

Ecography

E4699

Davidson, A. D. and Lightfoot, D. C. 2006. Keystone rodent interactions: prairie dogs and kangaroo rats structure the biotic composition of a desertified grassland. – *Ecography* 29: 755–765.

Appendix A. ANOVA table showing significant differences in plant cover and height for different plant functional groups between paired prairie dog mounds (n = 40) and non-mounds (n = 40) on the prairie dog (Pdog) and prairie dog + kangaroo rat (Pdog+Krat) plots.

| | Df | Pdog plot F | p | DF | Pdog+Krat plot F | p |
|-----------------|----|----------------|---------|----|---------------------|---------|
| Percent cover | | | | | | |
| All plants | | | | | | |
| Block | 3 | 0.54 | 0.6775 | 3 | 1.19 | 0.3257 |
| Mound | 1 | 55.64 | <0.0001 | 1 | 15.15 | 0.0004 |
| Block × mound | 3 | 2.34 | 0.0892 | 3 | 2.83 | 0.0519 |
| error | 36 | | | 36 | | |
| Summer forbs | | | | | | |
| Block | 3 | 3.23 | 0.0336 | 3 | 3.71 | 0.0203 |
| Mound | 1 | 8.07 | 0.0074 | 1 | 7.99 | 0.0088 |
| Block × mound | 3 | 2.85 | 0.0507 | 3 | 1.53 | 0.2288 |
| error | 36 | | | 36 | | |
| Grasses | | | | | | |
| Block | 3 | 2.49 | 0.0758 | 3 | 0.87 | 0.4684 |
| Mound | 1 | 37.75 | <0.0001 | 1 | 25.25 | <0.0001 |
| Block × mound | 3 | 0.25 | 0.8615 | 3 | 2.00 | 0.1377 |
| error | 36 | | | 36 | | |
| Spring forbs | | | | | | |
| Block | 3 | 2.22 | 0.1033 | 3 | 15.93 | <0.0001 |
| Mound | 1 | 26.19 | <0.0001 | 1 | 23.87 | <0.0001 |
| Block × mound | 3 | 1.16 | 0.3389 | 3 | 1.30 | 0.2906 |
| error | 36 | | | 36 | | |
| Perennial forbs | | | | | | |
| Block | 3 | 9.06 | 0.0001 | 3 | 4.80 | 0.0042 |
| Mound | 1 | 9.76 | 0.0035 | 1 | 18.84 | <0.0001 |
| Block × mound | 3 | 4.87 | 0.0060 | 3 | 2.19 | 0.0960 |
| error | 36 | | | 36 | | |
| Annual grasses | | | | | | |
| Block | 3 | 3.53 | 0.0244 | 3 | 4.67 | 0.0074 |
| Mound | 1 | 13.97 | 0.0006 | 1 | 9.78 | 0.0035 |
| Block × mound | 3 | 0.49 | 0.6946 | 3 | 1.66 | 0.1924 |
| error | 36 | | | 36 | | |
| Height | | | | | | |
| All plants | | | | | | |
| Block | 3 | 3.60 | 0.0226 | 3 | 1.52 | 0.2247 |
| Mound | 1 | 18.72 | 0.0001 | 1 | 10.62 | 0.0024 |
| Block × mound | 3 | 1.47 | 0.2397 | 3 | 2.38 | 0.0859 |
| error | 36 | | | 36 | | |

| | | | | | | |
|---------------|----|-------|---------|----|-------|---------|
| Summer forbs | | | | | | |
| Block | 3 | 2.62 | 0.0657 | 3 | 1.61 | 0.2043 |
| Mound | 1 | 0.22 | 0.6437 | 1 | 7.21 | 0.0123 |
| Block × mound | 3 | 2.40 | 0.0839 | 3 | 1.50 | 0.2377 |
| error | 36 | | | 36 | | |
| Grasses | | | | | | |
| Block | 3 | 2.03 | 0.1274 | 3 | 1.24 | 0.3107 |
| Mound | 1 | 23.80 | <0.0001 | 1 | 21.85 | <0.0001 |
| Block × mound | 3 | 0.30 | 0.8283 | 3 | 1.37 | 0.2725 |
| error | 36 | | | 36 | | |
| Spring forbs | | | | | | |
| Block | 3 | 1.24 | 0.3107 | 3 | 14.78 | <0.0001 |
| Mound | 1 | 21.85 | <0.0001 | 1 | 10.75 | 0.0025 |
| Block × mound | 3 | 1.37 | 0.2725 | 3 | 0.59 | 0.6235 |
| error | 36 | | | 36 | | |

Appendix B. ANOVA table showing significant differences in plant cover and height for different plant functional groups between paired kangaroo rat mounds (n = 40) and non-mounds (n = 40) on the kangaroo rat (Krat) and prairie dog + kangaroo rat (Pdog+Krat) plots.

| | DF | Krat plot F | p | DF | Pdog+Krat plot F | p |
|-----------------|----|----------------|---------|----|---------------------|---------|
| Percent cover | | | | | | |
| All plants | | | | | | |
| Block | 3 | 0.54 | 0.6575 | 3 | 3.26 | 0.0324 |
| Mound | 1 | 55.64 | <0.0001 | 1 | 21.36 | <0.0001 |
| Block × mound | 3 | 2.34 | 0.0892 | 3 | 0.53 | 0.6656 |
| error | 36 | | | 36 | | |
| Summer forbs | | | | | | |
| Block | 3 | 10.89 | <0.0001 | 3 | 4.47 | 0.0091 |
| Mound | 1 | 21.74 | <0.0001 | 1 | 51.55 | <0.0001 |
| Block × mound | 3 | 3.51 | 0.0248 | 3 | 0.26 | 0.8550 |
| error | 36 | | | 36 | | |
| Grasses | | | | | | |
| Block | 3 | 2.41 | 0.0828 | 3 | 4.47 | 0.0091 |
| Mound | 1 | 20.05 | <0.0001 | 1 | 51.55 | <0.0001 |
| Block × mound | 3 | 0.95 | 0.4284 | 3 | 0.26 | 0.8550 |
| error | 36 | | | 36 | | |
| Spring forbs | | | | | | |
| Block | 3 | 01.46 | 0.2411 | 3 | 12.43 | <0.0001 |
| Mound | 1 | 19.2 | <0.0001 | 1 | 43.78 | <0.0001 |
| Block × mound | 3 | 0.77 | 0.5209 | 3 | 0.90 | 0.4503 |
| error | 36 | | | 36 | | |
| Perennial forbs | | | | | | |
| Block | 3 | 3.63 | 0.0212 | 3 | 9.41 | <0.0001 |
| Mound | 1 | 70.11 | <0.0001 | 1 | 31.27 | <0.0001 |
| Block × mound | 3 | 1.22 | 0.3144 | 3 | 3.41 | 0.0276 |
| error | 36 | | | 36 | | |
| Annual grasses | | | | | | |
| Block | 3 | 3.07 | 0.0392 | 3 | 14.44 | <0.0001 |
| Mound | 1 | 17.54 | 0.0002 | 1 | 6.61 | 0.0144 |
| Block × mound | 3 | 0.91 | 0.4456 | 3 | 1.76 | 0.1715 |
| error | 36 | | | 36 | | |

| Height | | | | | | |
|---------------|----|-------|---------|----|-------|---------|
| All plants | | | | | | |
| Block | 3 | 2.26 | 0.0971 | 3 | 3.79 | 0.0185 |
| Mound | 1 | 38.36 | <0.0001 | 1 | 14.70 | 0.0005 |
| Block × mound | 3 | 2.00 | 0.1315 | 3 | 0.48 | 0.6991 |
| error | 36 | | | 36 | | |
| Summer forbs | | | | | | |
| Block | 3 | 14.84 | <0.0001 | 3 | 3.51 | 0.0247 |
| Mound | 1 | 25.25 | <0.0001 | 1 | 52.68 | <0.0001 |
| Block × mound | 3 | 2.99 | 0.0436 | 3 | 1.21 | 0.3249 |
| error | 36 | | | 36 | | |
| Grasses | | | | | | |
| Block | 3 | 2.40 | 0.0841 | 3 | 0.55 | 0.6543 |
| Mound | 1 | 24.08 | <0.0001 | 1 | 10.37 | 0.0035 |
| Block × mound | 3 | 0.26 | 0.8525 | 3 | 1.51 | 0.2353 |
| error | 36 | | | 36 | | |
| Spring forbs | | | | | | |
| Block | 3 | 4.95 | 0.0054 | 3 | 8.77 | 0.0002 |
| Mound | 1 | 9.58 | 0.0038 | 1 | 26.99 | <0.0001 |
| Block × mound | 3 | 0.76 | 0.5248 | 3 | 0.89 | 0.4540 |
| error | 36 | | | 36 | | |
