



<https://www.sciencedaily.com/releases/2016/10/161024133941.htm>

NEW: Find **great deals** on the latest gadgets and more in the **ScienceDaily Store!**

Science News

from research organizations

Print Email Share

Human-made noise can affect how animals use information from scents

Date: October 24, 2016

Source: University of Bristol

Summary: For the first time, research has found that human-made noise can have a detrimental impact on an animal's use of scent – putting them at greater risk of being attacked by predators.

Share:

RELATED TOPICS

Plants & Animals

- > Behavioral Science
- > Nature
- > Wild Animals
- > Dolphins and Whales
- > Endangered Animals
- > Cats

Optical Profilers & 3D Profilometers

ZETA INSTRUMENTS

LEARN MORE

RELATED TERMS

- > Origin of life
- > Penguin
- > Dodo bird
- > Pathogen
- > Skunk
- > Tick



This study was conducted on dwarf mongooses like this one. (Stock image)

Credit: © Kevkei / Fotolia

Research by scientists at the University of Bristol has, for the first time, found that human-made noise can have a detrimental impact on an animal's use of scent -- putting them at greater risk of being attacked by predators.

Using field-based experimental trials on dwarf mongooses in South Africa, the researchers combined sound recordings and fecal samples to demonstrate that road-noise playback negatively affected the mongooses' ability to detect predator feces. Even after detection, the additional noise led to less information gathering and less vigilance, making the mongooses more vulnerable to danger.

Professor Andy Radford from the School of Biological Sciences said: "We've known for a long time that noise from urbanisation, traffic and airports can detrimentally affect humans by causing stress, sleep deprivation, cardiac problems and slower learning. What's becoming increasingly clear is that a lot of other species - mammals, birds, fish, insects and amphibians -- are also impacted in all sorts of ways by anthropogenic, or human-made, noise."

One obvious way in which human-made noise can cause animals problems is through the masking of valuable acoustic information. Lead author Amy Morris-Drake says: "What our study shows for the first time is that there could also be disruption to the use of olfactory information; human-made noise could affect decision-making based on information gathered using a different sense."

The Bristol team's experiment used groups of wild dwarf mongooses that were so familiar with the researchers' close presence that they could walk within a few feet of them. Co-author Dr Julie Kern adds: "This habituation allows us to conduct ecologically relevant experiments in the mongooses' natural habitat while collecting incredibly detailed and accurate information."

Closely monitoring the mongooses, the team found that their adaptive responses to predatory cues, such as increased inspection of the cue, vigilance scanning for danger and more time spent near the safety of the burrow, were all disrupted by road-traffic noise.

Morris-Drake said: "While lots of work on the impacts of human-made noise has shown effects on animal vocalisations, movement patterns and foraging, it is often difficult to determine what that might mean for survival or reproductive success. By looking at responses to cues about a predator's presence, there is a direct link to survival; making the wrong decision can result in death."

Professor Radford concluded: "Our study suggests that noise pollution can have a negative effect in terms of information use -- in this case the impact on responses to smell, a very common information source in mammals. Given the demonstrated effects, considering the interactions among multiple sensory channels is critically important if we are to understand fully the consequences of human-induced environmental change."

Story Source:

Materials provided by **University of Bristol**. Note: Content may be edited for style and length.

Journal Reference:

- Amy Morris-Drake, Julie M. Kern, Andrew N. Radford. **Cross-modal impacts of anthropogenic noise on information use**. *Current Biology*, 2016; 26 (20): R911 DOI: 10.1016/j.cub.2016.08.064

Cite This Page:

MLA APA Chicago

University of Bristol. "Human-made noise can affect how animals use information from scents." ScienceDaily. ScienceDaily, 24 October 2016. <www.sciencedaily.com/releases/2016/10/161024133941.htm>.

Powered by Google

14000+ Elisa Kits.

Ad elabscience.com

World's rarest whale seen for the first time

sciencedaily.com

Gardening Tips & Supplies

Ad gardeningenthusiast.c...

'Ringin In The Ears' May Be Caused By...

sciencedaily.com

Giant Ape Lived Alongside Humans

sciencedaily.com

Amazing Wildlife Pictures

Ad Wild Card Magazine

Human-eating monster crocodile may be...

sciencedaily.com

Don't drink the (warm) water, study says

sciencedaily.com

Recommended Articles

Mongoose sentinels respond flexibly to threats

University of Bristol, ScienceDaily , 2014

Meerkats use subordinate animals as guinea pigs when approaching novel threats

ETH Zürich, ScienceDaily , 2013

Noise distracts fish from their dinner

University of Bristol, ScienceDaily , 2011

Noise pollution impacts fish species differently

University of Bristol, ScienceDaily , 2014

Boat noise impacts development, survival of sea hares

University of Bristol, ScienceDaily , 2014

Why do we sleep badly during the first night in a new place?

Tim Newman, Medical News Today

A rabid dog made it past border control. Again

STAT

Behavioral decisions in sensory landscapes: crayfish use chemical signals to make habitat use choices

Paul A. Moore et al., J Crustac Biol , 2014

Effects of potential predator and competitor cues and sibship on wood frog

Jessica E. Rettig et al., Amphib Reptilia , 2009

Everything In Our Power To Eradicate Foot-and-mouth, Says Prime Minister,

Gordon Brown

Medical News Today , 2007



Related Stories

Traffic Noise Reduces Wild Owls' Foraging Efficiency

Sep. 27, 2016 — Traffic noise reduces the foraging efficiency of wild owls by up to 89 percent, a team of researchers has found. The team's world-first study examined how different levels of such noise affect ... [read more »](#)

Persist and Shout: Male Bluebirds Alter Songs to Be Heard Over Increased Acoustic Noise

Aug. 21, 2015 — Birds 'shout' to be heard over the noise produced by human-made activity, new research has shown. Researchers recorded songs produced by 32 male bluebirds, and analysed two from each male ... [read more »](#)

Odor That Smells Like Blood: Single Component Powerful Trigger for Large Carnivores

Nov. 10, 2014 — People find the smell of blood unpleasant, but for predatory animals it means food. When behavioral researchers wanted to find out which substances of blood trigger behavioral reactions, they got ... [read more »](#)

Lemurs Match Scent of a Friend to Sound of Her Voice

Apr. 15, 2014 — Scientists report that ring-tailed lemurs respond more strongly to the scents and sounds of female lemurs when the scent they smell and the voice they hear belong to the same female -- even when ... [read more »](#)

Strange & Offbeat

PLANTS & ANIMALS

Parasitic Plants May Form Weapons out of Genes Stolen from Hosts

Zebrafish Want to Hang out With Moving 3-D Robotic Models of Themselves

Lonely 'Lefty' Snail Seeks Mate for Love, and Genetic Study

Windsurfing Swans: An Overlooked Phenomenon

EARTH & CLIMATE

Ice Shelf Vibrations Cause Unusual Waves in Antarctic Atmosphere

Move Over, Solar: The Next Big Renewable Energy Source Could Be at Our Feet

Exploring Vast 'Submerged America,' Marine Scientists Discover 500 Bubbling Methane Vents

Lazarus Ice

FOSSILS & RUINS

Early Humans Used Innovative Heating Techniques to Make Stone Blades

African Clawed Frog Genome Contains Two Full Sets of Chromosomes from 2 Two Extinct Ancestors

Mystery Species Hidden in Cave Art Appears to Be Unknown Bison-Cattle Hybrid

Oldest Known Squawk Box Suggests Dinosaurs Likely Did Not Sing

Find All The Libraries and SDKs you Will Ever Need in One Place



discoversdk.com

Powered by Trend MD

Free Subscriptions

Get the latest science news with ScienceDaily's free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

- Email Newsletters
- RSS Feeds

Follow Us

Keep up to date with the latest news from ScienceDaily via social networks:

- Facebook
- Twitter
- Google+
- LinkedIn

Mobile Apps

Get the latest news from ScienceDaily via our free mobile apps, available for download on the following platforms:

- iPhone/iPad
- Android

Have Feedback?

Tell us what you think of ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

- Leave Feedback
- Contact Us