

Mitigating reptile road mortality: Fence failures compromise ecopassage effectiveness

March 25 2015



Snapping Turtle nesting beside the road. Credit: James Baxter-Gilbert

Ecopassages may be less effective reptile road mortality mitigation tools when fences fail to keep reptiles from accessing the road, according to a study published March 25, 2015 in the open-access journal *PLOS ONE* by James Baxter-Gilbert from Laurentian University, Canada, and colleagues.

Roadways pose serious threats to [animal populations](#) and the use of tools, like fences and ecopassages, to mitigate [road](#) crossing mortality are becoming increasingly common. To evaluate the effectiveness of these tools, the authors of this study compared reptile abundance on an Ontario, Canada highway before and after fencing and ecopassage installation and at a control site from May to August in 2012 and 2013. Scientists used radio telemetry, cameras, and a tagging system to monitor reptile movements and use of ecopassages. Additionally, they conducted a willingness to utilize experiment to quantify turtle behavioral responses to ecopassages.

The authors found no difference in turtle abundance on the road between the un-mitigated and mitigated highways, and an increase in the percentage of both dead snakes and turtles detected on the road post-mitigation, suggesting that the fencing was not effective. Although ecopassages were used by reptiles, the number of crossings through ecopassages was lower than road-surface crossings, suggesting that effectiveness of ecopassages may be compromised when alternative crossing options are available, like through holes in the fence. The authors suggest that [mitigation measures](#) need to be designed with the biology and behavior of the target species in mind and to quantitatively evaluate road mitigation to allow for adaptive management and optimization of these conservation tools.

More information: Baxter-Gilbert JH, Riley JL, Lesbarrères D, Litzgus JD (2015) Mitigating Reptile Road Mortality: Fence Failures Compromise Ecopassage Effectiveness. *PLoS ONE* 10(3): e0120537. [DOI: 10.1371/journal.pone.0120537](https://doi.org/10.1371/journal.pone.0120537)

Provided by Public Library of Science

Citation: Mitigating reptile road mortality: Fence failures compromise ecopassage effectiveness (2015, March 25) retrieved 26 April 2024 from <https://phys.org/news/2015-03-mitigating-reptile-road-mortality-failures.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.