

# Even non-migratory birds use a magnetic compass

May 18 2017

---



Credit: CC0 Public Domain

Not only migratory birds use a built-in magnetic compass to navigate correctly. A new study from Lund University in Sweden shows that non-migratory birds also are able to use a built-in compass to orient

themselves using the Earth's magnetic field.

The researchers behind the current study have received help from a group of [zebra finches](#) to study the [magnetic compass](#) of what are known as resident birds, that is, species that do not migrate according to the season. Zebra finches are popular pet birds in many homes. Originally, they come from Indonesia and Australia where they search for food in a nomadic way.

"We wanted to know how a magnetic compass works in non-[migratory birds](#) like these", says Atticus Pinzón-Rodríguez, doctoral student in biology at the Faculty of Science at Lund University.

In the current study, researchers have looked closer at the zebra finches' ability to utilise the Earth's [magnetic field](#) and the different properties of this built-in compass. The results show that the zebra finches use a magnetic compass with very similar functions to that of migratory birds, i.e. one with a very specific light dependency and thus sensitivity to different colours and light intensities.

"Our results show that the magnetic compass is more of a general mechanism found in both migratory birds and [resident birds](#). It seems that although zebra finches do not undertake extensive migration, they still might be able to use the magnetic compass for local navigation", says Atticus Pinzón-Rodríguez.

Although the magnetic compass of birds has been studied by the research community for a long time, the understanding of how it works is still very incomplete, according to Atticus Pinzón-Rodríguez.

The present study was published recently in the scientific *Journal of Experimental Biology*.

**More information:** Atticus Pinzon-Rodriguez et al, Zebra finches have a light-dependent magnetic compass similar to migratory birds, *The Journal of Experimental Biology* (2017). [DOI: 10.1242/jeb.148098](https://doi.org/10.1242/jeb.148098)

Provided by Lund University

Citation: Even non-migratory birds use a magnetic compass (2017, May 18) retrieved 20 April 2024 from <https://phys.org/news/2017-05-non-migratory-birds-magnetic-compass.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.