2005 PHOTO BY SHANA S. WEBER, U.S. GEOLOGICAL SURVEY/PRINCETON UNIVERSITY, VIA AP

The mountain-dwelling American pika — a member of the rabbit family — is disappearing. As temperatures rise, the animals are spending more time underground during the summer rather than foraging for food to store for winter. That leads to starvation.

VANISHING WILDLIFE ON A WARMING PLANET

A few degrees' difference poses a mortal danger to species that are perfectly adapted to their habitat

Joseph Stewart
Special for USA TODAY

The sun is rising on Donner Summit. The mountain air in California's Sierra Nevada is cold and still. It's eerily quiet. I'm waiting — listening for the song of the American pika — and growing concerned that pikas here might have gone the way of the glaciers. When I finally hear a staccato series of chirps echoing from the crags above, I breathe a sigh of relief. Thank goodness. They're still here.

Pikas — the real-life inspiration behind the Pikachu character from Pokémon— are audacious little members of the rabbit family. Residents of high mountain peaks, they spend their summers busily collecting plants, which they store for winter consumption. With their thick coat of fur and furnace-like metabolism, they are well adapted for winter survival under the snow. But these same adaptations make them especially vulnerable to summer heat.

When temperatures become too hot, pikas are forced to stay below ground to avoid overheating. As a result, pikas at warmer sites are not able to collect enough food to survive. That's what is happening at Donner Summit. Rising temperatures are causing the pikas to starve before they can reproduce. The animal's numbers at the site have plummeted. Dozens of other populations on mountains throughout the American West have already succumbed, vanishing forever.

16% OF SPECIES AT RISK

The pika's story is by no means unique. Multiple species have already been driven to extinction by global warming — and they are just the first of what will likely be

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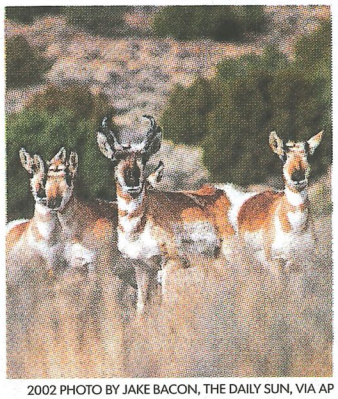

2002 PHOTO BY JAKE BACON, THE DAILY SUN, VIA AP

Pronghorn antelope are abundant in the American West, but prolonged drought has helped push one subspecies, the Sonoran pronghorn, to the brink of extinction.

Action can't wait

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many. Our best estimate is that during this century, more than a million species — 16% of all known species on earth — will be vulnerable to extinction from climate change.

Polar bears have received plenty of headlines for their vulnerability, but there are many other familiar species in similar straits. They include bighorn sheep, pronghorn antelope, tigers, honeycreepers, sea turtles, narwhals, walruses, penguins and salmon.

As the planet warms, species are disappearing from hotter and drier climates. Recent studies show that forest trees such as oaks and pines are shifting to higher elevations. Forests throughout the American West are experiencing catastrophic tree death in response to unprecedented drought. In many cases, entire ecosystems are threatened. Coral reefs, for example, are already suffering massive die-backs in response to increased ocean temperature.

There's a precedent for an extinction crisis — although it predates humans by eons. More than 250 million years ago, volcanoes in Siberia released massive amounts of carbon dioxide, which warmed the climate and acidified the ocean. Warming caused the oceans to release methane, which led to more warming. The result was a rise in global temperature of 8 degrees Celsius — more than 14 degrees Fahrenheit — and the extinction of more than 70% of all species on the planet.

CRAIG BIHRLE, NORTH DAKOTA GAME AND FISH DEPARTMENT, AP

According to the National Wildlife Federation, changing climate patterns could affect the iconic bighorn sheep in multiple ways, making food and water harder to come by and disrupting the balance between the animals' reproductive cycle and the growth of spring foliage that they rely on to feed their young.

With a thick coat and a high metabolism, the American pika is built to survive winter, but only if it can gather food in summer.

It took the earth 10 million years to recover.

Scientists refer to that episode in earth's history as "the Great Dying." That's a scary example to think about, but it's the road we are headed down today, this time because of fossil fuel pollution.

IT'S UP TO US

As I descend from the rocky habitat at Donner Summit, I think about the pikas' future at this place. How much longer will they be able to hold out? During my research over the past several years, I have seen pikas disappear from lower-elevation sites across California. I wonder whether my children will have to travel much farther north, to much cooler places, to watch pikas collect their wildflower bouquets. And what about all the other animals we appreciate today — the tropical birds, the butterflies, the coral-reef fishes, the mammals?

Our decisions today will have staggering consequences for over a million species. If we choose to continue burning fossil fuels unabated, the best evidence indicates that by the end of this century, about 1.4 million species will be headed toward early extinction. If, on the other hand, we make some significant choices, if we vote for politicians who take climate change seriously, and we are able to limit global warming, we can save many of these species from extinction. But the clock is running out on preventing global catastrophe. We need leaders who will take bold action now.

SAUL LOEB, AFP/GETTY IMAGES

Rising sea levels may wipe out some nesting beaches for sea turtles and make others too hot for their eggs to survive.

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