

# Mobile phones responsible for disappearance of honey bee

The growing use of mobile telephones is behind the disappearance of honey bees and the collapse of their hives, scientists have claimed.

Dean Nelson in New Delhi

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Their disappearance has caused alarm throughout Europe and North America where campaigners have blamed agricultural pesticides, climate change and the advent of genetically modified crops for what is now known as 'colony collapse disorder.' Britain has seen a 15 per cent decline in its bee population in the last two years and shrinking numbers has led to a rise in thefts of hives.



Britain has seen a 15 per cent decline in its bee population in the last two years Photo: ALAMY

Now researchers from Chandigarh's Punjab University claim they have found the cause which could be the first step in reversing the decline: They have established that radiation from mobile telephones is a key factor in the phenomenon and say that it probably interfering with the bee's navigation senses.

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They set up a controlled experiment in Punjab earlier this year comparing the behaviour and productivity of bees in two hives – one fitted with two mobile telephones which were powered on for two fifteen minute sessions per day for three months. The other had dummy models installed.

After three months the researchers recorded a dramatic decline in the size of the hive fitted with the mobile phone,

a significant reduction in the number of eggs laid by the queen bee. The bees also stopped producing honey.

The queen bee in the "mobile" hive produced fewer than half of those created by her counterpart in the normal hive.

They also found a dramatic decline in the number of worker bees returning to the hive after collecting pollen. Because of this the amount of nectar produced in the hive also shrank.

Ved Prakash Sharma and Neelima Kumar, the authors of the report in the journal *Current Science*, wrote: "Increase in the usage of electronic gadgets has led to electropollution of the environment. Honeybee behaviour and biology has been affected by electrosmog since these insects have magnetite in their bodies which helps them in navigation.

"There are reports of sudden disappearance of bee populations from honeybee colonies. The reason is still not clear. We have compared the performance of honeybees in cellphone radiation exposed and unexposed colonies.

"A significant decline in colony strength and in the egg laying rate of the queen was observed. The behaviour of exposed foragers was negatively influenced by the exposure, there was neither honey nor pollen in the colony at the end of the experiment."

Tim Lovett, of the British Beekeepers Association, said that hives have been successful in London where there was high mobile phone use.

"Previous work in this area has indicated this [mobile phone use] is not a real factor," he said. "If new data comes along we will look at it."

He said: "At the moment we think is more likely to be a combination of factors including disease, pesticides and habitat loss."

The UK Government has set aside £10 million for research into the decline of pollinators like bees, but the BBKA claim much more money is needed for research into the problem, including studies on pesticides, disease and new technology like mobile phones.

According to the University of Durham, England's bees are vanishing faster than anywhere else in Europe, with more than half of hives

dying out over the last 20 years.

The most recent statistics from last winter show that the decline in honey bees in Britain is slowing, with just one in six hives lost.

This is still above the natural rate of ten per cent losses, but a vast improvement on previous years.

There has been an increase in the number of thefts of hives across the world and in Germany beekeepers have started fitting GPS tracking devices to their hives.