Supplementary material

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(*a*)

Fig. S1. Representative site photos from the study area in San Diego County, California, in January 2006. Sites were classified as (*a*) *unburned*, areas that did not burn in the 2003 Cedar fire and had not burned in >20 years; (*b*) *burn edge*, areas that burned in the Cedar fire and were <4.0 km from the fire perimeter or (*c*) *burn interior*, areas that burned in the Cedar fire and were >4.0 km from the fire perimeter

Fig. S1. (*Cont.*)

(*b*)

(*c*)

Table S1.   Multi-season occupancy models estimate the probability a species is present at a site during the first primary sampling period (occ, occupancy), the probability of local colonisation (col) and extinction (ext), and the probability a species will be detected at a site given it is present (det, detection probability)

We examined each parameter in relation to a single variable or a combination of variables, including burn status (burn), distance to riparian area (riparian), elevation (elevation), and rural homes (residential). We included models where parameters were held constant (1). We also accounted for the possibility that a parameter may change through time by including primary sampling period (primary) and secondary sampling period (secondary) as variables that might influence local colonisation, local extinction, and detection probability

| Candidate Model Set | | | |
occ	col	ext	det
~1	~1	~1	~1
~residential	~1	~1	~1
~burn	~1	~1	~1
~riparian	~1	~1	~1
~elevation	~1	~1	~1
~residential + burn	~1	~1	~1
~residential + riparian	~1	~1	~1
~residential + elevation	~1	~1	~1
~burn + riparian	~1	~1	~1
~burn + elevation	~1	~1	~1
~riparian + elevation	~1	~1	~1
~residential + burn + riparian	~1	~1	~1
~residential + burn + elevation	~1	~1	~1
~riparian + elevation + burn	~1	~1	~1
~riparian + elevation + residential	~1	~1	~1
~residential + burn + riparian + elevation	~1	~1	~1
~1	~1	~1	~residential
~residential	~1	~1	~residential
~burn	~1	~1	~residential
~riparian	~1	~1	~residential
~elevation	~1	~1	~residential
~residential + burn	~1	~1	~residential
~residential + riparian	~1	~1	~residential
~residential + elevation	~1	~1	~residential
~burn + riparian	~1	~1	~residential
~burn + elevation	~1	~1	~residential
~riparian + elevation	~1	~1	~residential
~residential + burn + riparian	~1	~1	~residential

Candidate Model Set

occ	col	ext	det
~residential + burn + elevation	~1	~1	~residential
~riparian + elevation + burn	~1	~1	~residential
~riparian + elevation + residential	~1	~1	~residential
~residential + burn + riparian + elevation	~1	~1	~residential
~1	~1	~1	~burn
~residential	~1	~1	~burn
~burn	~1	~1	~burn
~riparian	~1	~1	~burn
~elevation	~1	~1	~burn
~residential + burn	~1	~1	~burn
~residential + riparian	~1	~1	~burn
~residential + elevation	~1	~1	~burn
~burn + riparian	~1	~1	~burn
~burn + elevation	~1	~1	~burn
~riparian + elevation	~1	~1	~burn
~residential + burn + riparian	~1	~1	~burn
~residential + burn + elevation	~1	~1	~burn
~riparian + elevation + burn	~1	~1	~burn
~riparian + elevation + residential	~1	~1	~burn
~residential + burn + riparian + elevation	~1	~1	~burn
~1	~1	~1	~secondary
~residential	~1	~1	~secondary
~burn	~1	~1	~secondary
~riparian	~1	~1	~secondary
~elevation	~1	~1	~secondary
~residential + burn	~1	~1	~secondary
~residential + riparian	~1	~1	~secondary
~residential + elevation	~1	~1	~secondary
~burn + riparian	~1	~1	~secondary
~burn + elevation	~1	~1	~secondary
~riparian + elevation	~1	~1	~secondary
~residential + burn + riparian	~1	~1	~secondary
~residential + burn + elevation	~1	~1	~secondary
~riparian + elevation + burn	~1	~1	~secondary
~riparian + elevation + residential	~1	~1	~secondary
~residential + burn + riparian + elevation	~1	~1	~secondary
~1	~primary	~primary	~1
~residential	~primary	~primary	~1
~burn	~primary	~primary	~1
~riparian	~primary	~primary	~1
~elevation	~primary	~primary	~1

Candidate Model Set

occ	col	ext	det
~residential + burn	~primary	~primary	~1
~residential + riparian	~primary	~primary	~1
~residential + elevation	~primary	~primary	~1
~burn + riparian	~primary	~primary	~1
~burn + elevation	~primary	~primary	~1
~riparian + elevation	~primary	~primary	~1
~residential + burn + riparian	~primary	~primary	~1
~residential + burn + elevation	~primary	~primary	~1
~riparian + elevation + burn	~primary	~primary	~1
~riparian + elevation + residential	~primary	~primary	~1
~residential + burn + riparian + elevation	~primary	~primary	~1
~1	~primary	~primary	~residential
~residential	~primary	~primary	~residential
~burn	~primary	~primary	~residential
~riparian	~primary	~primary	~residential
~elevation	~primary	~primary	~residential
~residential + burn	~primary	~primary	~residential
~residential + riparian	~primary	~primary	~residential
~residential + elevation	~primary	~primary	~residential
~burn + riparian	~primary	~primary	~residential
~burn + elevation	~primary	~primary	~residential
~riparian + elevation	~primary	~primary	~residential
~residential + burn + riparian	~primary	~primary	~residential
~residential + burn + elevation	~primary	~primary	~residential
~riparian + elevation + burn	~primary	~primary	~residential
~riparian + elevation + residential	~primary	~primary	~residential
~residential + burn + riparian + elevation	~primary	~primary	~residential
~1	~primary	~primary	~burn
~residential	~primary	~primary	~burn
~burn	~primary	~primary	~burn
~riparian	~primary	~primary	~burn
~elevation	~primary	~primary	~burn
~residential + burn	~primary	~primary	~burn
~residential + riparian	~primary	~primary	~burn
~residential + elevation	~primary	~primary	~burn
~burn + riparian	~primary	~primary	~burn
~burn + elevation	~primary	~primary	~burn
~riparian + elevation	~primary	~primary	~burn
~residential + burn + riparian	~primary	~primary	~burn
~residential + burn + elevation	~primary	~primary	~burn
~riparian + elevation + burn	~primary	~primary	~burn

Candidate Model Set

occ	col	ext	det
~riparian + elevation + residential	~primary	~primary	~burn
~residential + burn + riparian + elevation	~primary	~primary	~burn
~1	~primary	~primary	~secondary
~residential	~primary	~primary	~secondary
~burn	~primary	~primary	~secondary
~riparian	~primary	~primary	~secondary
~elevation	~primary	~primary	~secondary
~residential + burn	~primary	~primary	~secondary
~residential + riparian	~primary	~primary	~secondary
~residential + elevation	~primary	~primary	~secondary
~burn + riparian	~primary	~primary	~secondary
~burn + elevation	~primary	~primary	~secondary
~riparian + elevation	~primary	~primary	~secondary
~residential + burn + riparian	~primary	~primary	~secondary
~residential + burn + elevation	~primary	~primary	~secondary
~riparian + elevation + burn	~primary	~primary	~secondary
~riparian + elevation + residential	~primary	~primary	~secondary
~residential + burn + riparian + elevation	~primary	~primary	~secondary