

Pandas' popularity not protecting neighbors

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Asiatic black bear, pictured here in a camera trap image, find habitat geared toward giant pandas doesn't meet their needs Credit: Fang Wang, Michigan State University Center for Systems Integration and Sustainability

Forgive Asiatic black bear if they're not impressed with their popular



giant panda neighbors.

For decades, conservationists have preached that panda popularity, and the resulting support for their habitat, automatically benefits other animals in the mountainous ranges. That logic extends across the world, as animals regarded as cute, noble or otherwise appealing drum up support to protect where they live.

Yet in *Biological Conservation*, scientists take a closer look at how other animals under the panda 'umbrella' fare and find several species have every reason to be ticked at panda-centric policies.

"The popularity of giant pandas, as of the popularity of other beloved threatened animals across the world, has generated tremendous advances in protecting forests and other fragile habitats," said Jianguo "Jack" Liu, Michigan State University's Rachel Carson Chair in Sustainability and a paper author. "But this is an important reminder that it can't assume that what's good for a panda is automatically good for other species. Different species have specific needs and preferences."

The authors of "The hidden risk of using umbrella species as conservation surrogates: A spatio-temporal approach" used camera trap data collected throughout mountain ranges to get a clear understanding of what and how animals were using protected habitats.





Animals like this forest musk deer in China, caught by a camera trap, don't necessarily thrive in habitat that specifically protects giant pandas Credit: Fang Wang, Michigan State University Center for Systems Integration and Sustainability

What they discovered is that while the pandas are doing very well (the species in 2016 was declared "threatened" rather than "endangered"—a conservation point of pride). But three of the eight species focused upon in this study—the Asiatic black bear, the forest musk deer and the Chinese serow (a goat-like animal) seem to have suffered significant habitat loss and/or degradation under panda-centric habitat management. Pandas are picky about where they live—needing lots of bamboo, a gentle slope and no contact with humans. And the managed habitats have



largely delivered for them. Just not so much for others.

Fang Wang, the paper's first author, noted that earlier efforts at tracking how a broader range of animals fared were handicapped by turning a blind eye to different habitat preferences, and not spotting potentially different habitat trends of other animals. The authors suggested that the forests and shrublands in lower elevations next to the habitats that best serve pandas could be better for bear and deer.



Giant pandas in China have found their status upgraded to "threatened" thanks to conservation efforts. But new studies indicate what's good for the panda may not be optimal for other species Credit: Fang Wang, Michigan State University Center for Systems Integration and Sustainability



"China has made a tremendous achievement in establishing giant panda nature reserves, and now we're learning that one size does not fit all," said Wang, who with Liu and other authors is part of MSU's Center for Systems Integration and Sustainability. "China as well as other countries that face similar conservation challenges have the opportunity to move forward from rescuing single species to protecting animal communities and ecosystems."

More information: Fang Wang et al, The hidden risk of using umbrella species as conservation surrogates: A spatio-temporal approach, *Biological Conservation* (2020). <u>DOI:</u> 10.1016/j.biocon.2020.108913

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