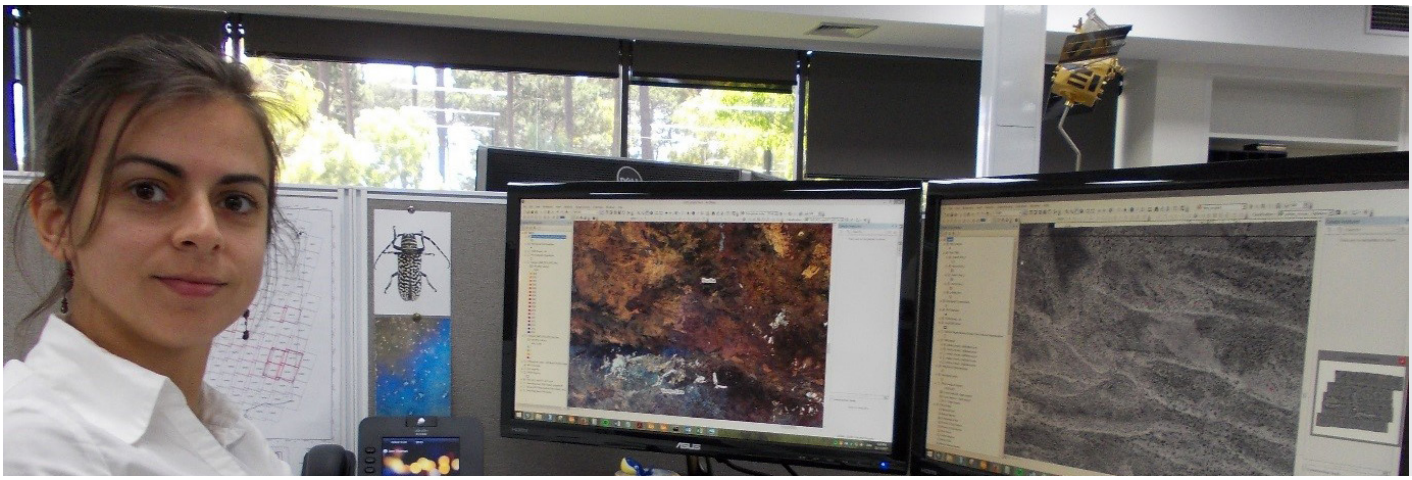
Interpreting traditional and contemporary fire patterns

Neil Burrows, Project Manager

This project is being conducted by Neil Burrows and colleagues from the Department of Biodiversity Conservation and Attractions (DBCA) with assistancee from the Spinifex people.



Jane Chapman, comparing the historical and recent aerial photography for fire scars

Through the Adaptive Management Partnership, consisting of Spinifex Land Management, Yilka Aboriginal Corporation, Central Desert Native Title Services, Rangelands NRM, Greening Australia, the Trust, Conservation Management and the Department of Biodiversity, Conservation and Attractions it was decided that the earliest possible imagery for the GVD should be sought in order to determine the fire regime when Aboriginal people were living on the land and conducting cultural burn activities. The aim of the project is to determine what the land looked like when subject to cultural burns and this used as aspirational guidelines for how burning should occur in the region.

While there was no aerial photography taken over the GVD prior to the military rocket launches at Maralinga in the 1950's, DBCA has found some photography from the 1960's.

The photography is being stitched together to help to better understand traditional Aboriginal burning patterns. Photography was acquired over selected areas where people were most likely living a traditional lifestyle just prior to the photography. A mosaic of 216 photos covering an area of about 1 million hectares, or about 18% of the Spinifex Lands, is being processed for signs of fire scars. It's early days in the analysis, but on many photos there is good evidence of small fires lit by Aboriginal people prior to 1960. The small size of the fires suggests that they were mostly lit under mild weather conditions during the cooler time of year. There is evidence that the bare ground on dune tops was used to contain many fires, also suggesting the fires were low intensity. The old photos also reveal large areas that have not been recently burnt – probably because the vegetation was not flammable, or people did not visit these areas, or did not burn these areas for cultural reasons. The traditional burning patterns revealed by the 1960/61 photos contrast strongly with the contemporary (2000-2017) fire patterns evident on Landsat satellite imagery, which can be characterised as relatively frequent, large, mostly hot season fires.

A field trip is planned for March 2018 to validate the satellite fire scar imagery, to understand the fire environment of the project area, and to better understand traditional use of fire. An important part of interpreting traditional fire patterns is to understand when, where, why and how the land was burnt, or not burnt in some cases. While some information exists in published documents and oral histories, there is much more to record. It will be important to capture this knowledge from the old people sooner rather than later. Working in partnership with the Spinifex People, this project will capture some information, but there is an urgent need for ongoing work beyond the life of this project.

Once completed in late autumn 2018, this project will have compared and contrasted traditional and contemporary fire patterns, synthesised available oral histories and published information about traditional fire use, and made some observations about ecologically appropriate contemporary fire management options for the flammable, spinifex dominated landscapes of the GVD.

For further information on this project, contact Project Manager, Neil Burrows at neil.burrows@dbca.wa.gov.au.