Buzz, Buzz, Buzz …

Two butterflies are sitting in the sun.

They’re chatting. Let’s listen in.

---ooo000ooo---

Hello.

*Oh, Hello.*

Have you been here long?

*That depends what you mean by “long”.*

Well, how long have you been here?

*A while.*

Oh…

*Quite a while.*

Oh*…*

*Quite a while.*

Oh… Hot, isn’t it!

*Suppose so.*

I’ve been watching those bees.

*Bees?*

They’re always busy.

*Well, yes. They’re famous for it.*

They’ve been in and out of those flowers all morning.

*Well, of course they have.*

I suppose so…

*It’s what bees do.*

Well…

*Bees are always busy.*

Yes. They are.

*They fly around from flower to flower.*

Like us, really.

*What?*

Like us two butterflies.

*Sort of.*

Like we do.

*Well, they drink nectar.*

Like butterflies do.

*And get pollen all over.*

That’s what we do!

*But they live in a hive.*

So?

*They are collecting for the hive.*

Oh.

*They live in a hive.*

Yes. You said.

*Thousands and thousands of them.*

In one hive?

*Yes.*

Do they live long?

*Some live for years.*

Years!

*Bees live much longer than we do.*

Do they?

*Oh yes.*

How long does a bee live?

*Some live for years.*

Oh yes. You said.

*Four or five, anyway.*

And butterflies don’t?

*No.*

We don’t live long?

*No.*

Oh.

*We live alone.*

What difference does that make?

*Well, we only want enough nectar for a few days.*

Just a few days?

*You and I will be dead soon.*

Really?

*In about a fortnight.*

We’ll be dead in a fortnight?

*Yes.*

Oh. I thought we’d have longer than that.

*No. Sorry.*

What’s the point, then?

*We just want to lay our eggs.*

Lay our eggs?

*Somewhere nice.*

And that’s it?

*That’s it.*

You mean all we do is lay a few eggs?

*Yes.*

Then we die?

*Yes.*

Oh.

*Those bees over there.*

Yes.

*They don’t eat pollen and nectar, you know.*

They don’t?

*They take it all back to the hive.*

For the hive?

*That’s right.*

Collecting pollen and nectar looks like hard work.

*That’s why they’re called ‘workers’.*

They take it all back to the hive?

*Yes.*

Oh.

*It’s used to make honey.*

Oh.

*They’re honey bees.*

And thousands of them live in a nest together?

*Well, they call it a hive.*

And thousands of bees live there.

*Sixty.*

Pardon?

*60,000 bees live in a hive. Give or take.*

Wow!

*Almost all of them are workers.*

Almost all bees are workers?

*All the bees you see out and about are.*

I’ve heard there’s one queen.

*There is.*

 And a few hundred drones.

*In the hive. That’s right.*

And all the rest are workers.

*Right again.*

The workers do all the work, do they?

*Pretty much.*

What does the queen do?

*Lays eggs.*

She just lays eggs?

*Which workers look after.*

So what do workers do?

*More like what don’t they do!*

What about collecting nectar and pollen?

*Worker bees do that.*

That’s a lot of work.

*Sometimes they fly as far as 5 miles to a flower.*

5 miles!

*5 miles.*

One thing bothers me.

*Yes…*

If these bees are 5 miles from their hive …

*Yes…*

How do they get back?

*Well, they fly, of course.*

 Yes, but how do they know which direction to fly in?

*What do you mean?*

They can’t see the hive from here.

*They don’t need to.*

Oh?

*They can find their way home by the sun.*

How does that work?

*They know where the sun is in the sky.*

Clever!

*Even though the sun moves, of course.*

Well, yes.

*They seem to be able to keep track of that.*

That’s really cool.

*Those bees are even more clever than that.*

Oh? How’s that?

*They can tell other bees where their flower was.*

Tell them where their flower was?

*They can tell other bees where the really good flowers are.*

They can talk to other bees!

*Not quite.*

Not quite?

*Not quite talk.*

Oh.

*What they do is dance.*

Dance?

*Yes, dance.*

How does that work?

*It’s known as the waggle dance.*

The waggle dance?

*Yes.*

Strange!

*It is.*

How does the waggle dance work?

*The bee waggles.*

Waggles?

 *And buzzes.*

Waggles and buzzes?

*The better its flower was, the harder it waggles and buzzes.*

And the direction it faces is the direction the flower is in, I suppose?

*Yes.*

And?

*And how far it dances, forward and back, tells how far the flower is from the hive.*

Clever!

*That’s not all these worker bees do, you know!*

Oh?

*Worker bees in the hive take the nectar and pollen.*

How do you mean?

*They take it from the forager bees.*

Those are the bees that collect it, right?

*Yes.*

Then they make honey with it?

*Yes, they do.*

But how?

*They mix it. Then they fan it.*

Fan it?

*They fan it like mad.*

How do they do that?

*With their wings.*

Oh.

*A bee can beat its wings 13,800 times a minute.*

13,800 times a minute?

*That’s 230 times a second.*

It must make quite a wind!

*It does.*

Why do they fan the mix of nectar and pollen?

*To dry it.*

Dry it?

*Make it into sticky, thick stuff.*

Honey!

*Yes, honey.*

Do the bees in the hive eat honey?

*They do, but they also feed it to their grubs.*

Grubs?

*Well, that’s another job the workers do.*

Right.

*They make cells. Out of wax.*

I’ve seen cells like that.

*Right.*

Rows and rows of them.

*Right*.

It’s called a honeycomb, isn’t it?

*Yes.*

And the cells are all hexagons.

*Right.*

Hexagon means ‘six-sided’.

*I knew that.*

Mmmm…

*Hexagons are very good shapes.*

Good shapes?

*You can fit the maximum number of cells in the minimum space.*

If you make them hexagons?

*Yes.*

Cool!

*And you use the minimum amount of wax, too.*

Clever!

*Very.*

How do the bees know all that stuff?

*Nobody knows.*

Do they store honey in these cells?

*Yes, they do.*

They put some into each cell, do they?

*Yes.*

Cool!

*It takes 12 bees to collect a teaspoonful.*

Of pollen and nectar?

*Or 12 trips by one bee I suppose.*

Well, yes.

*And thousands to make a jar of honey.*

I guess.

*Thousands of trips.*

Amazing.

*And people keep bees.*

In special wooden hives.

*A hive can produce 100 Kg of honey in a year.*

That’s a lot of honey!

*It’s more than 200 jars.*

But bees help us in other ways too, don’t they?

*Because flowers have to be pollinated.*

Yes.

*If they are to produce fruit.*

Well, yes.

*Bees do a lot of that.*

I know.

*Loads of plants depend on bees for pollination.*

Getting pollen from one plant to another plant.

*Yes. Fertilising them.*

Do they do this on purpose?

*The bees, or the plants?*

The bees.

*No.*

Oh.

*They get pollen all over them when they go into a flower.*

OK.

*And some rubs off when they go into another flower.*

OK.

*So they carry pollen from flower to flower.*

By accident?

*Yes. It just happens.*

And this fertilises the flowers?

*Exactly. So bees really matter.*

What else do worker bees do?

*Well, they keep the hive clean.*

How do you mean?

*They take the rubbish out.*

Take the rubbish out?

*60,000 bees make a lot of rubbish!*

I suppose they must do. What else?

*Well, on a hot day they stand at the entrance to the hive and fan.*

Fan?

*Yes. Blow air through the hive.*

Fanning their wings 230 times a second!

*That’s right.*

And the hive needs it on a hot day, I expect.

*Bees get quite warm, actually.*

Really?

*So the hive needs it even on a cool day.*

It’s a lot of work.

*What is?*

Being a bee.

*Being a worker bee, anyway.*

Being a butterfly is not such hard work.

*Oh, I don’t know.*

Well, you couldn’t call us ‘workers’, could you?

*We have to find flowers and drink nectar.*

Well, yes we do.

*Then we have to find a mate.*

Well, yes …

*Find a good place to lay eggs.*

Maybe, but …

*But we don’t have to collect for a hive.*

No.

*Or make honey.*

No.

*Or look after our babies.*

No.

*Or clean a hive.*

No.

*Or fan it.*

No.

*But then we die young.*

I wish you wouldn’t keep saying that.

*Very young.*

So you keep saying.

*Not like a bee.*

No.

*We have a short life.*

Compared to a bee, anyway.

*But a merry one, perhaps?*

A short life but a merry one?

*Well, yes.*

If you say so!