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Preface for Papers on Short-range Endemism

Endemism is a well-observed phenomenon in biology shaped by historical factors such as climate variation, ecological specificity, reproductive strategies and geological history. In Australia, about 85% of the flora are endemic, that is, individual species are confined to a clearly defined geographic area. The high degree of endemism provides a strong incentive to successfully manage our flora into the future to minimise the risk of worldwide extinction.

This issue of *Australian Systematic Botany* contains a selection of papers presented at a symposium on Short-range Endemism held at the Joint Conference of the Society of Australian Systematic Biologists and the Australasian Evolution Society at the University of Melbourne on 18–21 July 2001. Animal-related papers are published in a companion volume of *Invertebrate Systematics*.

Three papers on vascular plants describe three different endemic species, each with features that compromise their sexual reproduction and so may help to explain their limited range. The *Acacia* studied by Bartolome *et al.* consists of a number of different populations, each of which comprises a single genotype that reproduces via root suckering. Coates *et al.* have found that *Borya mirabilis*, a resurrection plant whose closest relatives are found in Western Australia, also reproduces vegetatively with no apparent seed production. In this case, the entire species consists of one genotype. Finally, *Grevillea infecunda*, with six populations, is male sterile, yet the populations consist of different genotypes (Kimpton *et al.*). It survives by vegetative reproduction, yet presumably originates from seedlings.

Millar describes a new species of alga, *Ceramium juliae*, from the central and south coast regions of New South Wales. This diminutive species is most frequently found as an epiphyte on other marine algae and demonstrates that species endemism extends to our coastal marine environment.

In contrast to the plant and algal papers, May finds for Western Australian macrofungi that there is no conclusive evidence of short-range endemism or for any particular centres of narrow endemism. The few exceptions are species whose host range is very narrow or where substratum requirements are very stringent.

Conservation of the diverse Australian flora is reliant on informative scientific research underlying the decisions made for the management of both species and ecosystems. The examples presented in this issue will encourage research to further the success of Australian plant conservation.

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