

THE BATTLE BETWEEN GRASSES AND SHRUBS IN ARID AUSTRALIA

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Observations over much of central Australia indicate that spinifex-grass communities are advancing at the expense of shrub communities. Mulga (*Acacia aneura*) and Hill-mulga (*A. macdonnelliensis*) shrub-lands are particularly affected, especially when they occur on low fertility soils. It appears that spinifex replacement is often aided by the adverse effects of frequent hot fires on soil crusts and the subsequent loss of fertility by wind and water erosion. Fire-induced spinifex intrusion is also affecting rare plant species such as *Acacia undoolyana* and *Ricinocarpos gloria-media*.

It is suggested that large areas of the vast spinifex tracts now occupying arid Australia may have only become established in the recent past. If there have been large fire-induced vegetation shifts in the vegetation, animal populations must also have been severely affected. The demise of the Spectacled Hare-wallaby (*Lagorchestes conspicillatus*) after the loss of its preferred habitat (lancewood thickets) is given as a possible scenario if present fire regimes continue.