

## Pollution may make birds change their tune

by Bend\_Weekly\_News\_Sources

Nothing like a bird chirping in the morning to remind you of nature's glory, right? Not quite. A rather creepy new research finding suggests some bird songs are a bit unnatural—inspired by pollutants, which cause at least one species of birds to change their songs.

The European Starling, *Sturnus Vulgaris*. Courtesy Wash. Dept. of Fish & Wildlife

It's the latest of a number of studies to note that some of pollution's biological effects are not only unhealthy, but bizarre. Studies have found contaminants causing sex changes, for example, or even possibly raising suicide and child abuse rates. In the bird study, researchers found that the revised, more elaborate tunes were appealing to female birds. But the affected birds also suffered weak immune systems, the investigators said. The scientists studied male European starlings, *Sturnus vulgaris*, feeding on earthworms at a sewage treatment works in the south-west U.K. Many of the worms were found to be contaminated with chemicals similar to estrogen, a hormone involved in the development of sexual characteristics. Affected male birds showed marked changes in brain and behavior, including more complex songs, which females preferred, the researchers said. And a brain area responsible for song complexity, called the high vocal center, was also found to be enlarged in the males. This region is particularly sensitive to estrogen, which is known to cause oestrogenic effects of the songbird brain, according to the research team. The study, by Katherine Buchanan of Cardiff University in the U.K. and colleagues, appeared Feb. 27 in the research journal PLoS One.

Courtesy Public Library of Science and World Science staff

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