

# It's not trails that disturb forest birds, but the people on them

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Credit: Wikipedia.

The first study to disentangle the effect of forest trails from the presence of humans shows the number of birds, as well as bird species, is lower when trails are used on a more regular basis. This is also the case when trails have been used for many years, suggesting that forest birds do not get used to this recreational activity. Published in *Frontiers in Ecology and Evolution*, the finding suggests the physical presence of trails has

less of an impact on forest birds than how frequently these recreational paths are used by people. To minimize the impact on these forest creatures, people should avoid roaming from designated pathways.

"We show that [forest birds](#) are quite distinctly affected by people and that this avoidance behavior did not disappear even after years of use by humans. This suggests not all [birds](#) habituate to humans and that a long-lasting effect remains," says Dr. Yves Bötsch, lead author of this study, based at the Swiss Ornithological Institute, Sempach, Switzerland and affiliated with Institute of Evolutionary Biology and Environmental Studies, University Zurich, Switzerland. "This is important to show because pressure on natural habitats and nature protection areas is getting stronger and access bans are often ignored."

Many outdoor activities rely on infrastructure, with roads and trails being most common. Previous research has shown that trails cause habitat loss and fragmentation, where larger areas of habitat are dissected into smaller pieces thereby separating wildlife populations. However it has been difficult to say for certain whether it is the presence of trails or humans that have the most impact on forest birds.

Bötsch explains, "Previous studies provide conflicting results about the effects of trails on birds, with some studies showing negative effects while others do not. We thought differences in the intensity of human use may cause this discrepancy, which motivated us to disentangle the effect of trails from the presence of humans."

The researchers visited four forests with a similar habitat, such as the types of trees, but which differed in the levels of recreation. They recorded all birds heard and seen at points near to the trails, as well as within the forest itself, and found that a lower number of birds were recorded in the forests used more frequently by humans. In addition, they noticed certain species were more affected than others.

"Species with a high sensitivity, measured by flight initiation distance (the distance at which a bird exposed to an approaching human flies away), showed stronger trail avoidance, even in rarely frequented forests. These sensitive species were raptors, such as the common buzzard and Eurasian sparrowhawk, as well as pigeons and woodpeckers," says Bötsch.

He continues, "Generally it is assumed that hiking in nature does not harm wildlife. But our study shows even in forests that have been used recreationally for decades, birds have not habituated to people enough to outweigh the negative impact of [human](#) disturbance."

Bötsch concludes with some advice, which may help to minimize the adverse effects on forest birds by people who use forests recreationally.

"We believe protected areas with forbidden access are necessary and important, and that new trails into remote forest areas should not be promoted. Visitors to existing [forest](#) trails should be encouraged to adhere to a "stay on [trail](#)" rule and refrain from roaming from designated pathways."

**More information:** *Frontiers in Ecology and Evolution*, [DOI: 10.3389/fevo.2018.00175](https://doi.org/10.3389/fevo.2018.00175) , [www.frontiersin.org/articles/10.3389/fevo.2018.00175/full](http://www.frontiersin.org/articles/10.3389/fevo.2018.00175/full)

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