

Appendix S2

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Demography and dispersal at a grass-shrub ecotone: a spatial integral projection model for woody plant encroachment. *Ecological Monographs*

| Pr(Survival) | df | dAIC |
|---|-------|------|
| ~size + transplant + size:transplant + (1 transect) | 11.50 | 1.72 |
| ~size + transplant + density + size:transplant + density:transplant + (1 transect) | 13.19 | 0.19 |
| ~size + transplant + density + size:transplant + density:transplant + size:density + size:transplant:density + (1 transect) | 14.22 | 0.00 |

Table S1: AIC model selection for survival probability.

| mean(size) | sd(size) | df | dAIC |
|---|-----------------|-------|---------|
| ~size + (1 transect) | ~1 | 3.00 | 1024.88 |
| ~size + density + (1 transect) | ~1 | 8.50 | 977.23 |
| ~size + density + size:density + (1 transect) | ~1 | 10.47 | 975.17 |
| ~size + (1 transect) | ~size | 9.65 | 146.23 |
| ~size + density + (1 transect) | ~size | 16.24 | 19.45 |
| ~size + density + size:density + (1 transect) | ~size | 18.55 | 19.62 |
| ~size + (1 transect) | ~size + density | 10.40 | 115.52 |
| ~size + density + (1 transect) | ~size + density | 18.97 | 0.08 |
| ~size + density + size:density + (1 transect) | ~size + density | 21.33 | 0.00 |

Table S2: AIC model selection for mean and variance of future size

| Pr(Flowering) | df | dAIC |
|---|------|------|
| ~size + (1 transect) | 5.78 | 0.63 |
| ~size + density + (1 transect) | 6.80 | 2.32 |
| ~size + density + size:density + (1 transect) | 7.24 | 0.00 |

Table S3: AIC model selection for flowering probability.

| No. fruits | df | dAIC |
|---|-------|-------|
| ~size + (1 transect) | 14.25 | 71.99 |
| ~size + density + (1 transect) | 5.52 | 0.00 |
| ~size + density + size:density + (1 transect) | 6.23 | 0.37 |

Table S4: AIC model selection for fruit number.

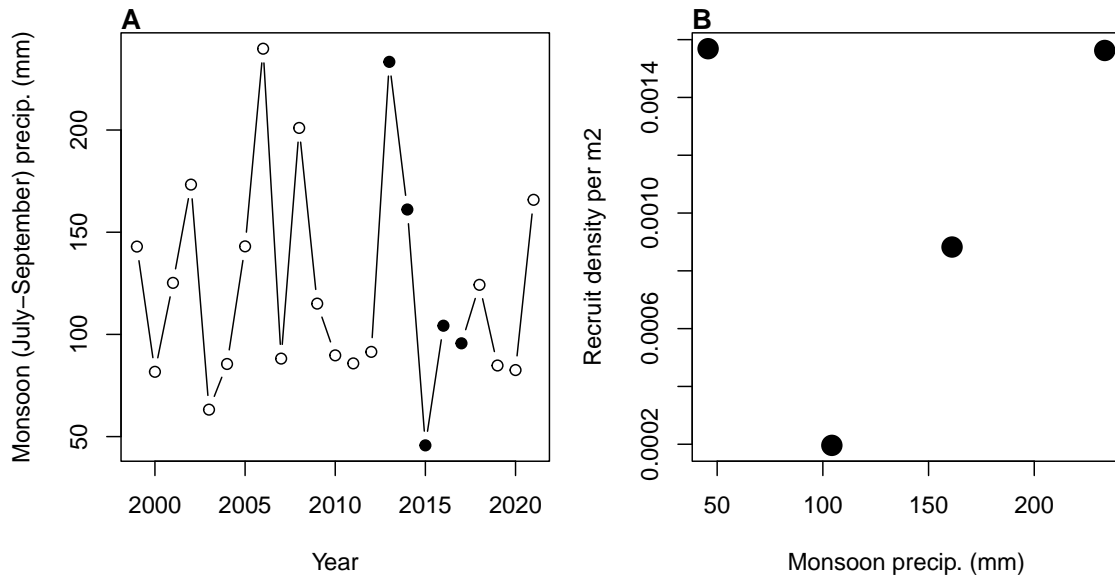


Figure S1: A, Time series of annual monsoon precipitation (filled circles are the years in which this study was conducted). B, Relationship between density of creosotebush recruits observed on our transects in May-June and monsoon precipitation in the preceding July-September.

| Pr(Recruitment) | df | dAIC |
|-------------------------|------|------|
| ~(1 transect) | 6.57 | 0.00 |
| ~density + (1 transect) | 7.39 | 0.93 |

Table S5: AIC model selection for recruitment probability.

| mean(size) | sd(size) | df | dAIC |
|-----------------------|----------|------|------|
| ~(1 transect) | ~1 | 2.00 | 2.90 |
| ~density+(1 transect) | ~1 | 4.42 | 0.00 |
| ~(1 transect) | ~density | 3.00 | 4.74 |
| ~density+(1 transect) | ~density | 5.56 | 1.21 |

Table S6: AIC model selection for mean and variance of recruit size.