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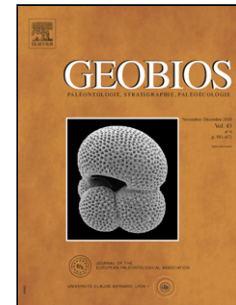
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On the association of giant short-faced bear (*Arctodus simus*) and brown bear (*Ursus arctos*) in late Pleistocene North America *

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Abstract

Climate change and human impacts are often implicated in Quaternary megafaunal extinctions. The discovery of associated remains of extinct giant short-faced bears (*Arctodus simus*) and invading brown bears (*Ursus arctos*) raises the possibility of competition as another potential factor. We describe fossil remains of both genera from Pellucidar Cave, Vancouver Island, Canada. Analyses of ancient mitochondrial DNA support the identifications of post-cranial brown bear specimens and assigns these bears to Clade 4. Our results are consistent with the migration of brown bears from Eastern Beringia to the contiguous United States before the Last Glacial Maximum (LGM) and to Vancouver Island as environmental conditions became favorable after the LGM. Radiocarbon age estimates on these specimens indicate the presence of

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