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[<< Back to Article](#)

Last-Ditch Resort: Move Polar Bears to Antarctica?

By Brandon Keim 07.17.08



Some scientists think we may need to give polar bears a new view — in the Antarctic.

Photo: Jonathan Hayward/AP

If the most dire climate predictions come to pass, the Arctic ice cap will melt entirely, and polar bears could face extinction.

So why not pack a few off to Antarctica, where the sea ice will never run out?

It may seem like a preposterous question. But polar bears are just the tip of the "assisted colonization" iceberg. Other possibilities: moving African big game to the American Great Plains, or airlifting endangered species from one mountaintop to another as climate zones shrink.

"It's a showdown. The impacts of climate change on animals have become apparent. And it's time to decide whether we're going to do something," said Notre Dame ecologist [Jessica Hellmann](#), co-author of an influential 2007 [Conservation Biology paper](#) (.pdf). "Reducing CO2 is vital, but we might have to step in and intervene."

Once dismissed as wrongheaded and dangerous, assisted colonization -- rescuing vanishing species by moving them someplace new -- is now being discussed by serious conservationists. And no wonder: Caught between climate change and human pressure, species are going extinct 100 times faster than at any point in human history.

And some scientists say that figure is too conservative. The real extinction rate, they say, is a full 1,000 times higher than normal. The last time such annihilation took place was during the time of the dinosaurs. And though many conservationists say that saving species by transplanting them is foolish, others say there's no choice.

"They want the world to be what it was before. But it's not going to happen," said Australian ecologist Hugh Possingham, author of an assisted-colonization article published Thursday in [Science](#) (citation page).

The language of Possingham's paper is understated -- its centerpiece is a risk-benefit flow chart -- but the recommendations are radical. He proposes a systematic analysis of Earth's threatened

species, identifying those suitable for last-ditch uprooting.

That the scientific world's most august publication carries such a proposal marks a sea-level shift in conservationist consciousness, say researchers. Others have weighed the idea, but Possingham's team came down firmly in favor.

Adding to the momentum, the Ecological Society of America's annual meeting in August will be preceded by a three-day discussion of assisted colonization, by ecologists, policy wonks and lawyers.

But not everyone is in a rush. "I think it's a bad idea," said Duke University biologist [Jason McLachlan](#), also a co-author of the *Conservation Biology* paper. "There are a million examples of invasive species introduced with good intentions that caused all sorts of damage."

Unfortunately, perhaps, for the polar bear, it's a perfect example of McLachlan's objections. Cost and logistics aside, the bears would wreak havoc in an ecosystem unprepared for them.

"Antarctic penguins and seals aren't adapted to surface predators," explained [Steven Amstrup](#), the chief U.S. Geological Survey polar-bear researcher. "The bears would have a field day for a while, because they could walk right up to them and eat them. For a short period of time, it would be great, but in the end the whole system would probably collapse."

Accounts of destruction wrought by invasive species are legion, from wild hogs in the southern United States and zebra mussels in the Great Lakes to cane toads in Australia and mongoose in Hawaii. An endangered species that now seems sympathetic could quickly become a villain.

But assisted-colonization proponents believe their animals, unlike other invasive species, would be carefully selected and their effects anticipated.

"You work out what the risks are before you take action," said Possingham. "You go through these decision trees, and start by doing some trials under very controlled circumstances, then we'll learn about it."

Things could still go wrong, said Hellmann, but the consequences pale in comparison to those of climate change and inaction. And for animals whose natural habitat has been eradicated, or who live -- as did the [golden toad](#) of Costa Rica's cloud forest -- in rapidly changing places from which they cannot escape, there may be no other option.

"If all other conservation methods fail, and evidence shows that a species is in danger of extinction, then assisted migration becomes an option that we should consider seriously," said Nature Conservancy ecologist [Patrick Gonzalez](#).

McLachlan, however, has other reasons for opposition. Assisted colonization could be seen as a quick-fix panacea, distracting people from the necessary task of preserving habitat and braking climate change. More philosophically, there's something troubling about treating nature as a zoological theme park.

"We're destroying any semblance of the idea that a place has its own [biota](#) and history," he said. "It's not just saving a couple whooping cranes, it's redesigning the entire biota of Earth. And that's incredibly creepy to me."

Hellmann agrees that assisted colonization could be mistaken as a convenient solution. But the purity of nature, she said, is now a myth.

"You can find signatures of humanity in the deepest jungles and remote locations. This idea of pristine nature doesn't really apply," she said. "If assisted colonization will have benefits, it seems strange not to cross some arbitrary line."