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HOW WILL CLIMATE CHANGE AFFECT ANTARCTIC MOSS SPECIES?

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Antarctica has been exposed to increases in ultraviolet-B (UV-B) radiation as a result of ozone depletion for several decades. In addition, climate change will alter temperature and water availability to plant communities over the next century. Recent studies, in the Windmill Islands of East Antarctica, have shown that these environmental changes are likely to have more negative effects on the endemic moss species, *Grimmia antarctici*, than on two co-occurring cosmopolitan species *Ceratodon purpureus* and *Bryum pseudotriquetrum*. This is illustrated by the species relative abilities to screen UV-B radiation and thus withstand UV-B induced damage to pigments and DNA, and in their response to desiccation stress. Our results suggest that the endemic species is more vulnerable to climate change with consequences for future Antarctic biodiversity.