

Honeybees and Human Beings

Understanding the relationship between bees and pollination

The honeybee is one of our best known insects, whose relationship with humans can be traced back to the dawn of humankind when early people ‘stole’ honey from wild bee nests. Cave paintings in Spain from as long ago as 6000 BC show our ancestors taking honey from bees, which surely indicates that beekeeping is at least as old as the other two oldest professions!

By the time humans did come on the scene, the honeybee had already been around for about 40–50 million years or more – it had evolved from its hunting-wasp ancestors and had become a strict vegetarian. Bees and flowering plants then evolved with each other in a truly remarkable relationship that changed and colored the world we live in. This evolutionary symbiotic relationship is probably the most important reason why our world looks like it does today, and still the vital work of bees goes on. It is a sobering thought that, if all humans were to be wiped out, the world would probably revert to the rich, ecologically balanced state that existed some 10,000 years ago. On the other hand, if bees and other pollinating insects were to be wiped out, humans and other animals would not last for long.

“Bees are probably the only livestock that use other people’s land without permission and those landowners welcome them”

Bees and the economy

Don’t forget that governments regard the whole set-up as so important that they are willing to spend millions on ensuring that the status quo does not change and that nothing happens to harm it. Recent research in the USA has valued crops that require pollination by honeybees at an estimated \$24 billion annually, and the value of commercial bee pollination on contracts at around \$10 billion annually. These are huge figures by any standard and they show that bees are big business. Honey sale value, on the other hand, is much less, at \$285 million annually in the USA.

Coping with bee stings

But bees sting, don’t they? And that hurts, doesn’t it? Other than producing honey, bees are best known for their tendency to sting on sight. In fact, it is not in a bee’s interest to sting for the sake of it because they die in the process and they will avoid doing so unless in defence of their nest, which of course is why beekeepers are stung. All beekeepers will be stung during their beekeeping careers. This is a fact and it is also a fact that it is painful. But it is not very painful and the pain doesn’t last for long.

Bees and learning

Honeybees are not domestic animals. They are wild and, unlike horses and cows and other livestock, they don't recognize beekeepers as their 'owners'. Having said that, recent research has shown that, despite the small size of its brain, a bee can recognize human faces if trained to do so and can remember them for two days. Scientists hope that, by studying this amazing ability further, they will be able to develop better face-recognition computer software. It is unlikely, however, that the average beekeeper will find their bees flocking to them on sight.

Researching honeybees

Honey-bees can navigate using the position of the sun, polarized light and landmarks. They can 'tell' other bees about the distance and bearing to sources of food using a well developed symbolic language based on movement and sound. They can also regulate the temperature of the nest to an exact degree using heating and cooling systems of immense complexity. As long as it has water and food, a colony placed on the sides of a volcano or iceberg will maintain its brood nest at 34°C (93°F).

Source:

Cramp, D. (2008). *A Practical Manual of Beekeeping: How to keep bees and develop your full potential as an apiarist*. How to Books, Spring Hill House, Spring Hill Road Begbroke, Oxford OX5 1RX, United Kingdom.