

The phantom chorus: birdsong boosts human well-being in protected areas

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The Wilson's warbler was one of the birds whose songs were recorded for the phantom chorus that improved hikers' sense of well-being. Credit: Dave Keeling

If you thought your morning hike was contributing to your wellbeing, a new study shows that you're right, especially if our avian friends were singing while you strolled.

A growing body of research shows that time spent in nature contributes to human mental health. Although many studies have found that humans benefit from spending time in nature, few studies have explored why. A research team at California Polytechnic State University investigated how much the [natural](#) sounds humans hear during their time in the great outdoors contribute to this sense of well-being. The study was published in *Proceedings of the Royal Society B*.

"There is a lot of evidence that spending time in nature has positive effects on human well-being. However, few studies have considered the specific qualities of nature that confer these benefits," said biology graduate student Danielle Ferraro, who led the study. "While the bigger picture of nature's restorative properties is likely to involve multiple senses, our study is the first to experimentally manipulate a single one (sound) in the field and demonstrate its importance to human experiences in nature."

Ferraro and her team hid speakers that played recorded songs from a diverse group of birds on two sections of trails in the Boulder Open Space and Mountain Parks in Colorado. The researchers alternated playing birdsong and turning the speakers off on each [trail](#) section in weekly blocks. Hikers were interviewed after they passed through these sections.

Hikers who heard the bird songs reported a greater sense of well-being than those who didn't. The [survey results](#) showed that both the sounds themselves and people's perception of biodiversity can increase humans' feelings of well-being.

On the first section of trail, hikers who heard more birdsong simply reported that they felt better but didn't comment that they thought more birds lived along that part of the trail. Hikers who heard more birdsong on the other section said that they thought more [birds](#) lived along that section of trail, and researchers found this perception of more species was responsible for making hikers feel better.

"We're such visual animals that we discount this modality of sound that we have," said Cal Poly biology Professor Clinton Francis, who oversaw the research. "I'm still kind of flabbergasted that only 7-10 minutes of exposure to these sounds improved people's well-being. It really underscores how important hearing is to us and probably to other animals."

Both findings support the need to improve natural soundscapes within and outside of protected areas. Less human noise pollution could contribute to greater human happiness by making it easier to hear natural sounds, including bird song.

"Our results underscore the need for park managers to reduce anthropogenic noise pollution, which is not only a cost-effective way to improve visitors' experiences but can also benefit wildlife as well," Ferraro said.

More information: Danielle M. Ferraro et al, The phantom chorus: birdsong boosts human well-being in protected areas, *Proceedings of the Royal Society B: Biological Sciences* (2020). [DOI: 10.1098/rspb.2020.1811](#)

Provided by California Polytechnic State University

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