

Urban rabbits distance themselves more from their neighbours

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As a group of researchers at Goethe University has now discovered, urban rabbits display a greater need to segregate themselves from their neighbours.

What are the neighbours up to? The European [rabbit](#) (*Oryctolagus cuniculus*) can tell from the smell of their latrines, which mark the boundary of their territory like a fence. Latrines located near their own burrow, on the other hand, serve to exchange information within the group. As a group of researchers at Goethe University has now discovered, urban rabbits use the latrines along the territorial boundary more often and thus display a greater need to segregate themselves from their neighbours.

Rabbits communicate with each other via scents in their urine or faeces. By snuffling at the latrine, they learn everything there is to know about the age, gender or social status of the other users. Urban rabbits, however, demonstrate a completely different behaviour to that of their rural brethren when using the latrines, as Madlen Ziege, doctoral researcher in the Ecology and Evolution Working Group at Goethe University reports in the current issue of the *BMC Ecology* online journal.

Whilst wild rabbits in the countryside deposit more latrines in close proximity to their burrows and also use these more often, their relatives in the city behave quite differently. Along the rural-to-urban gradient, researchers not only found a particularly large number of latrines along

territorial boundaries, i.e. quite a distance away from the burrow, but also signs that these were used more frequently than those right next to the burrow. "The depositing of latrines as a means of communication between neighbouring social groups in order, for example, to demarcate territory, is therefore particularly significant amongst wild rabbits in Frankfurt's inner city," explains Madlen Ziege.

Findings from earlier studies deliver a good explanation for these observations: In the centre of Frankfurt only a few wild rabbits – often even just one or a pair – live in a burrow. However, burrow and rabbit population densities are very high here and thus also the competition for resources. Clear segregation from the neighbours seems to be of particular importance here, whilst "internal" communication in a group which is anyhow small is less important. In the countryside surrounding Frankfurt, by contrast, large social groups inhabit extensive burrow systems; burrow and rabbit population densities are comparatively low here. Communication within the same social group is consequently of greater importance.

More information: Madlen Ziege et al. Importance of latrine communication in European rabbits shifts along a rural–to–urban gradient, *BMC Ecology* (2016). [DOI: 10.1186/s12898-016-0083-y](https://doi.org/10.1186/s12898-016-0083-y)

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