

The calm of the deer

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"Humans can have strong effects on the behaviour of wild animals and even influence their day and night rhythm," said conservation biologist Dr. Marco Heurich from the University of Freiburg. A team headed by Nadège C. Bonnot of the The French National Research Institute for Agriculture, Food and Environment (INRAE) has now investigated how

the targeted reintroduction of lynx throughout Europe has affected the behavior of deer—the lynx's favorite food—and the role of human activities in the changes. Bonnot, Heurich and the other researchers involved have published their results in the *Journal of Animal Ecology*.

The [lynx](#) is a nocturnal predator. Prior to the study, the researchers assumed that [human](#) disturbances such as hunting would cause deer to be increasingly active in the hours of the night. The study was based on eleven million records of movements of nearly 430 deer individually monitored using GPS. The animals were part of twelve populations distributed throughout Europe within the regions of the EURODEER network. Using this data, the researchers investigated how the behavior in the presence of the lynx in interaction with human influences affects the time of day when deer are active.

The scientists found that pronounced changes in the activity patterns of deer occur in response to fluctuating risks over areas and times, mainly caused by disturbance from humans. In particular, deer reduced their movements in daylight by a factor of 1.37 when general disturbances by humans, such as those caused by settlements or road traffic, were consistently high. The hunting of roe deer exacerbates this effect—during the [hunting season](#) they switched most of their activity to the night and, to a lesser extent, to dawn, to avoid daytime hunting by humans. In regions with lynx, the activity pattern changed—in the presence of their nocturnal enemy, roe [deer](#) were more active in the daylight hours. The study thus shows that the influence of [hunting](#) humans is significantly stronger than that of lynx.

More information: Nadège C. Bonnot et al, Fear of the dark? Contrasting impacts of humans versus lynx on diel activity of roe deer across Europe, *Journal of Animal Ecology* (2019). [DOI: 10.1111/1365-2656.13161](https://doi.org/10.1111/1365-2656.13161)

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