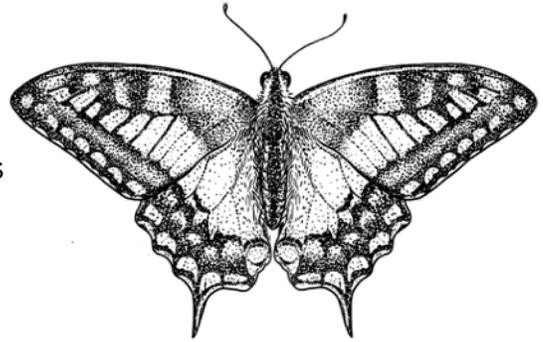
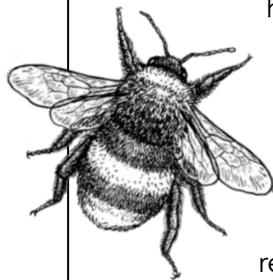


How 5G Could Dramatically Alter Our Natural World

Scientists have proven that radio frequency (RF) radiation can be absorbed by insects, raising internal temperatures, interfering with reproduction or triggering other responses. This has dramatic implications for our natural world as purveyors of 5G technology push ahead with their plans to blanket the country with powerful 4G/5G antennas.



Honeybees are critical to our nation's food supply. They pollinate our crops, increasing yields and improving quality crops. In fact, many of the foods we eat every day would not exist without the pollinating work of honeybees at bloom time.

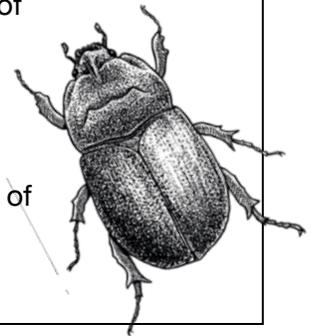


Scientists have found that insects like honeybees can be dramatically affected by high frequencies associated with 5G. These higher frequencies can raise the bee's internal temperature, leading to changes in behavior and physiology, with unknown and unpredictable results.

Even lower frequencies of RF radiation can have a significant impact on the behavior of bees. Studies have shown that signals from ordinary cell phones in close vicinity to a hive can cause bees to sense an impending emergency as if the colony is under attack.

RF radiation can disrupt the magnetic "compass" that many migrating birds and insects use, causing disorientation and possibly disrupting migration patterns.

More than fifty percent of beetle pupae exposed to RF radiation failed to develop normally compared to a control group, resulting in inconsistent maturation of body parts. Twenty-five percent of the exposed beetles died.



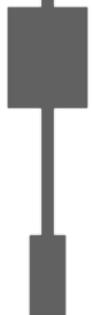
RF radiation is routinely used to kill insects in wood and wood products by exposing them to certain high frequencies that resonate in their bodies, causing dielectric heating and death.



Please see reverse for scientific citations.

Telecom engineers may know how their new technologies work, but what they **don't** know is how those new technologies will affect our natural world.

More study is urgently needed before proceeding with the widespread deployment of powerful new 4G/5G antennas.



Scientific References

Radio-Frequency Electromagnetic Field Exposure of Western Honey Bees. Theilens, A., et al. *Scientific Reports* 10, 461 (2020).

Exposure of Insects to Radio-Frequency Electromagnetic Fields from 2 to 120 GHz. Theilens, X., et al. *Scientific Reports* 8, 3924 (2018).

Effect of high-frequency radiations on survival of the honeybee (*Apis mellifera* L.). Darney, K. et al. *Apidologie* 47:703-710 (2016).

Mobile phone-induced honeybee worker piping. Theilens, O., et al. *Apidologie* (2011).

Exposure to cell phone radiations produces biochemical changes in worker honey bees. Kumar, N.R., et al. *Toxicology International* 18(1):70-72 (2011).

Changes in honeybee behavior and biology under the influence of cellphone radiations. Sharma, V.P. & Kumar, N.R. *Current Science* 98(10):1376-1378 (2010).

Can Electromagnetic Exposure Cause a Change in Behavior? Studying Possible Non-Thermal Influences on Honey Bees – An Approach within the Framework of Educational Informatics. Theilens, A., et al. (2006).

Effect of GSM 900-MHz Mobile Phone Radiation on the Reproductive Capacity of *Drosophila melanogaster*, Panagopoulos, D.J., Karabarbounis, A., & Margaritis, L.H. *Electromagnetic Biology and Medicine* 23(1):29-43 (2004).

Effects of Mobile Phone Radiation on Reproduction and Development in *Drosophila Melanogaster*. Weisbrot, D. *Journal of Cellular Biochemistry* 89(1):48-55 (2003)

Evidence For Nonthermal Effects of Microwave Radiation: Abnormal Development of Irradiated Insect Pupae. Carpenter, R.L. & Livestone, E.M. *IEEE Transactions on Microwave Theory and Techniques* 19(2) (1971).



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