

The World of Bees and Their Families

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b4u publishing



Bee's body

Antennae
- they're used for feeling around and capturing smells

Head

Two large compound eyes
- for observing the world

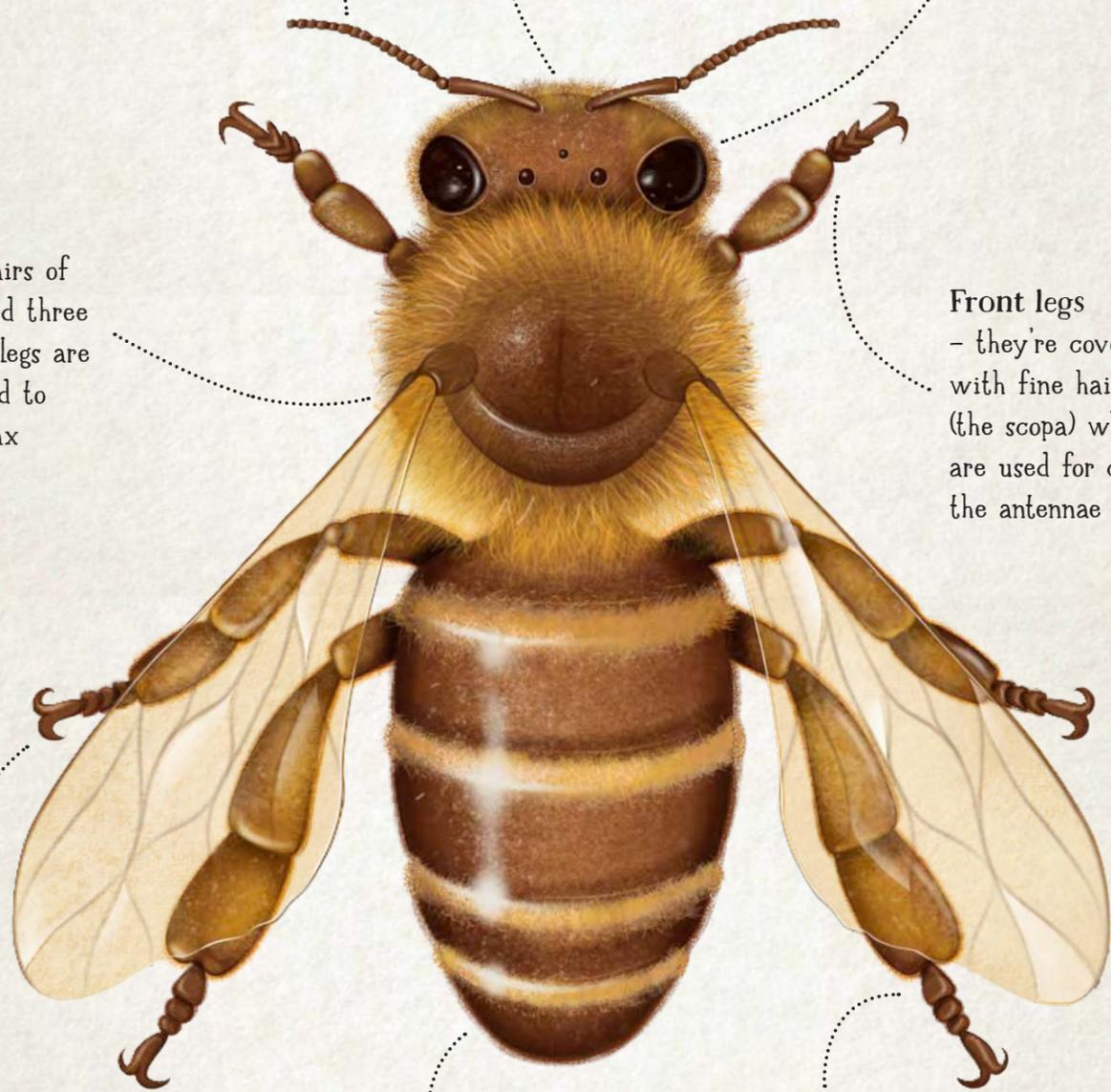
Thorax
- two pairs of wings and three pairs of legs are connected to the thorax

Front legs
- they're covered with fine hairs (the scopa) which are used for cleaning the antennae

Middle legs
- used for walking, cleaning, and wiping off any pollen stuck to the bee's body

Abdomen

Hind legs
- they're equipped with a pollen brush, comb, and basket for collecting pollen



Peek inside the hive



Blueberry bee

Yum, the blueberry bush! Let me at it! Buzzzzzz ... And without thinking, the small bee whose body resembles a tiny little bear sets off to reach the long tubular flowers. It attaches itself to them and then starts buzzing and shaking to fully cover its hairy body with as much of the heavy sticky blueberry pollen as possible. Thanks to this method, called the buzz pollination, blueberry bees are able to collect much more pollen than the ordinary honeybees. Those need three laborious sessions to pollinate the plant. Meanwhile, a blueberry bee pulls it off perfectly at the very first go.

Let the blueberries grow!

Over the 3-5 weeks of its short life, a single blueberry bee manages to pollinate almost 50,000 blossoms, producing 6000 sweet blueberries with its diligent work.

I live in the Eastern USA



Dasypoda alternator

Twinkle, twinkle,
little star, how I wonder
what you are



Safe home

Females build nests in sandy soil. The nest is actually a tunnel with chambers connected to it. They line the cells with a water-resistant film and put nectar and a lump of pollen inside. Once this is done, the bees place an egg inside each chamber, seal the entrance, and leave the young to their fate.

Hairy-legged mining bee

A great fop is flying over the meadow. Its orange trousers are visible from afar, making sure everyone notices. Oh, wait! It's no fop actually, rather a diligent worker known as the hairy-legged mining bee. If you take a closer look at those trousers, you'll see they're in fact no trousers at all! It's just long hairs which comes in handy when collecting pollen. Once the bee gets down to business, in no time it collects a huge loaf of pollen to feed hungry larvae.



Look at those trousers! It's the latest fashion from Paris!

I fly in Europe and Asia



Dasypoda altercator



Multipurpose trousers

Let's talk about the mining bee's trousers some more. They're a great tool for collecting pollen but that's not all! When a bee backs out of its home, the unique long hairs help it remove any sand out of its way, forming a protective ridge around the entrance. Be honest—wouldn't you love having such great trousers?



The honeycomb is covered with a protective layer of bees—100,000 workers.



Rock bees are equipped with a 3mm long, dangerous stinger.



Long live the queen!



Any bee that uses its stinger dies which is why the members of the colony never attack the intruder all at once.



The queen is darker than the workers and has a larger belly.

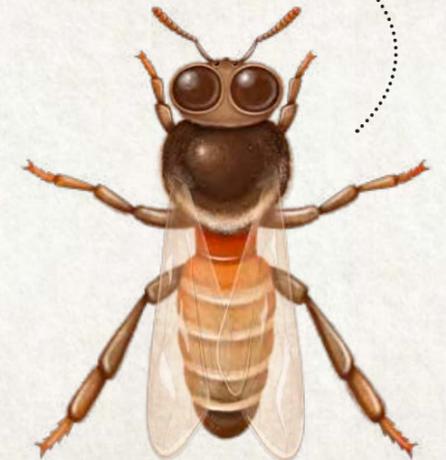
Rock bee

Guys, suit up, now! And forward maaaaaaaaaarch! The lifestyle of the giant South-Asian honey bee resembles that of the regular honeybee but watch out! Since they build nests that are suspended from branches or cliffs and thus are freely accessible, these bees learned to efficiently protect their home, becoming one of the most dangerous creatures you can encounter in the Asian jungles. As soon as a guard bee spots an oncoming enemy, it exposes its stinger and flies to the nest where it zig-zags along the suspended honeycomb. The bees then move over to the bottom edge of the honeycomb to scare the intruder away. If this doesn't work, some of the bees sacrifice themselves and start stinging the enemy while others bite away and buzz loudly. This is no fight that can be lost!

Rock bees shoo enemies away by exposing their bellies repeatedly. The glitter created by this tactic usually scares the intruder off.



I live in South Asia



Aspis dorsata



Don't be afraid. I'm large but nice

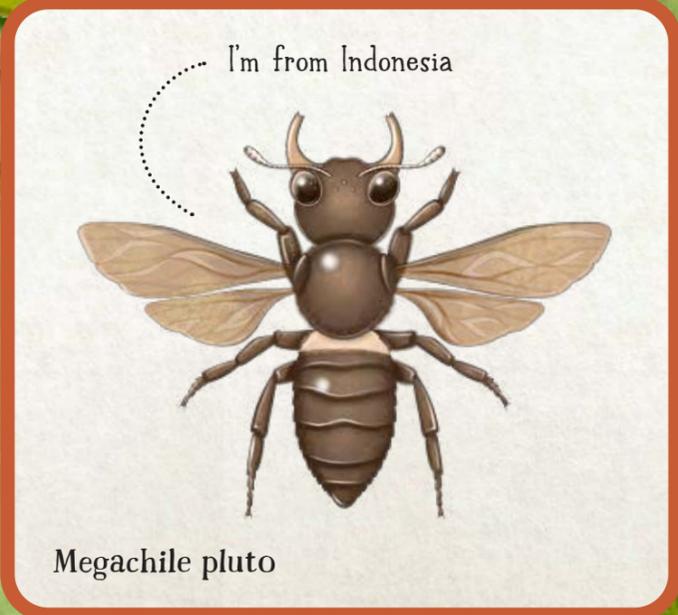
Giant bee

Heeeelp, what is this terrifying creature? Who is this giant? Anyone would get scared if they saw the rare bee species from the Indonesian Maluku Islands coming straight at them. That's because these bees are the largest in the whole world. *Megachile pluto* is a loner bee. It builds its home in the nests of tree termites. Perhaps the presence of the dreaded ants makes it feel safe. Or maybe it provides a nice warm climate—why wouldn't a bee giant capitalise on something like that?



Gigantic bees

The islanders call these huge insects the kings of bees. The giants feed on pollen and also use their mandibles, which resemble those of stag beetles, to collect resin from trees.



Large earth bumblebee

The spring's here and, having survived the winter, the bumblebee queen has finally discovered a hollow in the ground that's fit for her nest. She immediately gets down to business and adapts it to her needs. First, she makes a wax jug and fills it with sweet floral nectar so that there's always something good to eat. Then she builds a wax bowl at the bottom of her home—this is where she'll be laying her eggs. Four days later, she'll have fresh larvae to look after, warming them up with her own body and feeding them the pollen she'll be collecting each and every day. Once the larvae pupate, the queen lays new eggs. After the first workers emerge, the queen stops being self-reliant. The time when she could survive without workers is over.

Hey, put those eggs back at once!

Hushbaby ...

Me, me, me!

Once there's enough workers in the nest, they start fighting each other. The workers want to lay eggs too. They attack each other, destroying or stealing each other's eggs. These fights wind down come autumn when the nest ceases to exist. No one will survive long enough to see the next spring, with the exception of a young queen.

I live in Europe, Anatolia, Africa, the Canary Islands, New Zealand, and Australia



Bombus terrestris





What do you think of when you hear the word bee? Honey, lots of sweet honey, and colourful hives. But there are many types of bees, not all of them honeybees and not all of them social. It's not uncommon to encounter loner bees—they're quite abundant and incredibly diverse. Some have distinctive orange hairs on their legs, as though they're wearing a pair of highly fashionable trousers; others boast glittery tummies, metallic colours, or a gigantic size. And then there are bumblebees, wasps, or hornets. Would you like to take a closer look at the world of these unbelievably interesting critters and vital pollinators? In that case welcome ... buzzzzz ... to the realm of bees large and small, as well as their relatives. You certainly won't have time to get bored!

Welcome to the world of bees!



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