

Climate changes to result in bird, reptile shifts (Update)

April 9 2014, by Susan Montoya Bryan



This undated image provided by the U.S. Geological Survey shows a male desert tortoise near Palm Springs, Calif. The U.S. Geological Survey released a report this week that takes a closer look at some of the effects climate change is likely to have on species such as the desert tortoise and the pinyon jay. (AP Photo/U.S. Geological Survey)

As temperatures climb across the American Southwest, researchers have

found some species will win, but others stand to lose—and lose big.

The U.S. Geological Survey and researchers from the University of New Mexico and Northern Arizona University released a report this week that takes a closer look at some of the effects climate change is likely to have on species such as the desert tortoise and the pinyon jay.

The jay stands to lose nearly one-third of its breeding range, while other birds could lose as much as 80 percent by the end of the century. On the other hand, the tortoise is the only reptile studied that isn't projected to see a decrease in suitable habitat.

The researchers wanted to provide a "crystal ball" for land managers in the Southwest so they could make more informed decisions as conditions become warmer and drier and vegetation changes, said lead author Charles van Riper, a USGS ecologist in Tucson.

"Each individual species is going to have its own response, and some are going to benefit from change and others won't," he said.

The study focuses on ecosystems within the Sonoran Desert and the Colorado Plateau, but researchers also included the rest of the Western U.S., parts of which have been grappling with severe drought for years. Birds and reptiles make up most of the region's biodiversity, the researchers said.



This undated image provided by the U.S. Geological Survey shows a pinyon jay. The U.S. Geological Survey and researchers from the University of New Mexico and Northern Arizona University released a report this week that takes a closer look at some of the effects climate change is likely to have on species such as the desert tortoise and the pinyon jay. According to the report the jay stands to lose nearly one-third of its breeding range. (AP Photo/U.S. Geological Survey)

What will make or break a species' ability to live through a changing climate is whether they are generalists or specialists. Those creatures that nest only in certain trees or eat very specific foods will have the hardest time.

Those species that already deal with a wide range of temperatures in the places they live and aren't picky when it comes to diet will benefit the most, according to the report.

The jay, for example, depends on pinon groves throughout the high desert and stands to lose between one-quarter and 31 percent of its breeding range as warmer, drier conditions wipe out more pinon trees. Other birds such as the migrating Williamson's sapsucker and the sage thrasher could lose as much as 80 percent by the end of the century.

Land managers throughout the West already deal with numerous threatened and endangered species—from the lesser prairie chicken in Texas and New Mexico to California's desert slender salamander. Environmentalists say the study's findings show species that are common now could end up being just as rare as those protected under the Endangered Species Act due to changing climates.

"We're seeing these new emerging threats," said Collette Adkins Giese, a biologist and attorney with the Center for Biological Diversity.

"Originally, climate change wasn't prompting listings. There were other threats, but now it's a factor that's driving species toward extinction," she said. "Studies like this that have these models will help us identify those species that are more susceptible."

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