previous English work; can you find a synonym of majestic to describe the Queen Bee instead?
3. We use the collective noun, 'swarm' to describe a group of bees. What other words are used to describe groups of animals? Can you think of two others?

The male or drone bees

Drones are the true males, a few of which will be the queen's wedding partners. They are present only from about the beginning of May until perhaps September. They are heavily built, squat, very hairy and often appear slow and lazy. Even their low droning noise in flight, which gives them their name, sounds sleepy. They cannot go out for nectar for themselves, but get all their food from the workers or sometimes take it straight from the honey cells in the honeycombs.

They fly only on days when the sun is very warm, usually in the early afternoon. Unlike the workers, they can come and go from hive to hive without difficulty, but they usually stay with the hive where they were hatched.

At the end of summer they are dragged out of the hive by the workers and left to die of hunger and cold. Since they eat so much, they would be a heavy burden on the winter food store if they were allowed to spend the winter in the hive. To us it seems a cruel fate, but bees work only on the basis of efficiency, and do not tolerate useless drones when times are hard.



'The Male or Drone Bees' Questions

1. Where do Drone Bees get their name from?
2. Why do the Worker Bees drag the Drone Bees out of the hive at the end of Summer? Use the text to justify your answer.
4. **Challenge!** Can you choose a bee (Worker, Queen or Drone) and write a paragraph describing it in your own words?

I would like you to include:

- Three of its physical features
- How long it lives for
- What it does for the hive
- One fun fact!