

# Security barriers in US, Mexico national parks affect movement of animals

April 9 2014

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Because international boundaries can be focal points for trade, illegal activity and development, national parks in their vicinity can be vulnerable to pollution, erosion and hunting as well as smuggling of people and drugs.

There is an increasing trend towards the erection of barriers to counter this illegal activity, which may reduce environmental impacts too. However barriers may restrict native species' territory, causing an [environmental impact](#) of their own.

Bristol PhD student, Jamie McCallum, now of the Zoological Society of London (ZSL), and colleagues from Bristol's School of Biological Sciences and ZSL investigated the impacts of [illegal activity](#) and the barriers themselves by using automatically triggered cameras ('camera traps') to measure the number of humans, native and invasive mammals in four US parks on the Mexican international boundary. Comparisons were made between areas with barriers and those without.

Puma and coati were detected more often in areas without barriers, whereas counts of humans were seemingly unaffected.

Jamie McCallum said: "Our work suggests that the non-continuous barriers present in this part of the world do affect some [native species](#), but do not necessarily restrict the movement of humans, including illegal migrants."

**More information:** 'Conservation on international boundaries: the impact of security barriers on selected terrestrial mammals in four protected areas in Arizona, USA' by McCallum, J.W. Rowcliffe, J.M. and Cuthill, I.C. in *PLoS ONE*.

Provided by University of Bristol

Citation: Security barriers in US, Mexico national parks affect movement of animals (2014, April 9) retrieved 24 April 2024 from <https://phys.org/news/2014-04-barriers-mexico-national-affect-movement.html>

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