

Ultraviolet light deterrents

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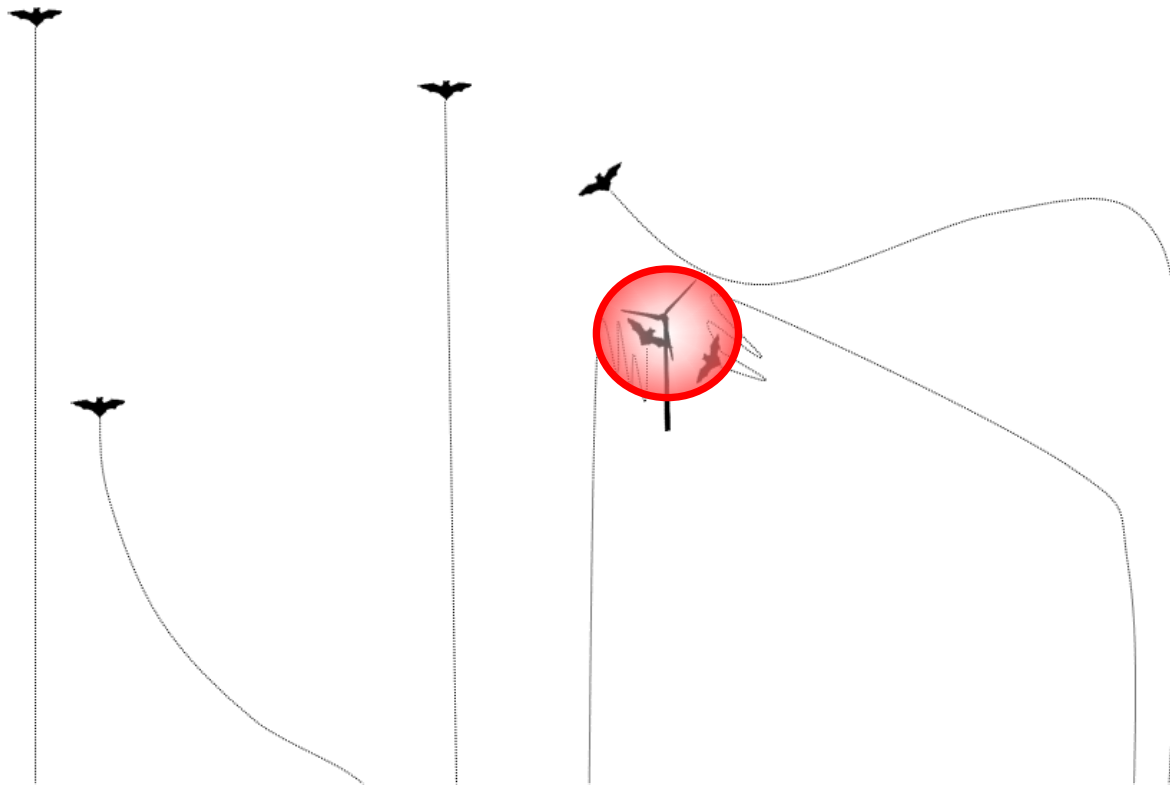


Current understanding and minimization



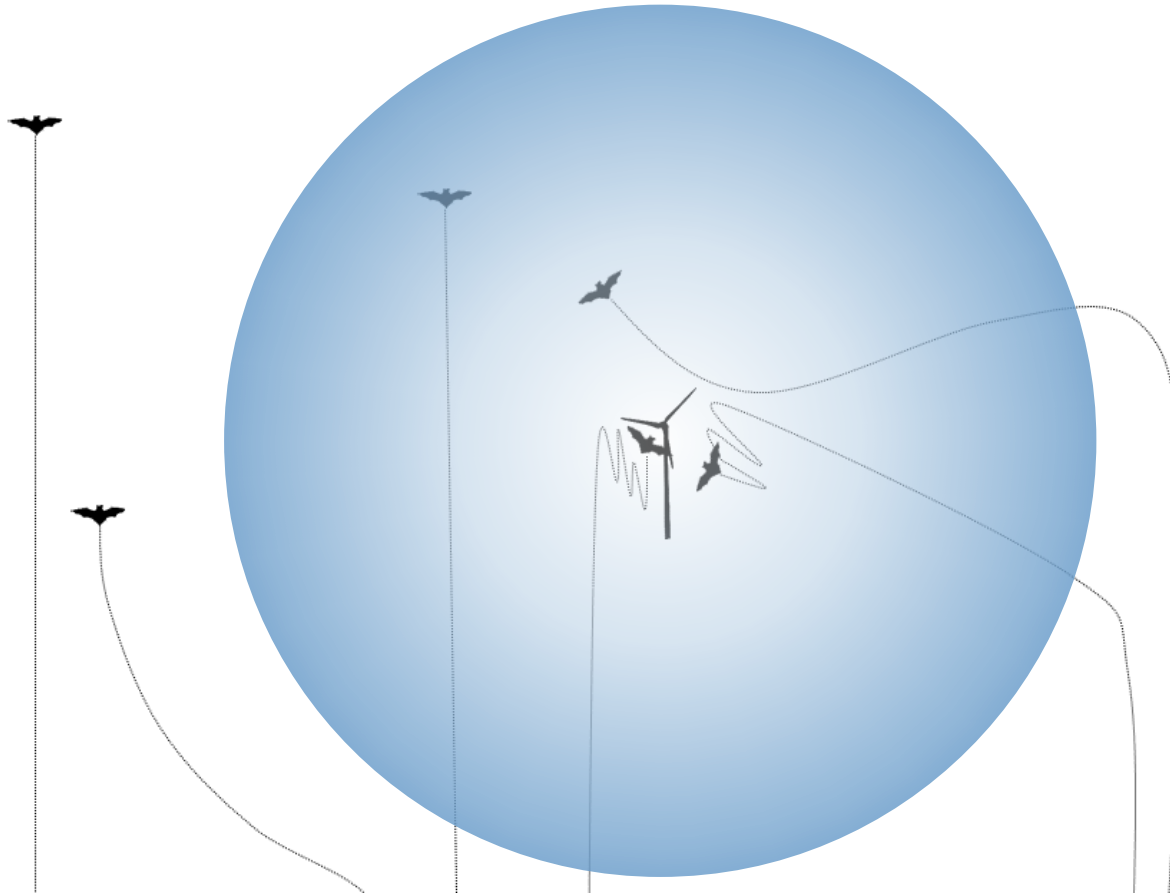
close to turbine

Methods Fatality searches Acoustic detectors Video cameras
Minimization Curtailment Acoustic deterrents Texture modification

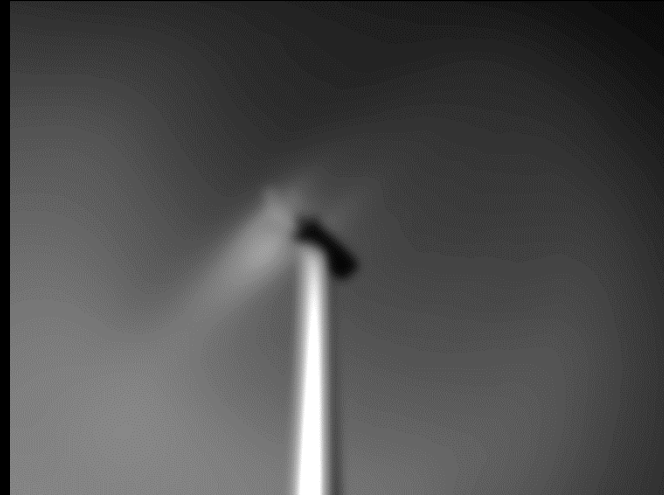
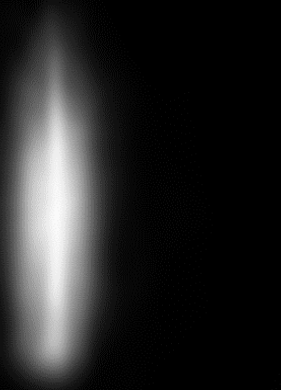


If fatality minimization is moving forward before understanding **cause** at observable scale, ***why not go bigger?***

Can we avoid possible attraction from **afar**?



How might bats see trees and turbines?



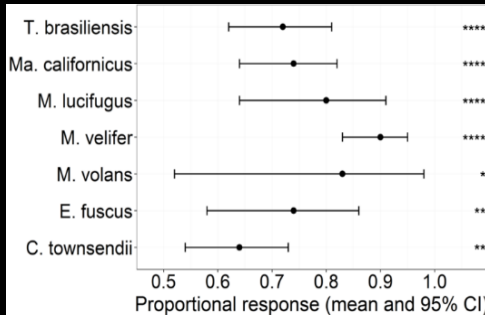
Ultraviolet vision and bats

✓ 2014: tested & confirmed
7 bat species (3 families)
see dim UV

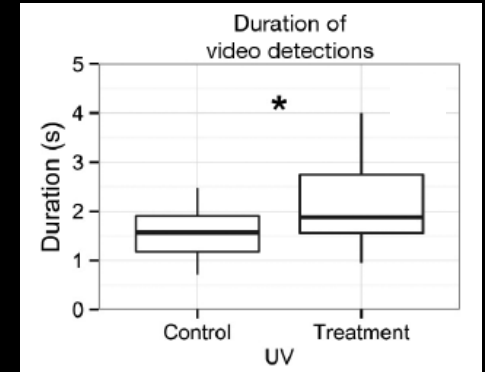
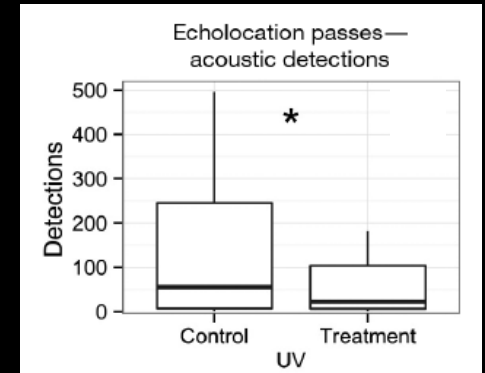
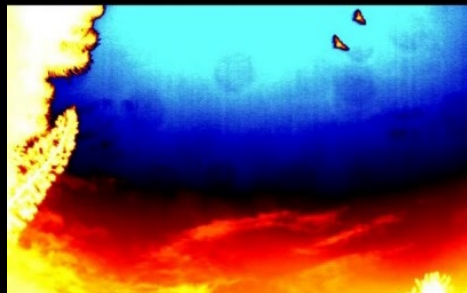
✓ 2014: decreased hoary bat
activity by flickering UV on
trees

✓ 2019: tested prototype UV
light systems on operating
wind turbines

2020: bat response to UV
at wind turbines



Gorresen *et al.* 2015
Ultraviolet vision may be
widespread in bats.
Acta Chiropterologica



Gorresen *et al.* 2015
Dim ultraviolet light as a
means of deterring activity by
the Hawaiian hoary bat
(*Lasiurus cinereus semotus*).
Endangered Species Research

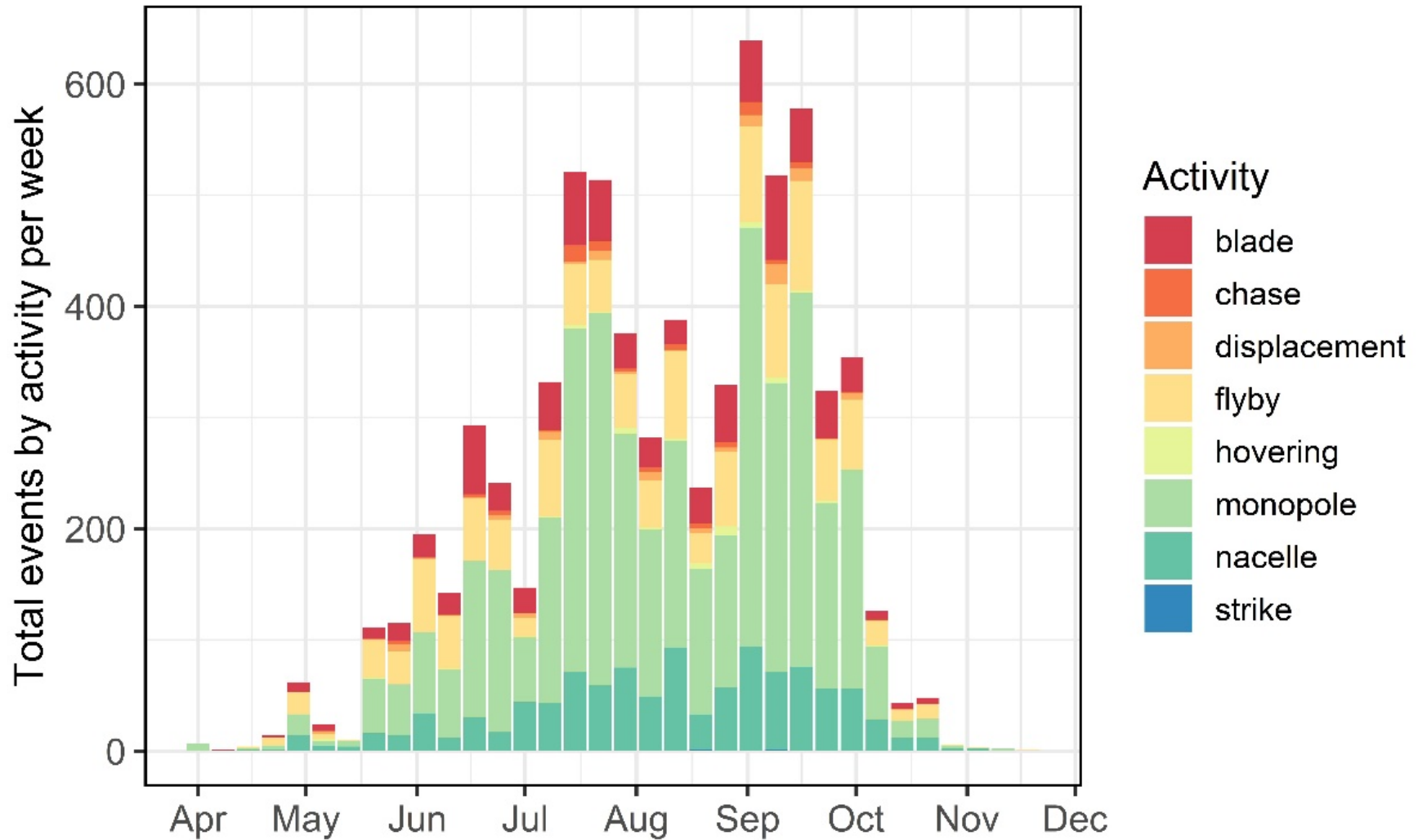
UV turbine tests

National Wind Technology Center





Bat behavior at turbines



S. Z. Goldenberg, P. M. Cryan, P. M. Gorresen, and L. J. Fingersh. In review.
Behavioral patterns of bats at a wind turbine confirm seasonality of fatality risk

Acknowledgments

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- American Wind Wildlife Institute

