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THE BIOGEOGRAPHY OF TERRESTRIAL AND LACUSTRINE INVERTEBRATES OF EAST ANTARCTICA

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The invertebrate animals that inhabit ice-free areas of East Antarctica have been studied since the earliest days of Antarctic science. However, even though biodiversity and biogeography is reasonably well known for some regions (e.g. Southern Victoria Land) and detailed and enlightening studies have been made of particular genera (e.g. the mite genus *Maudheimia*), there are few if any studies on many other ice-free areas of East Antarctica and information on most species is at best patchy. The recent realisation that many of the ice-free areas of East Antarctica, both coastal and inland, were not completely glaciated at the Last Glacial Maximum and therefore may have provided refuges for invertebrate animals has provided an impetus for a re-appraisal of the fauna. As shown by the genus *Maudheimia*, the fauna of East Antarctica contains an ancient Gondwanan component that has probably survived since the onset of complete glaciation. Similar Gondwanan origins have been postulated for the lacustrine copepod *Gladioferens antarcticus*, and the absence of shared nematode species between East and West Antarctica further argues for the overprint of ancient distributions on the modern continent. Here we analyse the known distributions of invertebrate taxa in East Antarctica to determine the locations of major biogeographical divisions in the area. We further consider whether the observed biogeography across all invertebrate classes is best explained by an ancient fauna that has survived on the continent, or can in part be explained by more recent dispersal. Two particular problems are highlighted: the absence of an objective taxonomy for many groups that can make comparisons of reported faunas difficult; and the patchy spatial information available.