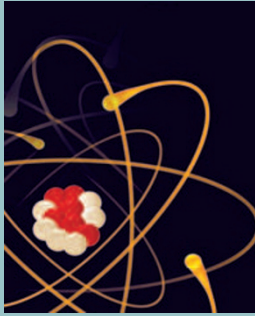


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IT'S CONSERVATION — BUT NOT AS WE KNOW IT

Deep-rooted in modern conservation is the dogma that to protect biodiversity, we must keep species assemblages, habitats and ecosystems intact. This preservation-based philosophy is well-founded. Long gone are the days when a lover of Shakespeare could set free 80 European starlings in Central Park as a tribute to the Bard. Romantic notions of the benefits of exotic species have been replaced with all-too-familiar tales of their unintended consequences. The cane toad serves as a case in point, that poisonous beast having overtaken more than a million square kilometres of Australia since its introduction in 1935 from the Americas.

But a proposal by ecologists to relocate wildlife threatened by climate change poses a challenge to this central tenet of conservation, prioritizing the survival of individual species over the preservation of the native ecosystem as a whole.

Ahead of this year's Ecological Society of America annual conference, a group of scientists, lawyers, land managers, economists and ethicists came together in Milwaukee, Wisconsin from August 1 to 3 to give serious consideration to the concept of 'assisted migration.' Though some at the Milwaukee meeting remain sceptical of the approach, they gathered with the shared realization that sorting out the nuts and bolts of what could become a crucial conservation tactic warrants immediate attention (see page 112 of this issue).

With human-induced climate change affecting biological systems on all continents and in most oceans (*Nature* 453, 353–358; 2008), species are being squeezed out of their native ranges by rising temperatures and by changes in rainfall and ocean acidity. The vast majority of those affected will have to adapt *in situ* or say sayonara as part of the Earth's sixth mass extinction. But for those that could up and leave to a better place if they were not hemmed in by human barriers, giving them a helping hand — say, by moving individuals several hundred kilometres north — could make all the difference.

Yet even for its proponents, the notion of shifting species is replete with ethical quandaries. Not least is how to select candidates and host communities, which begs the question 'how far is too far?' Most agree that moving polar bears to the Antarctic is unsound, but what of reintroducing the threatened Bolson tortoise from northern Mexico to parts of the United States where it once roamed (*Nature* 436, 913–914; 2005)?

Nor is relocating species an easy option: any required tweaks to the Endangered Species Act, America's flagship environmental law, would probably be contested. This is especially true in the current political climate, where discussions are already underway on scaling the bill back to facilitate planning applications (*Nature* 454, 1029; 2008).

But difficulties aside, assisted migration is an option worthy of investigation. For many, reorganizing nature in such an intentional way reeks of our self-appointed superiority in the Universe. After all, the species assemblages and ecosystems on Earth now are not permanent fixtures on geological timescales, but have formed as conditions have changed. But this time we have changed the conditions — and for those species on the edge of extinction, our assistance, even if it means a radical intervention, might be their last chance.

OLIVE HEFFERNAN, EDITOR

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