Which mosaic? A landscape ecological approach for evaluating interactions between fire regimes, habitat and animals. Wildlife Research 32, 409-23. [1]

Aim:
To explore the link between ‘fire mosaics’ and the persistence of animal species. Key questions included: are variegated time since fire (i.e. ‘visible’) mosaics required for species persistence in all types of landscape context?, is the ‘visible’ mosaic the only form of fire/habitat/landscape heterogeneity that is needed to adequately understand the requirements of animals resident in areas subject to recurrent fire?, and, are the kinds of mosaics required for persistence of animal populations sensitive to practical management constraints?

Type of Study:
Narrative review. Simulation modelling.

Key Results:
Results suggest that persistence of malleefowl Leipoa ocellata populations will be dependent on intervention using small patchy fires but that there is an optimum rate of intervention. Results were sensitive to spatial pattern of prescribed fire, landscape type (topography) and probability of wildfire. Underlying effects of the fire-interval distribution (the ‘invisible’ mosaic) on plant species and habitat account for these results.

Treatments:
NA.

Response:
A management emphasis on species/landscape context and awareness of the ‘invisible’ mosaic is advocated.

Models:
A landscape fire simulation model (CAFÉ).

Reviewer:
L. Kelly

Locations:
The simulation component draws on data from mallee shrublands and woodlands in southern Australia.

Response variable:
Demographic parameters of Callitris verucosa and Leipoa ocellata.

Replication:
NA.
**Ecosystem:**
Mallee shrublands and woodlands.

**Full Reference:**

**Source URL:** https://www.ecolsoc.org.au/hot-topics/managing-pyrodiversity-animal-conservation/research/bradstock-r-bedward-m-gill-m-cohn-j-s

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