

# Measures to help species cope with climate change?

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Many species must move to new areas to survive climate change. Often, this seems impossible. Species stranded on mountain tops in southern Europe that are becoming too hot for them, for instance, are unlikely to be able to reach northern Europe unaided. So should WE step in to help?

Scientists from Australia, the United States and UK joined forces to outline a framework for deciding how and when people might intervene to move species to more favourable locations. An article -- "Moving with the times: assisted colonization and rapid climate change"-- published on Friday 18 July in *Science* outlines their new framework, and suggests that our failure to act could consign some species to extinction.

Professor Chris Thomas, from the Department of Biology at the University of York, and his colleagues identified a series of steps that might be taken for each species. If there is low to moderate risk of extinction from climate change, it may be sufficient to bolster conventional conservation measures, for example by increasing the amount of habitat available or reducing persecution.

However, this looks increasingly likely to be inadequate for many species. The main alternatives are to maintain species in captivity, or to find new places to move them to. Breeding species in captivity can only save a very small number, though seed banks, or frozen eggs and sperm could protect more. The scientists, led by Professor Ove Hoegh-Guldberg of the University of Queensland, say that such options are better than nothing, though they do not fulfill many of the reasons for

protecting biodiversity in the first place. So, they conclude that translocation is a serious option.

Professor Thomas said: "Moving species carries potential risks to other species, as well as benefits to the species being moved, so we have to be careful to weigh up the pros and cons on a case by case basis. But not to act may represent a decision to allow a species to dwindle to extinction."

In the 19th Century, Acclimatisation Societies were formed in many of the then- European colonies specifically with the aim of establishing 'familiar' species in new regions.

"Moving species between continents caused all sorts of problems, and has given translocation a bad name amongst conservation organisations" Professor Thomas said.

"But this is not what we are suggesting. Ecology has moved on a long way since then, and we now know that moving species within the same general region (e.g., from France to Britain) hardly ever causes serious biological problems. The time is fast approaching when we need to identify the species that might need to be protected – from a European or global perspective – within Britain, and then set about moving them here."

The scientists agree that minimising the amount of climate change that takes place (climate mitigation) is the most important issue to address. "We can go so far with helping species to adapt to climate change, but ultimately we are not going to be successful if high levels of climate change take place," Professor Thomas added.

Source: University of York

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