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Sustaining vegetation and bird communities along roads and hiking trails in semi-arid gorges

Vegetation and bird communities along recreational tracks may be impacted on by edge-effects accrue from modified environmental conditions, direct disturbance by tourists and the increased competition with species that benefit from disturbance. This study investigated the effects of roads vs. hiking trails on vegetation and bird communities in the gorges of the Flinders Ranges, a popular South Australian tourism destination.

High compared to low usage recreational tracks significantly altered species community composition, decreased total plant cover, increased non-native plant cover, increased or decreased plant diversity depending on the distance to the track and decreased bird numbers and species richness. Impacts of roads were greater, and some self-propagated to disjointed sites with a predisposition to disturbance (neighbouring creek beds), which increased their spatial extent from 10 up to 50 m. However, vegetation moderated the impacts of high usage on birds along roads so that they were entirely mitigated at sites with the best developed shrub and tree layer.

To protect vegetation and bird communities along recreational tracks in semi-arid gorges, we recommend (1) the closure of some gorges or sections for vehicle or any access and (2) the minimization of open space created for tourism usage particularly for wild camping.