

The potential effect of the enhanced greenhouse climate change on selected flora and fauna of the high country of mainland Australia

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Abstract

The possible effects of enhanced greenhouse climate change have been wide debated in the general and scientific community. The current distribution of alpine and high country flora and fauna species, their current predicted climatic envelope determined using BIOCLIM and several scenarios of regional climate change developed by the CSIRO were utilized to develop scenarios for the alpine environment. The high country and alpine areas along the Great Dividing Range have been identified as significant refugia at a sub continental level (Bennett et al, 1991, Brereton et al. 1994) under various greenhouse scenarios. However, the climatic envelopes of alpine species disappear, suggesting potential extinction of species and a landscape we now recognize as alpine. An examination of the potential distribution of species at lower altitudes suggests that the biota of these landscapes will "march up hill".

In contrast to other landscapes in se. Australia the alpine environment and its surrounding high country remain relatively intact, and relatively well represented in the conservation reserve system. Although fragmentation may not be a major problem, weed invasion and invasion from vegetation types at lower altitudes may be inevitable. Enhancing the robustness of the alpine environments may be its best short and medium term defense.

Notes to readers

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To read all abstracts presented at the Global Threats to the Australian Snow Country Conference, go to:

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