

University of California Merced, Sierra Nevada Research Institute, Yosemite National Park, CA 95389
209-375-9917(office), 209-625-6700 (cell), eberlow@ucmerced.edu

APPOINTMENTS:

- 2006-present STATION DIRECTOR
University of California Merced, Sierra Nevada Research Institute, Yosemite National Park.
- 2008-present RESEARCH SCIENTIST
USGS Yosemite Field Station, Yosemite National Park, CA
- 2004-present RESEARCH SCIENTIST
Pacific Ecoinformatics and Computational Ecology (PEaCE) Laboratory, Berkeley CA
- 2005-present Alexander VON HUMBOLDT RESEARCH FELLOW
Ecological Networks Laboratory, Darmstadt Technical University, Darmstadt, Germany.
- 1999-2006 RESEARCH SCIENTIST
University of California San Diego, White Mountain Research Station, Bishop, CA
- 1999-2004, 2007-present VISITING SCHOLAR
University of California, Berkeley CA
- 1996 - 1998 NATIONAL SCIENCE FOUNDATION POSTDOCTORAL FELLOW
Department of Integrative Biology, University of California, Berkeley, CA
(advisor: Carla D'Antonio)
- 1995 - 1996 ANDREW MELLON POSTDOCTORAL FELLOW
Oregon State University, Corvallis OR.

EDUCATION:

- B.A. 1988 Brown University, Providence, RI. (Biology)
– Advisor: Mark Bertness
- Ph.D. 1995 Oregon State University, Corvallis, OR (Ecology)
– Advisors: Jane Lubchenco (currently head of NOAA) and Bruce Menge

AWARDS/HONORS/DISTINCTIONS:

- 2010-11 [TED Fellow](#)
- Berlow et al 2009 PNAS paper “Simple prediction of interaction strengths in complex food webs” (PNAS 106:187) surpassed the ISI threshold of the top 1% of most highly papers published in that year for Ecology/Evolution.
- Moore et al 2004 Ecology Letters paper “Detritus, trophic dynamics and biodiversity” (Ecology Letters, 7:584) was highlighted Thomson Reuter’s ScienceWatch “Fast Moving Fronts” May 2010.
- Sala et al 2000 Science paper “Global biodiversity scenarios for the year 2100” (Science 287: 1770) was recognized among the Top 20 most highly cited papers for the decade 1998-2008.
- Berlow ranked 2nd among all SNRI faculty (junior and senior) for the mean number of citations per publication (as of August 2010)

PUBLICATIONS

** ISI top 1% of most highly cited ecology papers published that year

† ISI top 20 most highly cited papers in ecology/evolution over a 10 year period (1998-2008)

a) Articles in Peer-Reviewed Journals:

Menge, B. A., **Berlow, E. L., Blanchette, C. A., Navarrete, S. A. and Yamada, S. B. 1994: The keystone species concept: Variation in interaction strength in a rocky intertidal habitat. *Ecological Monographs* 64: 249-286.

Berlow, E. L. and Navarrete, S. A. 1997. Spatial and temporal variation in rocky intertidal community organization: lessons from repeating field experiments. *Journal of Experimental Marine Biology and Ecology* 214: 195-229.

Berlow, E. L. 1997. From canalization to contingency: Historical effects in a successional rocky intertidal community. *Ecological Monographs* 67: 435-460.

****Berlow, E. L.** 1999. Strong effects of weak interactions in ecological communities. *Nature* 398: 300-334.

Berlow, E. L., Navarrete, S. A., Briggs, C. J., Power, M. E., and Menge, B. A. 1999. Quantifying variation in the strengths of species interactions. *Ecology* 80: 2206-2224.

† Sala, O. E., Chapin, F. S., III, Armesto, J. J., **Berlow, E.**, Bloomfield, J., Dirzo, R., Huber-Sanwald, E., Huenneke, L. F., Jackson, R. B., Kinzig, A., Leemans, R., Lodge, D. M., Mooney, H. A., Oesterheld, M., Poff, N. L., Sykes, M. T., Walker, B. H., Walker, M. and Wall, D. A. 2000: Global biodiversity scenarios for the year 2100. *Science* 287: 1771-1774.

Berlow, E. L., D'Antonio, C. M. and Reynolds, S. A. 2002: Shrub expansion in montane meadows: the interaction of local-scale disturbance and site aridity. *Ecological Applications*. 12: 1103-1118.

Bauer, K., **Berlow, E. L.**, and D'Antonio, C. M. 2002: Shrub expansion into montane meadows: The relationship between climate and Rothrock sagebrush colonization patterns. *Journal of Range Management*. 55: 620-625.

Williams R. J., Martinez, N. D., **Berlow, E. L.**, Dunne, J. A. and Barabási, A-L. 2002: Two degrees of separation in complex food webs. *Proceedings of the National Academy of Sciences* 99: 12913-12916.

Berlow, E.L., D'Antonio, C. M. and Swartz, H. 2003: Response of herbs to shrub removal across natural and experimental variation in soil moisture. *Ecological Applications*. 13: 1375-1387.

****Berlow, E. L.**, Neutel, A.-M., Cohen, J. E., De Ruiter, P., Ebenman, B., Emmerson, M., Fox, J. W., Jansen, V. A. A., Jones, J. I., Kokkoris, G. D., Logofet, D. O., McKane, A. J., Montoya, J. and Petchey,

O. L. 2004: Interaction strengths in food webs: Issues and opportunities. *Journal of Animal Ecology*. 73: 585-598.

Moore, J.C., **Berlow, E. L., Coleman, D. C., de Ruiter, P. C., Dong, Q., Hastings, A., Collins Johnson, N., McCann, K. S., Melville, K., Morin, P. J., Nadelhoffer, K., Rosemond, A.D., Post, D. M., Sabo, J. L., Scow, K. M., Vanni, M. J. and Wall, D. 2004: Detritus, Trophic Dynamics, and Biodiversity. *Ecology Letters* 7: 584-600.

Brose, U., **E. L. Berlow**, and N. D. Martinez. 2005. Scaling up keystone effects from simple to complex ecological networks. *Ecology Letters*. 8: 1317-1325.

Brose, U., L. Cushing, **E. L. Berlow**, T. Jonsson, C. Banasek-Richter, L.-F. Bersier, J. L. Blanchard, T. Brey, S. R. Carpenter, M.-F. C. Blandenier, J. E. Cohen, H. A. Dawah, T. Dell, F. Edwards, S. Harper-Smith, U. Jacob, R. A. Knapp, M. E. Ledger, J. Memmott, K. Mintenbeck, J. K. Pinnegar, B. C. Rall, T. Rayner, L. Ruess, W. Ulrich, P. Warren, R. J. Williams, G. Woodward, P. Yodzis, and N. D. Martinez. 2005. Body sizes of consumers and their resources. *Ecology* 86: 2545

Navarrete, S.A. and **Berlow, E. L.** 2006. Variable interaction strengths stabilize marine community structure. *Ecology Letters*. 9: 526-536. (Cover Photo)

Brose, U., T. Jonsson, **E. L. Berlow, P. Warren, C. Banasek-Richter, L.-F. Bersier, J. L. Blanchard, T. Brey, S. R. Carpenter, M.-F. Cattin Blandenier, L. Cushing, H. A. Dawah, T. Dell, F. Edwards, S. Harper-Smith, U. Jacob, M. E. Ledger, N. D. Martinez, J. Memmott, K. Mintenbeck, J. K. Pinnegar, B. C. Rall, T. S. Rayner, D. C. Reuman, L. Ruess, W. Ulrich, R. J. Williams, G. Woodward, and J. E. Cohen. 2006. Consumer-resource body-size relationships in natural food webs. *Ecology* 87: 2411-2417.

Darrouzet-Nardi, A., C. M. D'Antonio, and **E.L. Berlow**. 2008. Effects of young invading *Artemisia rothrockii* shrubs on soil moisture, soil nitrogen cycling, and resident herbs. *Journal of Vegetation Science*. 19: 23-30.

Otto, S.B., **E.L. Berlow**, N.E. Rank, J. Smiley, and U. Brose. 2008. The diversity and identity of predators drive interaction strengths and trophic cascades in a montane food web. *Ecology*. 89: 134-144.

Berlow, E.L., U. Brose, N.D. Martinez. 2008. The "Goldilocks factor" in food webs. *Proceedings of the National Academy of Sciences*. 105: 4079-4080.

Brose, U., R.B. Ehnes, B.C. Rall, O. Vucic-Pestic, **E.L. Berlow**, and S. Scheu. 2008. Foraging theory predicts predator-prey energy fluxes. *J. Animal Ecology*. 77: 1072-1078.

****Berlow, E. L.**, J. A. Dunne, N.D. Martinez, P.B. Stark, R.J. Williams, and U. Brose. 2009. Simple prediction of interaction strengths in complex food webs. *Proceedings of the National Academy of Sciences* 106: 187-191.

Romanuk, T. N., Zhou Y., U. Brose, **E. L. Berlow**, R. J. Williams, N. D. Martinez. 2009. Predicting invasion success in complex ecological networks. *Philosophical Transactions of the Royal Society B*. 364: 1743-1754.

b) Book Chapters, Reports, Dissertations, etc.

Berlow, E. L. 1995. Patterns and Dynamics of Context-Dependency in the Marine Rocky Intertidal. Ph.D. Dissertation. Oregon State University, Corvallis, OR. 180 pp.

Berlow, E. L. 1997. Shoreline biology. *Trends in Ecology and Evolution* 12: 329-330.

Reynolds, S.A. and **Berlow, E. L.** 2004. *Artemisia rothrockii* G. rothrock sagebrush. In: Wildland shrubs of the United States and its territories, Ed. Francis, J. K. *USDA Forest Service General Technical Report* IITF-WB-1. International Institute of Tropical Forestry, Río Piedras, PR. www.fs.fed.us/global/iitf/pdf/shrubs/Artemisia%20rothrockii.pdf. 3 pp.

D'Antonio, C.M., **Berlow, E.L.** and Haubensak, K.A. 2004: Invasive exotic plant species in Sierra Nevada ecosystems. In: Proceedings from the Sierra Science Conference 2002: Science for management and conservation. *USDA Forest Service General Technical Report*, PSW Station Albany, Oregon.

Harper-Smith, S, **Berlow, E. L.**, Knapp, R. A., Williams, R. J. and Martinez, N. D. 2005: Communicating through food webs: visualizing the impacts of introduced predators on alpine lake communities in the Sierra Nevada, CA. In: *Dynamic Food Webs- multispecies assemblages, ecosystem development and environmental change*, Eds. De Ruiter, P., Moore, J. C., and Wolters, V. (Amsterdam: Elsevier Press). Ch. 7.5. pp: 407-423.

Brose, U, **Berlow, E. L.**, and Martinez, N. D. 2005: From food webs to ecological networks: linking non-linear trophic interactions with nutrient competition. In: *Dynamic Food Webs- multispecies assemblages, ecosystem development and environmental change*, Eds. De Ruiter, P., Moore, J. C., and Wolters, V. (Amsterdam: Elsevier Press). Ch. 2.1. pp: 24-36.

Sabo, J. L., Beisner, B. E., **Berlow, E. L.**, Cuddington, K., Hastings, A., Koen-Alonso, M., McCann, K., Melian, C., and Moore, J. 2005: Population dynamics and food web structure—the dual role of reductionism and holism in advancing food web science. In: *Dynamic Food Webs- multispecies assemblages, ecosystem development and environmental change*, Eds. De Ruiter, P., Moore, J. C., and Wolters, V. (Amsterdam: Elsevier Press). Ch. 8.2. pp: 437-450.

Memmott, J., D. Alonso, **E.L. Berlow**, A. Dobson, J.A. Dunne, R. Solé, J. Wietz. 2005. Biodiversity loss and ecological network structure. In: *Ecological Networks: Linking Structure to Dynamics in Food Webs*, eds. M. Pascual and J.A. Dunne. Oxford University Press, New York. Ch. 14. pp: 325-347.