

Blackbirds found to rest earlier at dusk when sick

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Turdus merula. Credit: Andreas Trepte / Wikipedia

A trio of biologists at Lund University in Sweden has found that blackbirds that feel ill tend to rest earlier at dusk than control birds. In their study, reported in the *Proceedings of the Royal Society B*, Rosie Lennon, Shivani Ronanki and Arne Hegemann tagged wild Eurasian blackbirds with accelerometers and studied their movements over the following 48 days.



Prior research has shown that when people and some animals, such as domesticated pets, become ill with minor ailments such as a cold, they tend to slow down, take more breaks and go to bed earlier at night. In this new effort, the researchers wondered what <u>wild animals</u> do when they get sick. To find out, they conducted an experiment with wild Eurasian <u>blackbirds</u>.

The experiment consisted of capturing 45 of the birds, affixing very tiny accelerometers to their backs, injecting half of them with lipopolysaccharide and then setting them all free. Lipopolysaccharide is a compound that makes animals, such as birds, feel as if they have been infected by a bacteria—it does so by damping the <u>immune system</u>.

After 48 days, the researchers attempted to recover the accelerometers, which stored movement data locally. They were only able to retrieve 10 of the devices that had been attached to the "sick" birds and 12 from the control group.

The researchers found that movement by those birds that had been injected with the illness-mimicking drug was reduced in the experimental group compared to the control animals. But this was true only at dusk—the sick birds began resting an hour earlier than normal. Prior to that, they maintained the same level of movement as the <u>control group</u>.

The research team suggests their findings were not a surprise; birds do not store fat, which means they must keep moving and looking for food or they will run out of energy, preventing them from flying, which would almost certainly lead to death.

They did find one thing surprising, however. The early resting behavior lasted for almost three weeks—long after the effects of lipopolysaccharide had worn off. The researchers note that they



conducted their experiment during the period after breeding and before winter, when conditions would be the least challenging for the <u>birds</u>.

More information: Rosie J. Lennon et al, Immune challenge reduces daily activity period in free-living birds for three weeks, *Proceedings of the Royal Society B: Biological Sciences* (2023). DOI: 10.1098/rspb.2023.0794

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