# RF Radiation: Damage to Trees, Wildlife, Plants

Following is a sample of the hundreds of published scientific research studies and reviews showing adverse impact of RF radiation on wildlife, trees, and plants (both residential/commercial, and natural habitat):

A. The following document contains links to over 300 published studies on the significantly damaging effects of EMR on wildlife, trees, plants, completed by Physicians for Safe Technology:

https://mdsafetech.org/environmental-and-wildlife-effects/

B. State of New Hampshire Commission Recommends 15 Measures to Protect the Living Environment and Public from 5G radiation:

# Excerpt:

"Fifth generation, or 5G, wireless technology is intended to greatly increase device capability and connectivity but also may pose significant risks to humans, animals, and the environment due to increased radiofrequency exposure. The purpose of the study is to examine the advantages and risks associated with 5G technology, with a focus on its environmental impact and potential health effects..."

The NH Commission, introduced in Jan. 2019 in HB 522, concluded, in part:

"The Commission heard from ten recognized experts in the fields of physics, epidemiology, toxicology, and public policy and they note that all but the Telecommunications representative expert acknowledged the vast body of peer reviewed science showing harm to animals, insects, vegetation and humans, with children being highly vulnerable. The push for 5G is for a presumed need, with "assurances by federal regulatory agencies that 5G technology is not harmful." This safety is now called into question as more people are using devices for longer periods of time and closer to the body. More cell towers are being deployed in cities with an expected 800,000 cell towers ultimately placed adjacent to homes, schools and businesses. Space satellites will connect with these towers and billions of Internet of Things devices resulting in a dense layered blanket of RF radiation to the planet."

https://mdsafetech.org/2020/11/17/new-hampshire-commission-studies-5g-technology-health-and-environment-effects/

The Commission Report: <a href="http://www.gencourt.state.nh.us/statstudcomm/">http://www.gencourt.state.nh.us/statstudcomm/</a> committees/1474/reports/5G%20final%20report.pdf

C. "Wireless Silent Spring" by Dr. Cindy Russell: A ten-page report on adverse impact to insects and wildlife by RF Radiation, with 49 referenced published scientific papers:

https://mdsafetech.files.wordpress.com/2018/11/wireless-silentspring\_-sccma-oct-2-2018.pdf

D. "Research Studies on Impacts to the Environment from Wireless: Trees, Plants, Pollinators, Birds, and Wildlife" (including 25 scientific references)

https://ehtrust.org/research-studies-on-impacts-to-the-environment-from-wireless-trees-plants-pollinators-birds-and-wildlife/

E. "Statement by Wildlife Biologist Alfonso Balmori, on the FDA Review of Cell Phone Radiation":

# https://ehtrust.org/26684-2/

F. "Bees-Butterflies-Wildlife Research: Electromagnetic Fields and the Environment"

Including references to numerous published studies, and two expert videos:

https://ehtrust.org/science/bees-butterflies-wildlife-research-electromagnetic-fields-environment/

G. "Memorandum on the Bird and Wildlife Impacts of Non-Ionizing Radiation by Albert M. Manville, PhD, Former U.S. Fish and Wildlife Service Senior Biologist"

https://ehtrust.org/memorandum-bird-wildlife-impacts-non-ionizing-radiation-albert-m-manville-ph-d-former-u-s-fish-wildlife-service-senior-biologist/

H. NABU Insect Research Review (190 studies)

https://phys.org/news/2020-09-mobile-insects-german.html

I."Effects of Wireless Radiation on Birds and Other Wildlife"

https://www.saferemr.com/2016/07/effects-of-wireless-radiation-on-birds.html Radiofrequency radiation injures trees around mobile phone base stations: https://pubmed.ncbi.nlm.nih.gov/27552133/

Electromagnetic pollution from phone masts. Effects on wildlife:

https://www.sciencedirect.com/science/article/abs/pii/S0928468009000030

Exposure of Insects to Radio-Frequency Electromagnetic Fields from 2 to 120 GHz:

https://www.nature.com/articles/s41598-018-22271-3

"Insect Apocalypse":

https://scientists4wiredtech.com/what-are-4g-5g/the-insect-apocalypse-is-here/

Reports on the Increasing Energy Consumption of Wireless Systems and Digital Ecosystem:

https://ehtrust.org/science/reports-on-power-consumption-and-increasing-energy-use-of-wireless-systems-and-digital-ecosystem/

#### A research review:

The influence of bioactive mobile telephony radiation at the level of a plant community - Possible mechanisms and indicators of the effects: https://www.sciencedirect.com/science/article/pii/S1470160X19306764?via%3Dihub

in plants reduced growth, increased infection and physiological and morphological changes (Balodis et al. 1996, Haggerty 2010, Waldmann-Selsam et al. 2016, Havas and Symington 2016, Vian et al. 2016, Halgamuge 2017);

in birds, aggressive behavior, impaired reproduction and interference with migration (Southern 1975, Larkin and Sutherland 1977, Balmori 2004, Balmori and Hallberg 2007, Everaert and Bauwens 2007, Fernie et al. 2010, Engels et al. 2015, Wiltschko et al. 2015);

in livestock, especially dairy cows, reduced productivity, impaired reproduction, and sudden death (Burchard et al. 1996, Loscher and Kas 1998, Hillman et al. 2013, Stetzer et al. 2016);

in rodents, increased cancer risk in three long-term studies (Chou et al 1992, NTP 2018, Falcioni et al. 2019):

in amphibians (Balmori 2006, Balmori 2010) and insects (Cucurachi et al. 2013), deformities and population decline; and

in honey bees, aggressive behavior, reduced learning, reduced productivity, swarming and abandoning hives (Harst et al. 2006, Pattezhy 2009, Warnke 2009, Favre 2011, Kumar et al. 2011, Sahib 2011, Shepherd et al. 2019).

Balmori A. 2004. Effects of electromagnetic fields of phone masts on a population of white storks (Ciconia ciconia). Electromagnetic Biology and Medicine 24: 109–119.

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Balmori A. 2010. Mobile phone mast effects on common frog (Rana temporaria) tadpoles: the city turned into a laboratory. Electromagn Biol Med. 29 (1–2):31–35.

Balmori A and O Hallberg. 2007. The urban decline of the house sparrow (Passer domesticus): A possible link with electromagnetic radiation. Electromagnetic Biology and Medicine 26 (2): 141–151.

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Study to Find Wireless Radiation Can Cause Cancer in Lab Rats

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Hillman D, D Stetzer, M Graham, CL Goeke, et al. 2013. Relationship of electric power quality to milk production of dairy herds – Field study with literature review. Science of the Total Environment 447: 500–514.

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Pattazhy S. 2009. Mobile phone towers a threat to honey bees: Study. The Times of India, August 2009. <a href="http://timesofindia.indiatimes.com/NEWS/Science/Mobile-phonetowers-a-threatto-honeybees-Study/articleshow/4955867.cms">http://timesofindia.indiatimes.com/NEWS/Science/Mobile-phonetowers-a-threatto-honeybees-Study/articleshow/4955867.cms</a>.

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- I. The following series of photographs and slides from one German researcher are short pictoral-text examples of how RF radiation may be damaging trees:
- 1. Series of three lime trees taken between Sept. 9 Nov. 16, 2006. The three trees show differential leaf death corresponding to matching differential exposure to a nearby RFR antenna.

One tree not shielded and in line with signal is dead by Oct. 8. one tree whose top is not shielded, but whose bottom is shielded, has a dead top where exposed to the RFR, and a tree unexposed to antenna has healthy leaves throughout:

# http://puls-schlag.org/download/ThreeLimeTrees%2096dpi0704ebook.pdf

2. Photographic and slide series from the same researcher, indicating how incongruous, incomplete tree damage may occur depending on partial exposure to RF radiation:

## http://puls-schlag.org/download/Bizarre-HF-Damage.pdf

3. Cherry trees on different sides of a shed, with an RF transmitter in the distance: two trees on the RF transmitter side die in July, a tree on the other side, partially protected by the shed, loses all its leaves above and to the side of the shed only (note last two photos):

## http://puls-schlag.org/download/CherryTreeHut200705.pdf

4. Horse Chestnut sickens on the side exposed to RF Radiation, healthy on the other side:

http://puls-schlag.org/download/Intelligencetest200705.pdf