Late Quaternary climatic history of the Chilean Channels based on fossil pollen and beetle analyses, with an analysis of the modern vegetation and pollen rain

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Fossil beetles and pollen were examined from an intermorainal bog at Puerto Edén, Isla Wellington, Chile (latitude 49°08'S, longitude 74°25'W). Wood from near the base of the section has an age of 12 960 ± 150 yr BP. Occurrence of flightless beetle species in the basal peat sample is evidence that some members of the biota survived the last glacial maximum in refugia. The assumption that the Chilean Channels were entirely ice?covered is incorrect. Plants and insects that invaded the deglaciated terrain were those of an Empetrum heathland in which patches of Nothofagus forest were restricted to sheltered locations. The climate supporting the heathland is inferred to have been windier and probably drier than that of the present day. From 13 000 yr BP to 9500 yr BP Nothofagus forest expanded, possibly in response to less windiness and more available moisture. Neither the fossil beetle nor pollen data support a return to significantly colder conditions between 11 000 and 10 000 yr BP at th