

Scientists expect evolutionary changes from loud, bright world

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Humans take for granted the noise and lights associated with cities and other developments across the landscape. For other creatures, these noisy and bright conditions lead to changes in behavior and activity such as the timing or pitch of a bird song in the morning. Scientists have long recorded these changes and now seek to understand whether these altered environments are driving evolution itself.

In a review published today in the journal *Trends in Ecology and Evolution*, an international group of ecologists and [evolutionary biologists](#) outlined the ways in which evolutionary responses to human-produced lights and noise might be measured and how researchers might separate [evolutionary changes](#) from changes in behavior that are not inherited.

"It would be remarkable if the widespread transformation of the visual and aural environment by humans did not leave its mark through [evolutionary selection](#) on other species," said Professor John Swaddle of the College of William and Mary, and lead author of the study with Professor Clinton Francis of California State Polytechnic University, San Luis Obispo. "We see some intriguing examples suggesting [evolutionary consequences](#) emerging in recent experiments, and use this paper to propose a research agenda in this field."

The research team collated many examples of behavioral responses to human-produced light and sound and linked these with heritable characteristics that might be investigated.

"Almost no corner of the Earth has escaped from human-produced light and noise," said co-author Davide Dominoni of the University of Glasgow. "Understanding how these stressors shape evolution can help us to devise programs to protect species and habitats wherever such impacts are found."

More information: "A framework to assess evolutionary responses to anthropogenic light and sound." DOI: [dx.doi.org/10.1016/j.tree.2015.06.009](https://doi.org/10.1016/j.tree.2015.06.009)

Provided by University of Glasgow

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