Could Climate Change Drive Giant Pandas to Extinction?

By JuJu Kim | Nov. 13, 2012 | 1 Comment

One of the planet’s most cherished endangered species could disappear by the end of the century. A study published on Nov. 11 in the journal Nature Climate Change predicts that increasing temperatures in the giant panda’s natural habitats will likely cause a shortage of its main dietary staple, bamboo — leading to the extinction of the animal by 2101.

(PHOTOS: Giant Panda People — Scientists Don Costumes for Good Cause)

Using models from the Intergovernmental Panel on Climate Change, the study’s authors projected that in China’s Qinling Mountains, which make up one-fourth of the world’s panda habitat and house 270 of the bears (17% of the wild population), warming will spur a “substantial reduction” in the region’s three dominant species of bamboo. The estimated 2- to 5-degree Celsius increase in temperature during summer and 3- to 8-degree Celsius rise during winter will cause between 80% and 100% of the area’s panda habitat — defined in the study as a location that supports at least one of the dominant bamboo types — to disappear by the end of the 21st century.

“The difference is the degree of the changes,” Jianguo Liu, a scientist from Michigan State University who co-authored the study, told LiveScience. “Even with very hopeful scenarios, where we allow bamboo to go anywhere it wants, there are still very severe consequences. Of course, if the bamboo has nowhere to go, then the panda habitat will be lost more quickly.” Bamboo, a member of the grass family, constitutes 99% of the giant panda’s diet. Pandas, who eat as much as 85 pounds of bamboo a day, face starvation without it.

Although the models also showed that cooler, high-elevation areas in the mountains unable to sustain bamboo will rise in temperature and become hospitable to the grass in the future, these locations are outside the existing boundaries of nature reserves — where the majority of wild pandas now live — and therefore hard to protect from human disturbance. Researchers also acknowledged that the findings could overestimate the remaining panda habitat because the bears often forage for different bamboo types depending on the season, which means one species may fail to support them year-round.
But the animals face other challenges besides climate change. “The giant panda population also is threatened by other human disturbances,” Mao-Ning Tuanmu, one of the study’s co-authors who works at Yale University, said in a MSU press release.

Raising pandas in captivity is not an adequate solution, either. Zoologists have had difficulty getting the animals to breed, and Liu told LiveScience that mating them in breeding centers and zoos causes a decline in genetic diversity.

“That’s not a long-term solution,” he said.

Despite the grim predictions, researchers still believe there’s hope for the longtime symbol of the World Wildlife Fund. LiveScience reported that if conservationists start to extend the borders of nature reserves now to correspond with adapted bamboo habitats, pandas could stand a chance. Tuanmu said in the MSU release that the study’s team wants their findings to guide conservation efforts. Liu agreed, saying the research could help clarify the “impacts of climate change” and “help us prepare for the challenges that the panda will likely face in the future.”

“It is tough, but I think there’s still hope, if we take action now,” Liu told LiveScience. “If we wait, then we could be too late.”

MORE: National Zoo Panda Cub Died of Lung and Liver Problems
Exaggeration isn't a crime, yet. You can't have a little crisis outside of Harry Potter movies leaving a "climate crisis" a virtual comet hit of an emergency, NOTHING could be worse. But the entire world of science never said it will happen, only could happen and it's been 26 years of research, mostly into effects not causes. The science agrees we could be at the point of no return yet there does not exist one single IPCC warning of "crisis" that isn't peppered with maybes and "could bes" and "likelys" etc. Help my house could be on fire maybe? We demand that if the world of science is going to condemn our children to the greenhouse gas ovens of a climate change crisis, at least be clear and say it will or will not happen. Maybe isn't good enough. Real planet lovers don't want this misery to be real and are glad, not disappointed the scientists legally exaggerated "crisis". Climate change crisis is real alright, really not a crisis.