

When darkness fell during the total solar eclipse, zoo animals responded in wildly different ways

July 27 2026, by Sanjukta Mondal



Japanese macaques had the most obvious response, as they became much less active and moved higher into branches. Credit: Pexels

Imagine a bright, sunny day suddenly turning dark as a solar eclipse

sweeps across the sky. Even though humans have watched and recorded eclipses for thousands of years and now understand the science behind them, experiencing a spell of darkness during the day can still evoke awe and surprise.

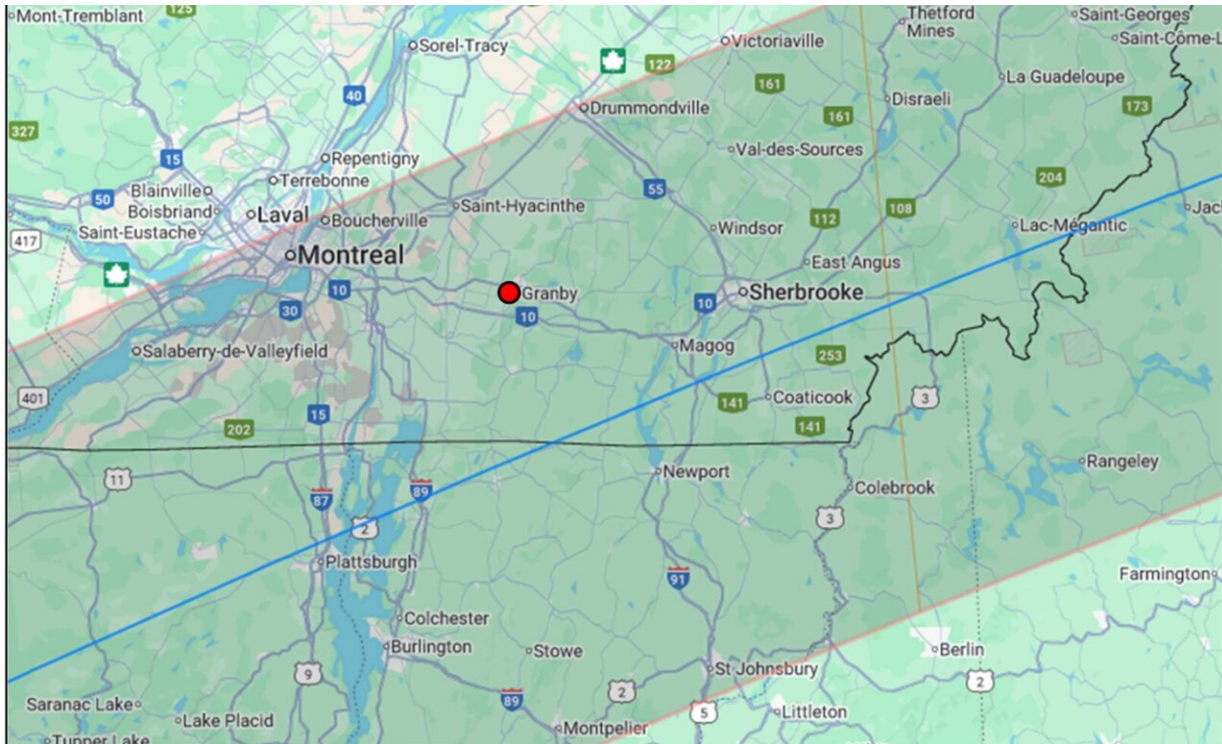
A rare total eclipse in 2024, which a significant portion of North America witnessed, created an exciting opportunity for researchers to understand how zoo animals behave during a total solar eclipse. They were curious whether the sudden changes in light and temperature caused by the eclipse would trigger different reactions in various captive species.

Most zoo animals showed very little change in their behavior during the total eclipse, but a few reactions stood out. Japanese macaques, zebras, camels and some birds displayed signs of stress, such as climbing high in trees, stopping their usual activities, becoming more active and showing increased alertness as the eclipse unfolded.

Since the zoo was closed to visitors during the eclipse, researchers were able to observe these reactions without the distraction of crowds or human excitement influencing animal behavior.

The results revealed a surprising gap between what observers believed the animals were doing and what the data actually showed, highlighting why standardized methods and proper training are essential when studying animal behavior.

The [findings](#) were published in *Zoo Biology*.



Zoo de Granby (red point; Granby, Canada) within the shadow cast by the moon on the afternoon of April 8, 2024. Credit: Jubier 2025.
http://xjubier.free.fr/site_pages/solar_eclipses/TSE_2024_GoogleMapFull.html.

What happened in the dark

Animals are remarkably perceptive to even the smallest shifts in their surroundings. What remains unclear is whether the change brought on by a solar eclipse is dramatic enough for every species to actually notice.

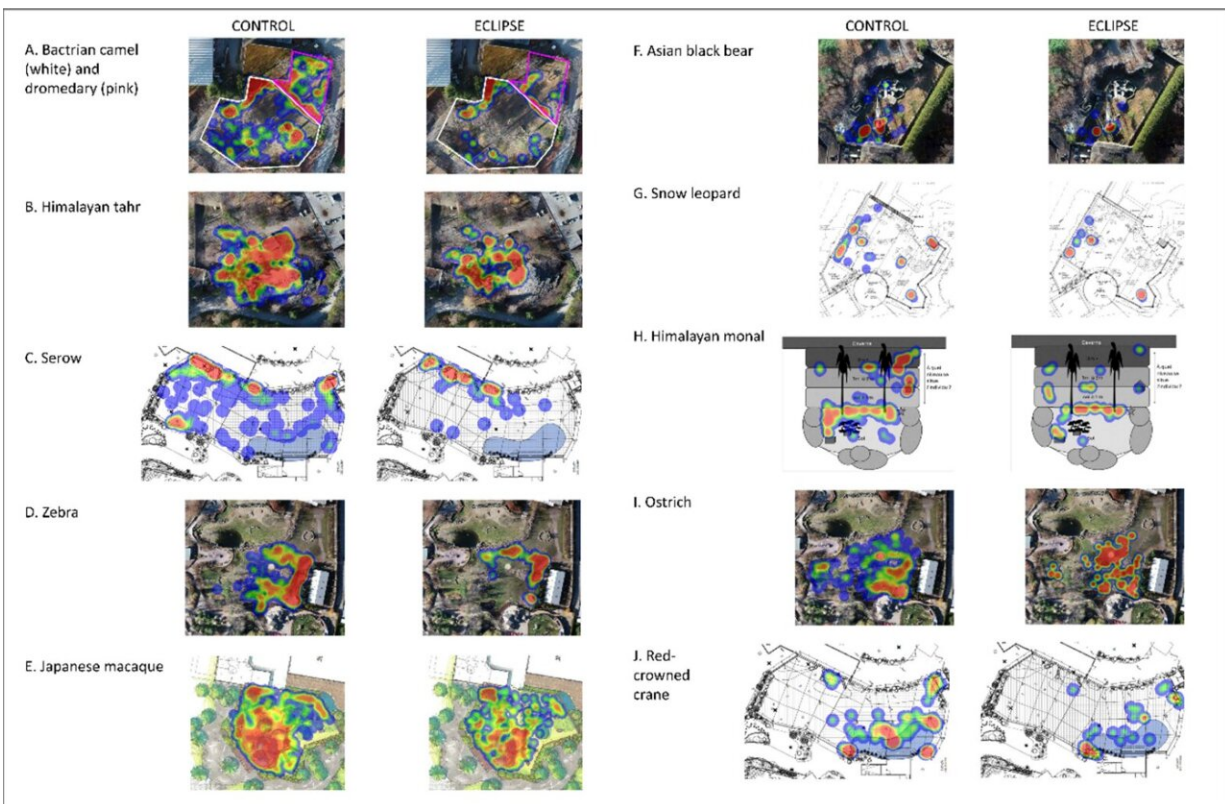
Much of what scientists know about how animals react to eclipses comes from anecdotal reports and casual observations rather than controlled scientific measurements.

Watching animals in the wild during an eclipse tends to produce

scattered, one-off accounts, since each sighting happens in a different setting with different animals. [Studying captive animals](#) offers a real advantage because their behavior can be compared before, during and after the eclipse under far more controlled conditions.

To understand how animals respond to a rare moment of darkness in the middle of the day, researchers watched 12 mammal and bird species at Zoo de Granby in Quebec during the April 8, 2024, total eclipse.

To determine whether the eclipse changed animal behavior, researchers first needed to understand what normal looked like. They observed the animals for more than six days, tracking their routines for two days before the eclipse and three days after it. This allowed researchers to see whether the animals behaved differently during the eclipse itself.



Heatmaps for 11 species in their habitats comparing space use between control days (between 2 and 4) and during the total solar eclipse and the post-totality partial eclipse. Credit: *Zoo Biology* (2026). DOI: 10.1002/zoo.70090

To avoid human reactions influencing the animals, researchers kept the zoo closed during the eclipse. Every 60 seconds for three hours, observers recorded the animals' behavior using the ZooMonitor app.

They tracked specific patterns, including whether animals were active or inactive, relaxed or showing signs of stress such as pacing or running. Researchers also mapped the animals' locations within their enclosures to see whether they gathered near night doors, climbed trees or changed where they spent their time.

The strongest reaction came from the Japanese macaques, also known as snow monkeys. As the eclipse reached totality, they stopped what they were doing, climbed high into the branches and became unusually quiet. When the sunlight returned, they resumed their normal behavior within about 15 minutes.

The zebras showed the opposite pattern. They became more active and appeared stressed, running during the darkness and remaining jumpy even after the sun began to return. Bactrian camels started moving closer to the doors where they typically go to sleep at night, while snow leopards became slightly more alert and watchful.

Among the birds, ostriches and monals showed a sharp drop in activity during totality, with activity falling by 88% and 100%, respectively. Both returned to their usual activity levels within about 5–15 minutes after totality. Cranes, meanwhile, stopped making their calls altogether as the sky went dark.

This unique glimpse into zoo animals' world during the astronomical event made it clear that animals do not respond in just one way and that, contrary to the common notion, not every animal mistakes the sudden darkness for night. Future studies across multiple zoos, using the same standardized observation methods, could help build a clearer, more complete picture of how different species respond.

More information: Louis Lazure et al, Behavioral Responses of Zoo Animals During a Total Solar Eclipse in the Absence of Visitors, *Zoo Biology* (2026). [DOI: 10.1002/zoo.70090](https://doi.org/10.1002/zoo.70090)

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