

Ecological Archives E096-025-A1

Luke E. Painter, Robert L. Beschta, Eric J. Larsen, and William J. Ripple. 2015. Recovering aspen follow changing elk dynamics in Yellowstone: evidence of a trophic cascade? *Ecology* 96:252–263. <http://dx.doi.org/10.1890/14-0712.1>

APPENDIX A. Multiple regression results, height and browsing rate by range sector, and snow-water-equivalent 1985–2012.

TABLE A1. Results of multiple regression analysis: variables tested, selected models, and reduced models for five response variables. The sign for each term indicates the sign of the regression coefficient. Columns list difference in AICc score compared to selected model (dAICc); adjusted R^2 ; and degrees of freedom (df) for the regression model.

Regression Model	dAICc	adj R^2	df
BROWSING RATE IN SAMPLING PLOTS			
(Browsing)~ +Central +West +LeaderLength +Logs** –Riparian +ConiferDistance**	6	0.21	6, 80
(Browsing)*~ +Central +West +(Leader Length)	0	0.23	3, 83
(Browsing)~ +Central +West	4	0.19	2, 84
HEIGHT OF YOUNG ASPEN IN SAMPLING PLOTS			
ln(Height)*~ –Browsing +LeaderLength	0	0.64	2, 84
ln(Height)~ –Browsing	3	0.62	1, 85
ln(Height)~ +LeaderLength	86	0.02	1, 85
HEIGHT OF FIVE TALLEST YOUNG ASPEN IN STAND			
Height~ –Central –West +Logs +Riparian –ConDistance** –LeaderLength**	0	0.35	6, 80

Height*~ –Central –West +Logs +Riparian	1	0.32	4, 82
Height~ –Central –West +Riparian	5	0.28	3, 83
Height~ –Central –West +Logs	7	0.27	3, 83
Height~ –Central –West	11	0.22	2, 84
Height~ –LeaderLength**	31	0.004	1, 85
ELK SCAT DENSITY			
ln(ElkScat)~ +Central +West –View** –Slope +SouthAspect – BisonScat	2	0.37	6, 80
ln(ElkScat)*~ +Central +West –View**	0	0.36	3, 83
ln(ElkScat)~ +Central +West	8	0.29	2, 84
ln(ElkScat)~ –BisonScat	23	0.15	1, 85
BISON SCAT DENSITY			
ln(BisonScat)~ –Central –West –Slope +View –SouthAspect**	3	0.53	5, 81
ln(BisonScat)*~ –Central –West –Slope	0	0.54	3, 83
ln(BisonScat)~ –Central –West	4	0.51	2, 84
*selected model			

**Sign of coefficient opposite of expected

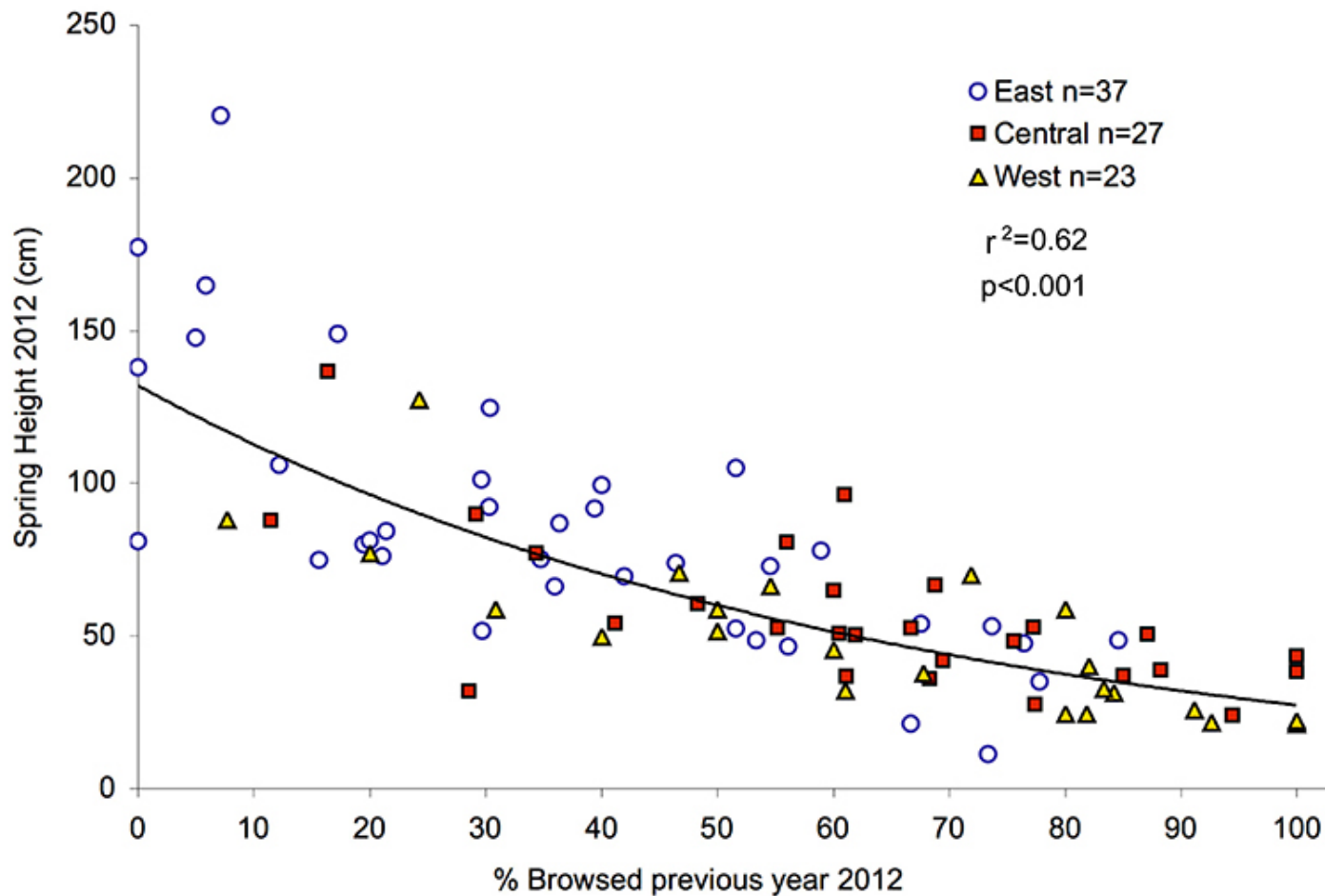


FIG. A1. Mean spring height of young aspen as a function of browsing rate in 87 aspen stand sampling plots, coded by range sector. Line is fitted to the logarithm of height.

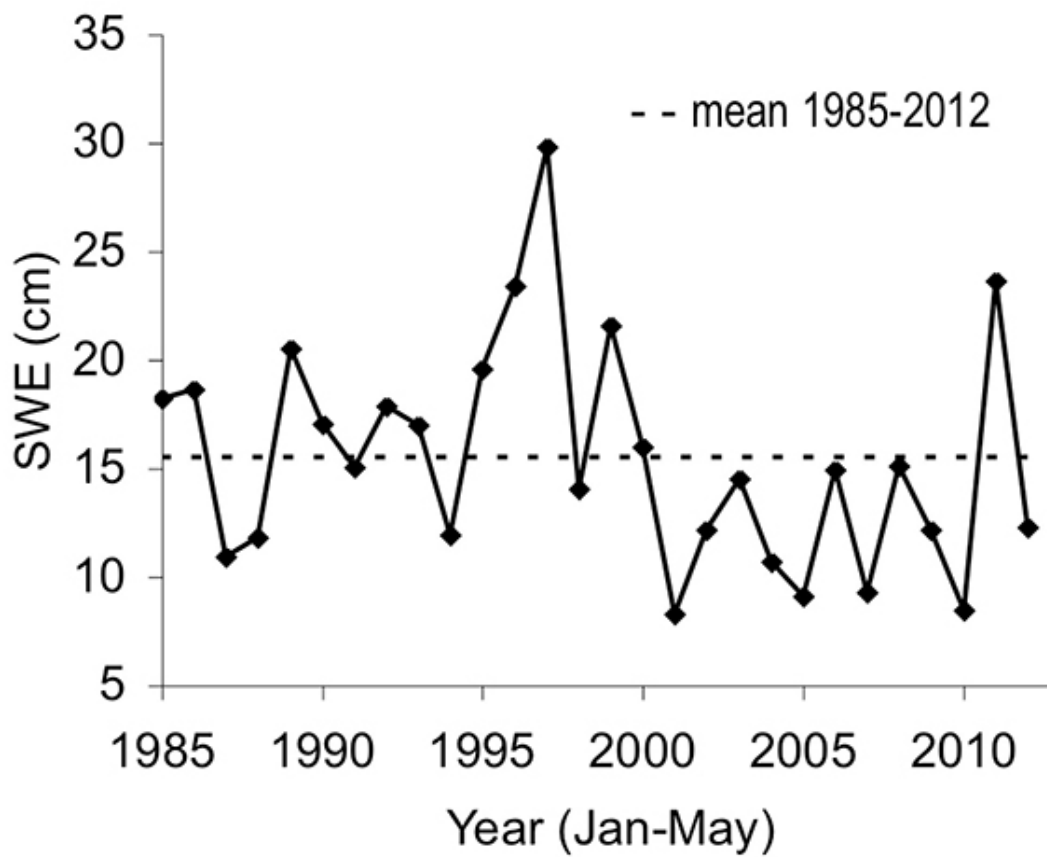


FIG. A2. Mean monthly SWE from Lupine Creek and Northeast Entrance snow courses. Data from National Resource Conservation Service.

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