

# 12 Tussock grasslands

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## SUMMARY

Tussock grasslands are characterised by the dominance of native grass species (either a single species or several genera) with a tufted habit (i.e. tussocks). They are widely distributed over 7% of the Australian continent through arid, temperate and tropical areas. Foliage cover classes range from open grasslands to areas with sparse trees or shrubs, with the inter-tussock areas supporting a wide range of other species. The inter-tussock species, and the defining native perennial tussock grasses, are quite diverse and generally palatable to livestock. Hence, the major land use of this ecosystem for at least the last century has been pastoralism, predominantly grazing by cattle and sheep.

Tussock grasslands include those with dominant species such as bluegrasses (*Dichanthium* spp.), Kangaroo Grass (*Themeda triandra*), Mitchell grasses (*Astrebla* spp.) and ribbon grasses (*Chrysopogon* spp.). All can show marked seasonal variability in species abundance and diversity. The Mitchell grass genus is uniquely Australian, the most common of the tussock grasses and characterised as a bioregion: the Mitchell Grass Downs. The bioregion occurs in the central and northern regions of the continent, largely as plains, naturally treeless or with only few trees. Due to their

relative homogeneity, Mitchell Grass Downs are considered to have relatively poor biodiversity values. Yet, they are acknowledged as supporting several Rare and Endangered species. Mitchell Grass Downs largely underpin the cattle industry in northern Australia. Associated with this industry, regular, widespread pastoral monitoring activities are conducted to investigate the sustainability of pastoral activities, focusing largely on the vegetation.

The long-term pastoral monitoring highlighted in this chapter has confirmed that climate is the key driver of tussock grasslands (see Box 12.1). Contemporary pastoral management appears to be compatible with the vegetation resource (i.e. tussock grass species have been retained with grazing at moderate stocking rates, for extended periods). The majority of current monitoring activities can describe aspects of change in vegetation, but is often too infrequent and dispersed to provide reliable information on ecosystem drivers. Pastoral monitoring provides no data on the native faunal component of the Tussock grasslands, nor of areas or vegetation unimportant for livestock grazing. Future systematic biodiversity monitoring should include these omissions. Current activities should be incorporated where suitable (e.g. biodiversity surveys and pastoral monitoring) and extended using an