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A history of biogeographical regionalisation in Australia

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Abstract

The development of Australian biogeographical regionalisation since 1858 has been driven by colonial 19th-century exploration and by the late 20th-century biodiversity crisis. The intervening years reduced existing large scale regionalisation into smaller taxon specific areas of vegetation or endemism. However, large scale biotic biogeographical regionalisation was rediscovered during multi-disciplinary meetings and conferences, sparking short-term revivals which have ended in constant revisions at smaller and smaller taxonomic scales. In 1995 and 1998, the Interim Biogeographic Regionalisation for Australia and the Integrated Marine and Coastal Regionalisation of Australia, Australian Commonwealth funded initiatives in order to "identify appropriate regionalisations to assess and plan for the protection of biological diversity", have respectively replaced 140 years of Australian biogeographical regionalisation schemes. This paper looks at the rise and slow demise of biogeographical regionalisation in Australia in light of a fractured taxonomic biogeographical community.

Key words: biogeographical regionalisation, biogeography, classification, colonialism, systematics, taxonomy

Introduction

In Australasian lands so wide, By meadows green, and forests' side, Strange and uncouth forms we see, Bounding over hill and lea.

Kangaroos are gaily leaping, Wombats through their burrows creeping; And in deep streams, near sunny rocks, The duckbill - Nature's paradox.

Their graceful plumes the lyre-tails spread, And the penguin sits on her chilly bed, While black swans in flocks are streaming, And cockatoos and parrots screaming.—Newton, 1845

The history of biogeographical regionalisation¹ is both complex and confusing and largely unknown by taxonomists, covering a period of geographical exploration and scientific discovery. The study of Australia's flora and fauna was a new and bewildering subject for early 19th-century naturalists, who started to recognise the immense diversity of life and the sudden break between Asian and Australasian biota. Moreover, the development of mapping techniques, quantitative ways to catalogue new species and the mapping of new terranes added to the growing demand for information and knowledge about Australia's biodiversity. "How much diversity was there and how could it be classified?" were two of the main questions asked during this period (1805–1906). With the advent of evolutionary biology, new ways to explain the distribution of organisms shifted from classification to dispersal