

## **New meta-study: Mobile phone radiation contributes to insect death**

Ny metastudie: Mobilstrålning bidrar till insektsdöden

<https://www.stralskyddsstiftelsen.se/2020/09/ny-metastudie-mobilstralning-bidrar-till-insektsdoden/>

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**Radiation from mobile masts has probably contributed to the dramatic decline in the number of insects observed in recent years. It shows a new scientific study of all available research. 83 studies have so far studied the effects on insects of mobile radiation and of these, 72 show harmful effects on insects. The effects have been shown at levels of radiation that are hundreds of times below the reference values applied in Sweden and many other countries.**

The new [meta-study](#) was carried out by environmental researcher Alain Thill on behalf of the German nature conservation association [NABU](#) in collaboration with two other environmental organizations from Germany (Diagnose Funk) and Luxembourg (AKUT). Of 83 studies that have so far studied effects on insects due to mobile phone radiation, a clear majority (72 studies) show that the radiation has negative effects on bees, flies and other insects.

According to the new meta-study, the following harmful effects on insects have so far been shown in research: impaired navigation ability, impaired reproductive ability, apathy, affected flight ability, disturbed circadian rhythm, inability to find food, impaired reaction ability, altered behavior, DNA damage and influence.

Research has also shown that radiation disrupts the cells' calcium balance, which in turn can lead to many other harmful effects, such as a weakened immune system.

Research showed in 2018 that future 5G expansion can be particularly harmful to insects due to increased radiation and the use of higher frequencies. According to the [study](#), higher frequencies above 6 GHz can lead to insects absorbing up to 370% more radiation, even though the radiation increases by only 10% in output power.

### **Previous reports warn of serious impact**

[In 2018](#), an EU-funded review report of available research already showed that radiation from power lines, mobile masts and WiFi can harm birds, insects and plants. Due to the increase in microwave radiation, the 5G expansion may worsen the situation and serious environmental impact could not be ruled out.

The investigation from EU-funded [EKLIPSE](#) concluded that there is scientific evidence that electromagnetic radiation from power lines, radar, TV / radio, Wi-Fi and 2G / 3G / 4G has a negative effect:

insects' ability to orient, movement patterns, behavior and reproduction  
birds' ability to orient (radio frequency radiation / microwave radiation)  
The metabolic health of plants through the formation of free radicals, which can, for example, lead to reduced growth

A scientific review article published in [The Lancet](#) in 2018 also pointed out radio frequency radiation (mobile phone radiation) as a factor behind the decline in the number of bees and insects.

In 2018, the European Commission's expert group [SCHEER](#) also published a report which concluded that 5G could lead to major consequences for animals and nature.

In March 2020, the European Parliament's Research Service released [a report](#) summarizing the state of research on 5G as follows:

"Various studies suggest that 5G would affect the health of humans, plants, animals, insects, and microbes - and as 5G is an untested technology, a cautious approach would be prudent."

### **Insects and birds completely without protection**

The reference values that the Swedish Radiation Safety Authority recommends as the maximum permissible radiation do not protect birds or insects against damage due to radiation from mobile base stations. This reference value, recommended by the controversial and heavily criticized organization ICNIRP, only applies to protection against immediate acute warming effects in humans and therefore lacks protection from harmful effects on humans due to prolonged exposure (more than 30 minutes at levels that do not cause warming of body tissue within 30 minutes ) such as cancer and neurological diseases. It therefore does not protect insects, birds or other animals against both harmful immediate heating effects and harmful effects due to prolonged exposure at levels that do not give rise to immediate heating.

Maria Feychting, professor at Karolinska Institutet and vice chair of ICNIRP, who decided on these reference values, confirmed to the Radiation Protection Foundation [in 2019](#) that

ICNIRP's value only applies to humans and that there is a lack of knowledge about the effects of microwave radiation from mobile masts and 5G on birds:

- "ICNIRP's guidelines apply to people. The scientific basis for animals (which are not experimental animals) is limited, so it is not possible to determine whether birds are protected by ICNIRP guidelines or not. "

Sources:

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