Climate change, the “escalator to extinction”, and me
Ben Freeman, Georgia Tech
Climate change sets in motion an escalator to extinction

??? Nowhere to go

now
future
Mountain birds on 'escalator to extinction' as planet warms

By Matt McGrath
Environment correspondent
© 29 October 2018

Climate change is 'escalator to extinction' for mountain birds

The Associated Press
Christina Larson

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Collapsing avian community on a Hawaiian island


The viability of many species has been jeopardized by numerous negative factors over the centuries, but climate change is predicted to accelerate and increase the pressure of many of these threats, leading to extinctions. The Hawaiian honeycreepers, famous for their spectacular adaptive radiation, are predicted to experience negative responses to climate change, given their susceptibility to introduced disease, the strong linkage of disease distribution to climatic conditions, and their current distribution. We document the rapid collapse of the native avifauna on the island of Kaua‘i that corresponds to changes in climate and disease prevalence. Although multiple factors may be pressuring the community, we suggest that a tipping point has been crossed in which temperatures in forest habitats at high elevations have reached a threshold that facilitates the development of avian malaria and its vector throughout these species’ ranges. Continued incursion of malaria by climate change and could also contribute to extinctions in the coming decades. Kaua‘i represents a warning for Hawaii islands, as well as other species around the world.

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LETTER

Host phylogeny and elevation predict infection by avian haemosporidians in a diverse New Guinean bird community

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Two points:

1. Climate change -> altered disease dynamics -> consequences for biodiversity, human health, agriculture
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1. Climate change -> altered disease dynamics -> consequences for biodiversity, human health, agriculture

2. Birds tell us what is happening in the world ("canaries in the coal mine")
Questions?