

BEES
SHOWN TO THE CHILDREN

BY
ELLISON HAWKS

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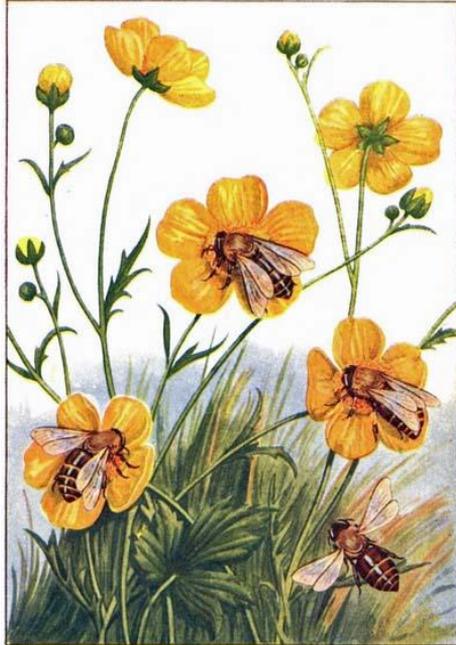
11. BEES

By ELLISON HAWKS. Illustrated in
Colour and Black and White.

THE "SHOWN TO THE CHILDREN" SERIES

EDITED BY LOUEY CHISHOLM

BEES



Pollen gathers on Buttercups

TO

MY TWO LITTLE FRIENDS

ANNIE AND KATIE

THIS BOOK IS AFFECTIONATELY DEDICATED

ABOUT THIS BOOK

DEAR ANNIE AND KATIE,—When I was a little boy I often wished that my soldiers would come to life. I used to think how grand it would be if only I could have a city of little people on the dining-room table. Of course my dreams never came true, even though one day I had a brilliant idea, and wrapped a whole regiment of soldiers in flannel and put them in the oven, hoping that in this way I should find them really alive next morning!

But nowadays I have a wonderful city of tiny workers, that can be put on a table. In it there are soldiers, food gatherers, bread-makers, undertakers, and a host of others. It is ruled over by a queen, and each day the gates of the city are crowded with the workers, who pass in and out in hundreds.

Have you guessed that my wonderful city is really a bee-hive? Although I cannot command my little friends to do this thing or that, to come here or go there, yet I am quite content to leave them to their own ways, and just to watch them in their daily life, and to study their customs and laws.

In this little book I intend to tell you something about my bees. I hope that you will be interested to read what I have written, and then perhaps, later on, when you grow up, you may keep bees, and you will be able to study their wonderful ways for yourselves.

I am sure you will join me in giving our best thanks to my friends who have so kindly helped me in the preparation of some of the pictures: to Mr. W. Barker, Mr. D. Ingham, Mr. H. Mackie, Mr. G.

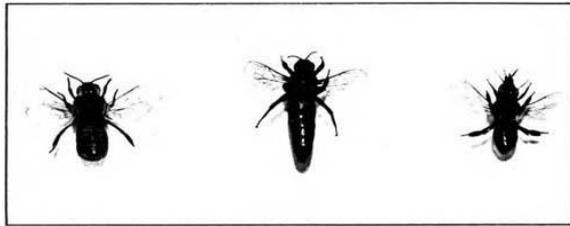
W. Stephenson; and to Mr. J. Lambert for permission to use Plates Nos. XIV., XV., XXVII., XXIX. and XXX.

My thanks are due also to Mr. W. H. McCormick for his kindness in reading over the proofs.

Yours truly,
ELLISON HAWKS.

10 GRANGE TERRACE,
LEEDS, 1912.

PLATE I



From a photograph by] [E. Hawks

Drone Queen Worker

The Three Kinds of Bees

BEES

CHAPTER I

ABOUT THE BEE

NO matter how small an insect may be, it is sure to teach us something interesting if we study its habits, and try to find out how the various parts of its body are used. Perhaps of all the thousands of different insects upon the earth, the most wonderful of all are Bees. When we speak of bees we generally think of those which live in the white hives we sometimes see in gardens; these are the bees kept by a man to make honey for him. You will perhaps be surprised, therefore, to learn that there are over 2000 different kinds of bees known at the present time, and that over 200 of these species are found in Great Britain. These include the different kinds of hive bees and also the wild bees, for there are races of bees just as there are races of mankind. In this little book I hope to tell you about the hive bee, or, as it is called by its Latin name, *Apis mellifica* ("the honey bee"). In the first few chapters we shall learn something about the body of the bee, and its different limbs and organs. Later on we shall consider the construction of the hive, and the habits of the bees which dwell therein.

The word insect comes from the Latin, and means "divided into parts." If you look at the body of a bee, or of any other insect, you will find that it is divided into three parts. These three divisions are respectively known as the Head, the Thorax, and the Abdomen. The head carries the *antennæ* or feelers, as they may be called; the thorax, or chest, has the wings and legs joined to it; whilst the

abdomen, or hindermost part of the body, contains the stomach and internal organs.

There are three kinds of bees in a hive—the Queen, the Drone, and the Worker, and a picture of these is seen in Plate I. Only one queen bee is found in each hive, though there may be several hundred drones and perhaps 50,000 or 60,000 workers. The number of the workers and drones varies according to the size of the hive and the time of the year.

The races of bees are many, but the best known is the British bee, sometimes called the Black Bee. Why it should be called “black” no one seems to know, for, as a matter of fact, it is of a beautiful rich brown colour. Then there is the Ligurian bee, which is of a lighter shade, and has three golden bands around its abdomen, by which you will easily recognise it. The Carniolian bees are natives of Carniolia in Austria, and they also have rings, but of a lighter yellow colour, while the bee itself is not such a dark brown as the Ligurian. Carniolian bees are supposed to be very sweet-tempered, and are therefore sometimes called “the lady’s bees.” Whether they really are better-tempered than other races is a question, for the temper of the little insects depends a great deal upon circumstances. For instance, if spiders have been trying to get into the hive, the bees are often very cross, and it is dangerous to go anywhere near them. But should there be no trouble of this kind to worry them, the hive may be opened and the bees handled without fear.

PLATE II



**From a photograph by] [E. Hawks
Queen**

CHAPTER II

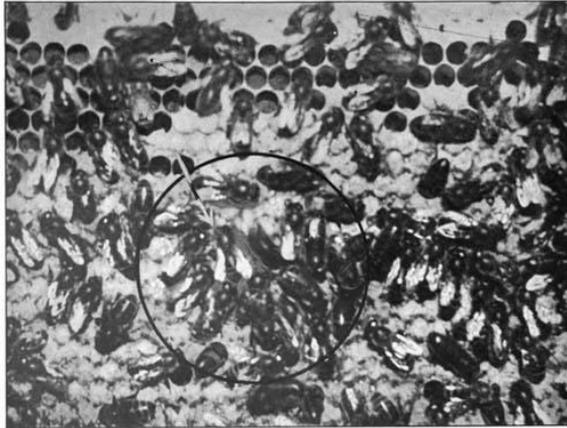
THE QUEEN BEE

LET us now look at Plate II., where an illustration of a queen bee is to be seen. It will be noticed that her abdomen is much longer than that of the worker or of the drone. Her head and thorax are about the same size as those of the others, but her legs are slightly longer and differently shaped.

This then is the queen of the hive, and she has, as we have seen, many thousands of subjects. We might imagine that, such being the case, she would lead a life of pleasure and enjoyment; but this is not so. In fact she is wrongly named the queen, for she does not rule over the other bees in the way we are accustomed to think of a king or queen doing. She would be better called the mother of the hive, for she is the parent of all the other bees. She never leaves the bee-city, except perhaps on one or two state occasions, so that she spends the greater part of her life in the darkness of the hive. She is waited upon and fed by her royal attendants, who also clean her and guide her over the combs. Perhaps, some time or other, if you have the opportunity of doing so, you may see the queen of some friend's hive. You will see her on the comb, no doubt, and you will notice a circle of six or more bees around her. These are her attendants, who face her and do not turn their backs to her if it can be avoided. In Plate III. is shown the queen surrounded by her attendants. They are within the circle which has been drawn on the photograph, and the arrow points to the queen. Great care is taken of the queen, for on her depends the future of the race, and so she

is closely guarded as well as being tended and fed. Every one of the little workers would willingly lay down her life for the sake of the queen, were this necessary.

PLATE III



From a photograph by] [E. Hawks

The Queen Bee surrounded by her Attendants

CHAPTER III

THE DRONE

NOW a few words about the drone, or male bee, and a picture of him is shown in Plate IV. He is not so big as the queen, though he possesses a more burly appearance. Unlike the queen or the worker bees, the drone has no sting, and so you may let him crawl over your hand without fear of being hurt, even though he should become angry.

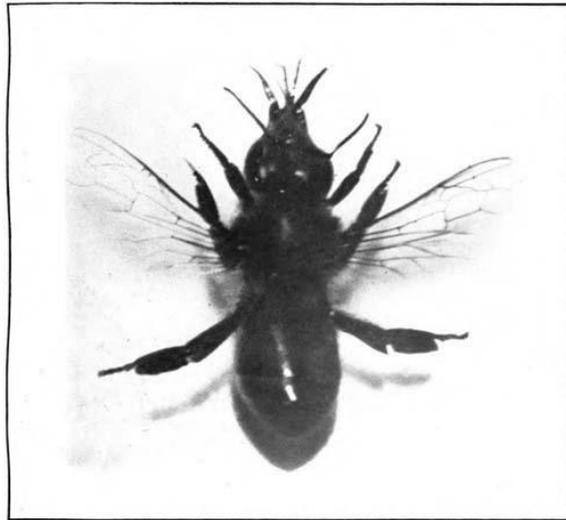
The life of the drone is a life of luxury and ease, for he does not work in the hive, neither does he gather any nectar or pollen. He is fed by the workers, and he also takes good care to help himself from the storehouses, whenever he thinks he would like a little more food. He generally finds some snug corner in the hive, away from the bustle of the city, and there sleeps till perhaps mid-day. Then at this hour, after a good meal, he sallies forth, pushes his way through the crowd of workers, and with a loud, droning noise flies away to some far-off flower, perchance, and there basks in the sun. Before the afternoon wanes, he returns to the bee-city, has another meal, and then sleeps until next day. A very lazy life is this, you will say, and I agree with you. But this life, like all good things, comes to an end, and little though the drones know it, before the winter comes they will be killed by executioners duly appointed by the other bees, and so their life of luxury will be cut short.

In appearance the drones are very beautiful, and if we watch the door of a hive, some summer day, we may see them come out to

take their daily outing. Their eyes are like enormous black pearls on each side of their head, while the silky antennæ look like beautiful plumes. Their thoraxes are covered with many golden hairs, which make them look as though they were clothed in the finest yellow velvet.

As they leave the hive, they create quite a stir amongst the other bees. They care not for the sentries, and rushing out, overturn the foragers who are coming in from the fields. No notice is taken of their rudeness, but the workers go on with their various duties, no doubt thinking that ere long the day of execution will come, and that then they will be avenged.

PLATE V



From a photograph by] [E. Hawks

Worker

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