

How will climate change and genetics affect migratory songbirds?

An [article published in January 2018](#) connected genetic variations in migratory songbirds with population changes due to climate change. UC Davis evolution and ecology postdoctoral scholar Rachael Bay is the lead author of the study into a songbird common throughout the Americas, the yellow warbler.

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[Yellow warblers require] adaptations to multiple types of environments to remain competitive. This study of the yellow warbler shows vulnerabilities to climate change and is an extension of a larger investigation by the [Bird Genoscape Project](#) at the [Center for Tropical Research at UCLA](#), which is currently mapping the migratory patterns and genetic variation of many birds across the world. “The way we extended this analysis is to ask, ‘Well, if these birds are adapted to these types of environments now, what’s that going to look like in the future?’” Bay said.

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Areas of greatest genomic vulnerability — the mismatch between what climate the bird’s genes are adapted to and what the predicted climate will be — include areas of the Rocky Mountains and, to a lesser extent, around the Great Lakes.

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Of the 25 genetic vulnerabilities to climate change calculated, Bay’s analysis found yellow warblers were most vulnerable to changes in precipitation, followed next by changes in temperature and vegetation levels.

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The new climate vulnerability tools will help research and conservation efforts to protect birds around the world.

Read full, original post: [Migratory songbirds, genetics, climate change](#)