

# Prevalence and intensity of avian malaria in a quail hybrid zone

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## Abstract

Hybridization is a common and important stage in species formation in plants and animals. The evolutionary consequences of hybridization depend not only on reproductive compatibility between sympatric species, but also on factors like vulnerability to each other's predators and parasites. We examine infection patterns of the blood parasite *Haemoproteus lophortyx*, a causative agent of avian malaria, at a site in the contact zone between California quail (*Callipepla californica*) and Gambel's quail (*C. gambelii*). We tested whether species identity, sex, and year predicted infection status and intensity. While we found no effect of sex on the status or intensity of infection, we found differences in infection status and intensity across species and between years. The prevalence of infection in California and hybrid quail was lower than in Gambel's quail. Once infected, however, California and hybrid quail had higher infection intensities than Gambel's quail. California and hybrid quail exhibited no significant differences in prevalence or intensity of infection. These findings suggest that infection by *H. lophortyx* has the potential to influence species barrier dynamics in this system, however, more work is necessary to determine the exact evolutionary consequences of this blood parasite.

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