

Study examines how pathogens affect bird migration

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Whether long-distance animal migration facilitates or hampers pathogen transmission depends on how infections affect the routes and timing of migrating hosts. In a *Journal of Zoology* study, investigators have found that haemosporidians—blood parasites commonly infecting birds—likely impede migratory performance, as infected individuals lag behind those who are uninfected.

For the study, researchers investigated haemosporidians in 4 passerine species on spring passage, and they linked infection status to passage date. Haemosporidian prevalence virtually doubled between [birds](#) sampled at the beginning of the passage period with those sampled one month later. This indicates that infected individuals arrived later than uninfected individuals. However, infection status was not related to any other individual, energetic or haematological variable, except white blood cell counts, which were elevated in infected birds, suggesting that they mounted an immune response that may require resources that could otherwise be allocated to migratory flights.

"As a consequence of the partial segregation of infected and uninfected [individuals](#), host populations often profit from hampered parasite transmission and reduced parasite prevalence. However, it is still not known whether these profits of infection-related delays can eradicate the costs of a late arrival at the breeding grounds and onset of reproduction", said lead author Tamara Emmenegger, of the Swiss Ornithological Institute.

More information: T. Emmenegger et al, Blood parasites prevalence of migrating passerines increases over the spring passage period, *Journal of Zoology* (2018). [DOI: 10.1111/jzo.12565](https://doi.org/10.1111/jzo.12565)

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