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INTERNAL PROGRESS REPORT

Fire History Survey - Neales Junction Nature Reserve

Introduction

To assist with setting fire management priorities within and between desert Nature Reserves, we spent a short time (approx. 3 days) at NJNR measuring fire history (recent) based on Landsat imagery and field indicators (mainly ring counting). This trip was made in conjunction with the trip to PLNR (see earlier report).

Methods

Landsat imagery (1981) was used as a basis for mapping recent fire scars. Using existing tracks, we attempted to calibrate the colour differences for each vegetation type on Landsat according to age since fire. This was done by stem section analysis, particularly of mallee coppice. At each sample site, 3-4 stems were sectioned and annual growth rings counted. Growth rings are not always readily discernable, but we are confident that the ages since last fire (attachment) are within 2-3 years.

Results

Figure 1 is a map of recent fire history. A coarse mosaic exists on NJNR, but we believe that generally, single fire events have burnt excessively large areas.

It is also obvious from Figure 1, that almost all of NJNR is vulnerable to burning now. While there are a few small patches of young (4½ y.o.) fuels which would not carry fire, the remainder of the reserve is in a flammable state.

Conclusions

Neales Junction NR should rate a high priority for both protection burning and patch burning in the next 5 years. Details of a burning plan for this reserve cannot be finalized until more work has been done on vegetation - what are the vulnerable species and communities, which types are most flammable? what areas need protection from fire? etc.

Following re-introduction studies in the GDNR, I see NJNR as the next locality in which to attempt re-introductions.

I have prepared a submission for CEP funds to carry out some hand burning in NJNR. this year.

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FIGURE 1: RECENT FIRE HISTORY, NEALES JNR. IN YEARS (±2-3 years).

Scale: 1:250,000