

## Is American Pika a Victim of Global Warming?

State wildlife officials have recommended denying endangered species status for the mountain-dwelling American pika, a rabbit relative that is the first animal proposed for protection under California law because of climate change.

Researchers have documented shrinking pika colonies throughout the Great Basin mountains of Nevada and Utah, and global warming is the main culprit. They say similar change is ahead for California pika populations.

But California Department of Fish and Game biologists found inadequate evidence that pika numbers are dropping here.

In a report submitted Thursday to the state Fish and Game Commission, they recommend rejecting a petition to protect the pika under the California Endangered Species Act. The commission is expected to review the report at its March meeting in Stockton.

The debate is likely to be the first of many to unfold in coming years. Scientists say a host of wildlife species are threatened by climate change, and many may not survive.

From crickets to abalone, butterflies to birds, biologists have already observed wildlife reacting to an altered climate. Some are migrating or breeding sooner. Some are leaving inhospitable homes and flourishing or foundering in new ones.

Because of the state's geographic diversity, "California is going to see a lot more changes than much of the rest of the United States," said Camille Parmesan, a University of Texas professor of population biology and climate change.

The Center for Biological Diversity petitioned the state to protect the pika. It also asked the U.S. Fish and Wildlife Service to protect all pika colonies under the federal Endangered Species Act.

Most surprising about the state's response to the petition is the report's statement that reducing greenhouse gas emissions and helping the state adapt to climate change "are not in the purview" of state wildlife officials.

That contradicts not only the state's broad efforts to become a global policy leader on climate change, but also the California Wildlife Action Plan. This document, adopted to guide all of Fish and Game's conservation activities, repeatedly stresses the need to plan for global warming.

Fish and Game officials "have to be helping species to adapt, or we're going to lose them," said Terry Root, a research ecologist at Stanford University. "If it is the case that the regulations are not there so that they can regulate for climate change, then we've got to do something very, very fast, because we already have species being greatly affected."

Officials at Fish and Game, including the lead author of the pika report, did not respond to several inquiries from The Bee.

An official at the Resources Agency, which oversees Fish and Game, declined to comment on the report but said a "direct action" policy to adapt to climate change is in the works.

"We're all on the same page of knowing we have to deal with adaptation to climate change," said Anthony Brunello, deputy resources secretary for climate change and energy.

Biologists say that as the mountains warm, pika habitat shrinks, forcing the fist-size fur ball into ever-higher "islands" of shrinking habitat.

The pika generally nests above 8,000 feet, deep within rocky slopes. It doesn't hibernate, eating grasses and plants through winter that it has dried in tiny haystacks outside its burrows.

But the pika has trouble regulating its body temperature because of dense fur. Research shows pikas overheat and die and thus must live where

temperatures are not commonly above 77 degrees Fahrenheit. In some areas, there is nowhere higher for the pika to go.

"The pika is the polar bear of California," said Kassie Siegel, an attorney at the Center for Biological Diversity. "The public thinks we've protected our wildlife in Yosemite. We haven't."

No area is immune to global warming. To protect the pika, the group wants the state to do more to reduce greenhouse gas emissions, preserve mountain roadless areas and improve monitoring of the species.

Ecologist Erik Beever of the U.S. Geological Survey documented that more than one-third of pika colonies in Nevada and Utah have vanished since the early 1900s. He believes more will vanish, largely because of climate change.

"Yes, climatic influences are impacting the distribution of pikas," said Beever, based in Alaska.

A study of habitat change in Yosemite by UC Berkeley researchers found that pika colonies there have been forced as much as 1,600 feet higher over the past century. But they don't know when that occurred or whether climate is to blame -- or even if pika numbers declined.

That information gap is a major reason state wildlife officials recommend against protecting California pika populations now.

Andrew Smith, a professor of conservation biology at Arizona State University, for 30 years has studied pika colonies in the historic town of Bodie and at Silver Lake in the eastern Sierra. Those colonies have been stable.

Smith said there may not be enough evidence yet to warrant protecting the pika in California. But he said pika experts believe the need for protection is coming.

"There are enough data to warrant a precautionary way of looking at pika," he said.

Other species in decline because of global warming include the Coachella Valley Jerusalem cricket, said Cameron Barrows, a UC Riverside ecologist.

"It's happening so fast ... over probably the last five to 10 years," he said.

The black abalone is under attack from a withering syndrome because of global warming. California officials have called for federal protection of the species.

Several seabirds sensitive to weather change will also bear watching, said Cagan Sekercioglu, a specialist in bird extinctions at the Center for Conservation Biology at Stanford.

Meanwhile, more tropical birds and butterflies are being seen in the south state. Creatures of the southern seas are moving north. No one knows what will happen as new species jostle with those already established.

What may become critical is protecting natural escape routes, so species forced out of one environment will have a shot at safety elsewhere, researchers said. Such "habitat corridors" are an old conservation idea.

"But with climate change, the need becomes really immediate and much more intense," said Parmesan.

Story from REDORBIT NEWS:  
<http://www.redorbit.com/news/display/?id=1248346>

Published: 2008/02/09 06:00:00 CST

© RedOrbit 2005