

# Temperature swings may be bigger threat to life than increased warmth

January 29 2014, by Bill Hathaway

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Credit: AI-generated image ([disclaimer](#))

Insects may thrive in the warmer average temperatures predicted by climate models but are threatened by greater temperature variation also anticipated in many areas around the globe, a Yale-led study predicts in the Jan. 29 issue of the *Proceedings of the Royal Society B* of London.

"There has been some thought that many species will do better because of rising average temperatures," said David Vasseur, associate professor of ecology and evolutionary biology, who headed the study. "But when coupled with greater temperature variations, the story changes."

Scientists have tested the impact of temperature on 38 species of insects. Vasseur and researchers from eight other organizations coupled that data with historic climate data and [climate projections](#) for 2050 to 2059 in order to assess effects of temperature variability. When only mean temperature rise was considered, insects flourished, but "greater variation impacted them negatively," Vasseur said.

The frequency of wide temperature swings will impact species like insects more than larger-bodied species with longer lifespans, he said. Also the study suggests effects of climate change on many species will vary greatly by locale.

"Global [climate models](#) predict many areas of temperate regions such as the central Midwest and much of Europe will experience more climate variation," Vasseur said.

**More information:** Increased temperature variation poses a greater risk to species than climate warming , [rspb.royalsocietypublishing.or ...  
.1098/rspb.2013.2612](https://rspb.royalsocietypublishing.org/.../1098/rspb.2013.2612)

Provided by Yale University

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