

Is a bee as smart as a sat nav?

Video transcript for introduction video presented by Professor Adam Hart

For an insect that is only 15mm long the honey bee can travel a remarkable distance every day.

They can fly more than 10 miles to find food.

For a colony of bees that means flying vast distances, just to produce this jar of honey means flying 55,000 miles, that's twice around the world.

They are no slouches either with speeds in excess of 15mph possible.

Finding that perfect source of nectar can be a challenge for a bee and finding its way back to the same flower even more so.

But that's exactly what the honey bee does.

Amazingly bees don't act on their own, they are able to communicate to each other where the flowers are.

They have evolved a series of movements known as the waggle dance; we can decode this dance language and see that it communicates to other bees the angle to fly with respect to the sun and the distance from the hive.

If that wasn't clever enough recent research has uncovered something we can't see – electricity.

The charge built up when a bee returns to the hive allows her to move the body parts of other bees and that might communicate even more than the waggle dance alone.

Even more amazing is that honey bees can detect the electric fields around flowers.

The electro-magnetic charge around a flower lets bees know if it's been recently visited, so bees don't waste their time visiting flowers without nectar.

The amount we now know about honey bees is nearly as incredible as the honey bees themselves.

And that's not least because of some of the technology we use such as radar tracking that is giving us information about them that we could only have dreamt of a few years ago.

Opening and closing image credit: Alex Wild/Visuals Unlimited, Inc. /
naturepl.com