

## Migratory birds: Invisible waves interfere orientation



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**Electromagnetic radiation confused migrating birds - they lose their way, German researchers found. Already weak waves bring the animals on the way.**

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Oldenburg - migratory birds surpass navigation devices. Without Map and Satellite Help them find their unerringly often thousands of kilometers long itineraries. They are based on the position of the sun in the night to the stars and the Earth's magnetic field. Very trouble-free but its navigation is not, as now, a team led by Henrik Mouritsen and Svenja Engels of the University of Oldenburg found out. Their findings [the scientists publish in the journal "Nature"](#).

Already weak electromagnetic fields mess up the orientation of migratory birds. Mouritsen and his colleagues found that the sensory system of robins fails when electromagnetic radiation in the medium wave acts on it.

This, the researchers robins packed during migration time in a specially prepared box - a funnel-like orientation cage. Normally birds hopping at night in the direction in which they would fly. However, the existing electromagnetic radiation on the campus of the University of Oldenburg made the beast disoriented.

### In the country of the compass works

Only when the researchers abschrmten the cages with aluminum plates, the robins were able to navigate again. The amazing thing: The disturbances came not from pylons or mobile networks and electrical appliances, and were in radio waves.

The researchers repeated their experiment in the country. Most there, the electromagnetic radiation is lower than in the city. Indeed, in a rural area of the inner compass of birds worked flawlessly.

The findings represent the current state of research in question: "Until now, that electromagnetic radiation below certain limits no effect on biological processes has," Mouritsen said. His attempts now tell you something else. "The results should give us pause," he says. "Both in terms of the survival of migratory birds, as well as what possible effects to humans." The applies it even to investigate.

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