

## **Mary Eleanor Power**

Department of Integrative Biology  
University of California  
Berkeley, CA 94720  
(510) 643-7776  
mepower@berkeley.edu

### **Education**

B.A., Brown University (Biology), Providence, Rhode Island, 1971  
M.S., Boston University Marine Program (Biology), Woods Hole, Massachusetts, 1974  
PhD., University of Washington (Zoology), Seattle, Washington, Dec. 1981  
"The grazing ecology of armored catfish in a Panamanian stream"

### **Professional Experience**

Assistant Professor, Department of Zoology, and Integrative Biology, University of California, Berkeley, 1987-1992  
Associate Professor, Department of Integrative Biology, University of California, Berkeley, 1992 - 1996  
Professor, Department of Integrative Biology, University of California, Berkeley, 1996 - present  
Faculty Manager, Angelo Coast Range Reserve, 1989 - present  
Chair, Aquatic Ecology Section, Ecological Society of America, 1995-1997  
Chair, University-Wide Natural Reserve System Advisory Committee, 1995-1998  
Peer Advisory Board, Institute for Ecosystem Studies, Millbrook, N.Y., 1996-1999  
Scientific Advisory Board, National Center for Ecological Analysis and Synthesis, 1996-1998  
Grand Canyon Monitoring and Research Center Peer Review Panel 1998-1999  
Group leader, Presidential Advisory Commission on Western Water Policy, 1997  
Board of Directors, The Nature Conservancy, California, 1997-present  
Science Advisor to the Grand Canyon Monitoring and Research Center and the Glen Canyon Dam Adaptive Management Program 2000-2001  
Director, California Biodiversity Center, 2001-present  
NOAA-Fisheries Salmon Recovery Science Advisory Panel, 2004-present  
Board of Reviewing Editors, Science Magazine, 2005-2009  
Participant, Vatican Conference on Water and the Environment, November 2005  
International Science Advisory Committee, Alberta Ingenuity Center for Water Research 2006-present

### **Honors**

Sigma Xi, 1971  
Phi Beta Kappa, 1971  
B.A., magna cum laude 1971  
Summer student fellowships, Woods Hole Oceanographic Institution, 1972, 1973  
Nobel Summer Fellowship, Smithsonian Tropical Research Institute, 1976  
Walter Rathbone Bacon Fellowship for Field Biology, Smithsonian Institution, 1978-80  
Jasper Loftus-Hills Prize for Young Investigators, from the American Society of Naturalists, 1985  
Guggenheim Fellowship, awarded 1994  
Miller Institute for Basic Research Professor, Spring 2002  
John and Margaret Gompertz Chair in Integrative Biology, 2002-2007  
Kempe Award for Distinguished Ecologists 2004 from Umea University and the Swedish University of Agricultural Science  
G. Evelyn Hutchinson Medal, American Society of Limnology and Oceanography, 2005  
American Society of Naturalists: President Elect 2004-2005, President 2005-2006, Past President 2006-2007.  
Ecological Society of America: President Elect 2008-2009, President 2009-2010, Past President 2010-2011  
Fellow, California Academy of Sciences (elected 2005)  
Fellow, American Academy of Arts and Sciences (elected 2007)  
Visiting Distinguished Research Professorship, LEREC, Umea University, Sweden (2010)  
Honorary Doctorate, Umea University, October 2011

National Academy of Science, elected Fellow May 2012

### **Awards**

National Science Foundation Dissertation Improvement award 1978-80

National Science Foundation award (Ecology panel), 1983-85: "Multi-level effects of an algae-grazing minnow (*Camptostoma anomalum*) on north temperate streams (with Drs. W.J. Matthews and A.J. Stewart, Univ. Oklahoma)

National Science Foundation supplementary award (Ecology panel), 1983-85: "Predators and algae-grazing minnows in north temperate streams: Does the kind of predator matter?" (with Drs. Matthews, Stewart, and R. Cashner)

National Science Foundation Visiting Professorship for Women, 1986-1988: "The role of primary consumers in structuring communities of northern Californian streams

Junior Faculty Award, University of California, Berkeley, 1988

Water Resources Center (California) Award: 1988-90: "Seasonal and hydrologic controls of algal blooms in northern California rivers."

National Science Foundation award (Ecology panel), 1991-1993: "Productivity, plant biomass, and trophic interactions in rivers."

National Science Foundation award (Conservation Biology panel), 1991-1993: "Food web analysis of biodiversity: Application to algal-based river systems."

National Science Foundation award (Ecology panel) (1994-1996): "Disturbance and the structure of river food webs" (with J.T. Wootton and M.S. Parker)

Water Resources Center (California) Award: 1993-1995. Effects of stream flow regulation and reduction of scouring floods on trophic transfer of biomass to fish in northern California rivers.

National Science Foundation award (Ecology panel) (1997-2000): "Consequences of trophic exchange between rivers and watersheds"

Water Resources Center (California) Award: 2000-2002. Bed texture, food web structure, and juvenile salmonid rearing in North Coast California rivers.

Water Resources Center (California) Award: 2002-2004. Upstream and upslope translocation of river-borne materials by aquatic and riparian organisms: Contrasts in spatial fluxes along mainstems and at tributary confluences

National Science Foundation Integrated Research Challenges in BioComplexity: 2002-2006 Analysis of factors determining the ecological function and resilience of microbial communities (PI Jill Banfield, EPS, ESPM, UCB; co-PIs Mary Power, IB, UCB; Wayne Getz ESPM, UCB; Phil Hugenholtz EPS, ESPM, UCB; Jo Handelsman (U. Wisconsin), Paul Richardson, Joint Genomics Institute).

National Science Foundation Science and Technology Center award (2002-2007 and (renewal) 2007-2012): National Center for Earth Surface Dynamics (Gary Parker, U. Minn, PI)--subaward to M.E. Power

CALFED (2002-2004): The influence of flood regimes, vegetative and geomorphic structures on links between aquatic and terrestrial systems: Applications to CalFed restoration and watershed monitoring.

National Science Foundation (Biological Field Stations and Marine Labs) (2001-2006): FSML: Research and facilities planning for the Angelo Coast Range Reserve

National Science Foundation (2006-2009): RUI: Coupling consumer-resource interactions and nutrient spiraling in a stream network. John Schade, St. Olaf's College, PI.

California Energy Commission, Public Interest Energy Research Group (2008-2010): Foothill Yellow-Legged Frog Conservation in Relation to Physical Habitat and Temperature. Mary Power, Sarah Kupferberg, and Alessandro Catenazzi, Dept. of Integrative Biology, University of California, Berkeley

### **Teaching Interests**

Community ecology, grazing, freshwater and watershed ecology, food webs, landscape controls on ecosystems, Earth stewardship

## Publications

1. Power, M.E. and J.H. Todd. 1976. Effects of increasing temperature on social behavior in territorial groups of pumpkinseed sunfish, *Lepomis gibbosus*. *Environ. Pollut.* 10: 217-223.
2. Moodie, G.E.E. and M. Power. 1982. The reproductive biology of an armored catfish, *Loricaria uracantha*, from Central America. *Environ. Biol. Fish.* 7: 143-148.
3. Power, M.E. 1983. Grazing responses of tropical freshwater fishes to different scales of variation in their food. *Environ. Biol. Fish.* 9: 103-115.
4. Power, M.E. and W.J. Matthews. 1983. Algae-grazing minnows (*Campostoma anomalum*), piscivorous bass (*Micropterus* spp.) and the distribution of attached algae in a small prairie-margin stream. *Oecologia* 60: 328-332.
5. Power, M.E. 1984. The importance of sediment in the feeding ecology and social interactions of an armored catfish, *Ancistrus spinosus*. *Environ. Biol. Fish.* 10: 173-181.
6. Power, M.E. 1984. Habitat quality and the distribution of algae-grazing catfish in a Panamanian stream. *J. Anim. Ecol.* 53: 357-374.
7. Power, M.E. 1984. Depth distributions of armored catfish: Predator-induced resource avoidance? *Ecology* 65: 523-528
8. Power, M.E., W.J. Matthews and A.J. Stewart. 1985. Grazing minnows, piscivorous bass and stream algae: Dynamics of a strong interaction. *Ecology* 66: 1448-1456.
9. Matthews, W.J., M.E. Power, and A.J. Stewart. 1986. Depth distributions of *Campostoma* grazing scars in an Ozark stream. *Environ. Biol. Fish.* 17: 291-297.
10. Power, M.E. and A.J. Stewart. 1987. Disturbance and recovery of an algal assemblage following flooding in an Oklahoma stream. *Amer. Midl. Nat.* 117: 333-345
11. Power, M.E. 1987. Predator avoidance by grazing fishes in temperate and tropical streams: Importance of stream depth and prey size. pp. 333-351 in Kerfoot, W.C. and A. Sih. (eds.) *Predation: Direct and indirect impacts in aquatic communities*. Univ. Press of New England, Dartmouth, N.H.
12. Matthews, W.J., A.J. Stewart and M.E. Power. 1988. Grazing fishes as components of North American stream ecosystems: effects of *Campostoma anomalum*. pp. 128-135 in W.J. Matthews and D.C. Heins (eds.) *Ecology of North American stream fishes*. Univ. Oklahoma Press, Norman, OK.
13. Power, M.E., A.J. Stewart and W.J. Matthews. 1988. Grazer control of attached algae in an Ozark Mountain stream: Effects of short-term exclusion. *Ecology* 69: 1894-1899.
14. Power, M.E., R.J. Stout, C.E. Cushing, P.P. Harper, F.R. Hauer, W.J. Matthews, P.B. Moyle, B. Stutzner, and I.R. Waiss de Badgen. 1988. Biotic and abiotic controls in river and stream communities. *J. North Amer. Benthol. Soc.* 7: 456-479.
15. Feminella, J.W., M.E. Power, and V.H. Resh. 1989. Periphyton responses to grazing invertebrates and riparian canopy in three Northern California coastal streams. *Freshw. Biol.* 22:445-487.
16. Power, M.E., T.L. Dudley and S.D. Cooper. 1989. Grazing catfish, fishing birds, and attached algae in a Panamanian stream. *Environ. Biol. Fishes* 26: 285-295. 17. Power, M. E. 1990. Effects of fish in river food webs. *Science* 250: 411-415.
17. Power, M.E. 1990. Effects of fish in river food webs. *Science* 250: 411-415.
18. Power, M.E. 1990. Benthic turfs vs. floating mats of algae in river food webs. *Oikos* 58:67-79.
19. Power, M.E. 1990. Indirect effects of grazers at low population density: armored catfish, algae, and sediment. *Ecology* 71:897-904.
20. Power, M.E. 1991. Shifts in the effects of tuft-weaving midges on filamentous green algae. *Amer. Midl. Nat.* 125:275-285.
21. Brimhall, G.H., O.A. Chadwick, C.J. Lewis, W. Compston, I.S. Williams, K.J. Danti, W.E. Dietrich, M.E. Power, D. Hendricks, and J. Bratt. 1992. Deformational mass transport and invasive processes in soil evolution. *Science* 255: 695-702.
22. Power, M.E. 1992. Hydrologic and trophic controls of seasonal algal blooms in northern California rivers. *Archiv fur Hydrobiologie* 125: 385-410.

23. Power, M. E., J. C. Marks and M. S. Parker. 1992. Variation in the vulnerability of prey to different predators: Community-level consequences. *Ecology* 73: 2218-2223.
24. Power, M. E. 1992. Top down and bottom up forces in food webs: do plants have primacy? *Ecology* 73: 733-746.
25. Power, M. E. 1992. Habitat heterogeneity and the functional significance of fish in river food webs. *Ecology* 73: 1675-1688.
26. Wootton, J.T. and M.E. Power. 1993. Productivity, consumers, and the structure of a river food chain. *Proc. Nat. Acad. Sci. USA* 90: 1384-1387.
27. Matthews, W.J., B.C. Harvey and M.E. Power. 1994. Spatial and temporal patterns in the fish assemblages of individual pools in a midwestern stream (USA). *Environmental Biology of Fishes* 39: 381-397.
28. Kupferberg, S.J., J.C. Marks and M.E. Power. 1994. Effects of variation in natural algal and detrital diets on larval anuran (*Hyla regilla*) life history traits. *Copeia* 1994 (2): 446-457.
29. Oksanen, T., M.E. Power and L. Oksanen. 1995. Habitat selection and consumer resources. *American Naturalist* 146: 565-583.
30. Power, M.E., G. Parker, W.E. Dietrich, and A. Sun. 1995. How does floodplain width affect floodplain river ecology? A preliminary exploration using simulations. *Geomorphology* 13: 301-317.
31. Power, M.E. 1995. Floods, food chains and ecosystem processes in rivers. pp. 52-60 in: C.L. Jones and J.H. Lawton (eds.) *Linking Species and Ecosystems*. Chapman and Hall, N.Y.
32. Power, M.E., A. Sun, G. Parker, W.E. Dietrich and J.T. Wootton. 1995. Hydraulic food chain models. *BioScience* 45: 159-167
33. Persson, L., J. Bengtsson, B.A. Menge and M.E. Power. 1996. Productivity and the structure and regulation of communities. pp. 396-434 in G.A. Polis and K.O. Winemiller (eds.) *Food Webs: Integration of Patterns and Dynamics*. Chapman and Hall, N.Y.
34. Power, M.E., M.S. Parker and J.T. Wootton. 1996. Disturbance and food chain length in rivers. pp. 286-297 in G.A. Polis and K.O. Winemiller (eds.) *Food Webs: Integration of Patterns and Dynamics*. Chapman and Hall, N.Y.
35. Wootton, J.T., M.S. Parker and M.E. Power. 1996. The effect of disturbance on river food webs. *Science* 273: 1558-1560.
36. Power, M.E., D. Tilman, J. A. Estes, B.A. Menge, W.J. Bond, L.S. Mills, G. Daily, J.C. Castilla, J. Lubchenco, and R.T. Paine. 1996. Challenges in the quest for keystones. *BioScience* 46: 609-620
37. Power, M.E., W.E. Dietrich, and J.C. Finlay. 1996. Dams and downstream aquatic biodiversity: Potential food web consequences of hydrologic and geomorphic change. *Environmental Management* 20: 887-895.
38. Carpenter, S., T. Frost, L. Persson, M. Power and D. Soto. 1996. Freshwater ecosystems: Linkages of complexity and processes. pp. 299-325 in Mooney, H.A., Cushman, J.H., Sala O.E. and Schulze, E-D. (eds.) *Functional Roles of Biodiversity: A Global Perspective*. Wiley, N.Y.
39. Wootton, J.T., M.E. Power, R.T. Paine and C. Pfister. 1997. Nutrients, El Nino Events, and Food Chain Processes in the Rocky Intertidal. *Proc. National Academy of Sciences* 93: 13855-13858.
40. Power, M.E., W.E. Dietrich, and K.O. Sullivan. 1998. Experiment, observation, and inference in river and watershed investigations. Pp. 113-132 In W.J. Resetarits and J. Bernardo, eds. *Experimental Ecology: Issues and perspectives*. Oxford Univ. Press, Oxford, UK.
41. Dodson, J., R.J. Gibson, R. A. Cunjak, K.D. Friedland, C.G. de Leaniz, M.R. Gross, R. Newbury, J.L. Nielsen, M.E. Power and S. Roy. 1998. Elements in the development of a conservation plan for Atlantic salmon (*Salmo salar*). *Can. J. Fish Aquat. Sci.* 55 (Suppl. 1): 312-323.
42. Folt, C. L., K. H. Nisow and M. E. Power. 1998. Implications of temporal and spatial scale for Atlantic salmon research. *Can. J. Fish Aquat. Sci.* 55 (Suppl. 1): 9-21.
43. Finlay, J.C., M.E. Power and G. Cabana. 1999. Effects of carbon limitation on algal carbon isotope ratios: implications for river food webs. *Limnology and Oceanography* 44:1198-1203.
44. Berlow, E.L., S.A. Navarrete, M.E. Power, B.A. Menge, and C. Briggs. 1999. Quantifying variation in the strengths of species interactions. *Ecology* 80: 2206-2224.

45. Marks, J.C., M.E. Power and M.S. Parker. 2000. Flood disturbance, algal productivity, and interannual variation in food chain length. *Oikos* 90: 20-27.
46. Power, M.E. and W.E. Rainey. 2000. Food webs and resource sheds: Towards spatially delimiting trophic interactions. pp. 291-314- in M.J. Hutchings, E.A. John and A.J.A. Stewart (eds.) *Ecological Consequences of Habitat Heterogeneity*. Blackwell Scientific, Oxford, UK.
47. Thompson, J.N., O. J. Reichman, P. J. Morin, G. A. Polis, M. E. Power, R. W. Sterner, C. A. Couch, L. Gough, R. Holt, D. U. Hooper, F. Keesing, C. R. Lovell, B. T. Milne, M. C. Molles, D. W. Roberts, and S. Y. Strauss. 2001. *Frontiers of Ecology*. *BioScience* 51: 15-24.
48. Power, M.E. 2001. Prey exchange between a stream and its forested watershed elevate predator densities in both habitats. *Proc. Natl. Acad. Sci.* 98: 14-15.
49. Power, M.E. 2001. Field biology, food web models, and management: Challenges of context and scale. *Oikos* 94: 118-129.
50. Power, M.E. 2001. Controls on food webs in gravel-bedded rivers: the importance of the gravel bed habitat to trophic dynamics. pp 405-422 in Mosley, M. P. (editor), *Gravel-Bed Rivers V*, New Zealand Hydrological Society, Wellington, New Zealand (ISBN 0-473-07486-9).
51. Harding, E.K., Crone, E.E., Eldred, B.D., Hoekstra, J.M., McKerrow A.J., Perrine, J.D., Regetz J., Rissler, L.J., Stanley, A.G., Walters, E.L., and NCEAS HCP Working Group (2001). *The Scientific Foundations of Habitat Conservation Plans: a Quantitative Assessment*. *Conservation Biology*, 15 (2) 488-500.
52. Marks, J.C. and M.E. Power. 2001. Nutrient induced changes in the species composition of epiphytes on *Cladophora glomerata* Kütz. (Chlorophyta) . *Hydrobiologia* 450: 187-195.
53. Sabo, J.L. and M.E. Power. 2002. River-watershed exchange: Effects of riverine subsidies on riparian lizards and their terrestrial prey. *Ecology* 83: 1860-1869.
54. Sabo, J.L. and M.E. Power. 2002. Numerical response of riparian lizards to aquatic insects and the short-term consequences for alternate terrestrial prey. *Ecology* 83: 3023-3236.
55. Sabo, J. L., J. L. Bastow, and M. E. Power. 2002. Length-mass relationships for adult aquatic and terrestrial invertebrates in a California watershed. *Journal of the North American Benthological Society* **21**:336-343
56. Power, M. E. and W. E. Dietrich. 2002. Food webs in river networks. *Ecological Research* 17:451-471. .
57. Fausch, K. D., M. E. Power, and M. Murakami. 2002. Linkages between stream and forest food webs: Shigeru Nakano's legacy for ecology in Japan. *Trends in Ecology & Evolution* 17: 429-434.
58. Finlay, J.C., Khandwala, S. and M.E. Power. 2002. Spatial scales of energy flow in food webs of the South Fork Eel River. *Ecology* 83: 1845-1859.
59. Bastow, J. L., J. L. Sabo, J. C. Finlay, and M. E. Power. 2002. A basal aquatic-terrestrial trophic link in rivers: algal subsidies via shore-dwelling grasshoppers. *Oecologia* **131**:261-268
60. Parker, M. S., M. E. Power, and J. T. Wootton. 2002. Effects of substrate composition, stream-bed stability, and sediment supply on survival and trophic role of a dominant stream grazer. *Verh. Internat. Verein. Limnol.* 28:238-241.
61. Power, M.E. 2003. Life cycles, limiting factors, and the behavioral ecology of four Loricariid catfishes in a Panamanian River. Pp. 581-600 in: Arratia, G., Kapoor, B.G., Chardon, M. and Diogo, R. *Catfishes*. Science Publishers, Inc., Enfield, NH.
62. Strayer, D.S., M.E. Power, W.F. Fagan, S.T.A. Pickett and J. Belnap. 2003 A classification of ecological boundaries. *BioScience (Special Section on Ecological Boundaries)*, 53:723-729.
63. Suttle, K.B., M.E. Power, J.A. Levine and F.C. McNeely. 2004. How fine sediment in river beds impairs growth and survival of juvenile salmonids. *Ecological Applications* 14: 969-974.
64. Power, M.E., M.J. Vanni, P. Stapp and G.A. Polis. 2004. Subsidy effects on managed ecosystems: Implications for sustainable harvest, conservation, and control. pp. 387-409 in G.A. Polis, M.E. Power, and G. Huxel (eds.) *Food webs and Landscapes*. U. Chicago Press, Chicago, IL.

65. Power, M.E., W. E. Rainey, M.S. Parker, J. L. Sabo, A. Smyth, S. Khandwala, J.C. Finlay, F.C. McNeely, K. Marsee, and C. Anderson. 2004. River to watershed subsidies in an old-growth conifer forest. pp. 217-240 in: G.A. Polis, M.E. Power and G. Huxel. (eds.) Food webs and Landscapes. U. Chicago Press, Chicago, IL.
66. Polis, G.A. M.E. Power and G. Huxel. (eds.) 2004. Food webs and Landscapes. U. Chicago Press, Chicago, IL.
67. Power, M.E., Brozovic, N., Bode, C. and Zilberman, D. 2005. Spatially explicit tools for understanding and sustaining inland water ecosystems. *Frontiers in Ecology and the Environment* 3: 47-55.  
[www.frontiersinecology.org/specialissue.html](http://www.frontiersinecology.org/specialissue.html). Reprinted in Chinese.
68. Lowe, W.H., G.E. Likens and M.E. Power. 2006. Linking scales in stream ecology. *BioScience* 56: 591-597.
69. Power, M.E. 2006. Environmental controls on food web regimes: a fluvial perspective. *Marine Ecology Progress Series* 68: 125-133.
70. Paola, C., E. Foufoula-Georgiou, W. E. Dietrich, M. Hondzo, D. Mohrig, G. Parker, M. E. Power, I. Rodriguez-Iturbe, V. Voller, and P. Wilcock. 2006. Toward a unified science of the Earth's surface: Opportunities for synthesis among hydrology, geomorphology, geochemistry, and ecology. *Water Resources Research* 42: W03S10, doi:10.1029/2005WR004336.
71. Agrawal, A., D. D. Ackerly, F. Adler, B. Arnold, C. Caceres, D.F. Doak, E. Post, P. Hudson, J. Maron, K.A. Mooney, M.E. Power, D. Schemske, J. Stachowicz, S. Strauss, M.G. Turner, E. Werner. 2007. Filling key gaps in population and community ecology. *Frontiers in Ecology and the Environment* 5: 143-152.
72. Suttle, K.B., M. A. Thomsen, and M.E. Power. 2007. Species interactions reverse grassland responses to changing climate. *Science* 315: 640-642. (<http://www.fl000biology.com/search/results.asp?terms=Suttle>)
73. McNeely, C. and M.E. Power. 2007. Spatial variation in caddisfly grazing regimes within a northern California watershed. *Ecology* 88: 2609-2619.
74. Warnars, T., M. Hondzo and M.E. Power. 2007. Abiotic controls on periphyton accrual and metabolism in streams: Scaling by dimensionless numbers. *Water Resources Research* 43: W08425.
75. McNeely, C., J.F. Finlay and M.E. Power. 2007. Grazer traits, competition, and carbon sources to a headwater stream food web. *Ecology* 88: 391-401.
76. Barnes, E.A., M.E. Power, E. Foufoula-Georgiou, M. Hondzo, and W.E. Dietrich. 2007. Scaling *Nostoc* biomass in a gravel-bedrock river: Combining local dimensional analysis with hydrogeomorphic scaling laws." *Geophysical Research Letters* 34: L24S26 .
77. Power, M.E., M.S. Parker, and W.E. Dietrich. 2008. Seasonal reassembly of river food webs under a Mediterranean hydrologic regime: Floods, droughts, and impacts of fish. *Ecological Monographs* 78: 263-282.
78. Michelle M. McClure, Stephanie M. Carlson, Timothy J. Beechie, George R. Pess, Jeffrey C. Jorgensen, Susan M. Sogard, Sonia E. Sultan, Damon M. Holzer, Joseph Travis, Beth L. Sanderson, Mary E. Power and Richard W. Carmichael. 2008. Evolutionary consequences of habitat loss for Pacific anadromous salmonids. *Evolutionary Applications* 1(2): 300-318 <http://www.blackwell-synergy.com/toc/eva/1/2>
79. Power, M.E. 2008. Biological interactions in river ecosystems. *Encyclopedia of Inland Waters*, in press.
80. Holomuzki, J.R., J.W. Feminella and M.E. Power. 2008. Biotic interactions in freshwater benthic habitats. In press, *Journal of the North American Benthological Society* (Birthday Issue).
81. Power, M.E., R. Lowe, P.C. Furey, J. Welter, M. Limm, J.C. Finlay, C. Bode, S. Chang, M. Goodrich, J. Sculley. 2009. Algal mats and insect emergence in rivers under Mediterranean climates: Towards photogrammetric surveillance. *Freshwater Biology* 54: 2101-2115. <http://www3.interscience.wiley.com/journal/119880174/issue>.
82. Cruz-Martínez, K., K. B. Suttle, E. L. Brodie, M.E. Power, G. L. Andersen, J. F. Banfield. 2009. Soil microbial communities are more resilient than overlying grassland to effects of elevated rainfall in California. *International Society of Microbial Ecology (ISME) Journal*: 1-7 ([www.nature.com/ismej](http://www.nature.com/ismej)).
83. Belnap, C.P., Pan, C. VerBerkmoes, N.C., Power, M.E., Samatova, N.F., Carver, R.L., Hettich, R.L., Banfield, J.F. 2009. Cultivation and quantitative proteomic analyses of acidophilic microbial communities. *International Society of Microbial Ecology (ISME) Journal*: 1-7 ([www.nature.com/ismej](http://www.nature.com/ismej)).

84. Palmer, M.A., E.S. Bernhardt, W. H. Schlesinger, K.N. Eshleman, E. Foufoula-Georgiou, M. S. Hendryx, A. D. Lemly, G.E. Likens, O. L. Loucks, M.E. Power, P. S. White, and P. R. Wilcock. 2010. Consequences of mountain top mining. *Science* 327: 148 – 149. DOI: 10.1126/science.1180543
85. J.C. Finlay, J.M. Hood, M. Limm, M.E. Power, J.D. Schade and J.R. Welter. 2011. Light mediated thresholds in ecosystem nutrient stoichiometry in a river network. *Ecology* 92: 140-150.
86. Schade, J.D., K. MacNeill, S. A. Thomas, F. C. McNeely, J. R. Welter, J. Hood, M. Goodrich, M. E. Power, and J. C. Finlay. 2010. The stoichiometry of nitrogen and phosphorus spiraling in heterotrophic and autotrophic streams. *Freshwater Biology*. doi:10.1111/j.1365-2427.2010.02509.x
87. Chapin, F.S. III, Pickett, S.T.A., Power, M.E., Jackson, R.B., Carter, D.M., Duke, C. 2011. Earth Stewardship: A Strategy for Social-Ecological Transformation to Reverse Planetary Degradation. *J. Environ. Studies and Sciences* 1: 44–53. Special issue to commemorate Steven Schneider. DOI 10.1007/s13412-011-0010-7.
88. Morris, M.W.L., M. Hondzo, and M.E. Power. 2011. Scaling *Glossosoma* (Trichoptera) density by abiotic variables in mountain streams. *J. North Am. Benthol. Soc.* 30: DOI: 10.1899/10-068.1.
89. Limm, M. and M.E. Power. 2011. The caddisfly *Dicosmoecus gilvipes*: making a case for a functional role. *J. N. Am. Benthol. Soc.* 30(2): 485-492.
90. Limm, M. and M.E. Power. 2011. Effect of the western pearlshell mussel *Margaritifera falcata* on Pacific lamprey *Lampetra tridentata* and ecosystem processes. *Oikos* doi: 10.1111/j.1600-0706.2010.18903.
91. Estes, J.A., J Terborgh, J S. Brashares, M E. Power, J Berger, W J. Bond, S R. Carpenter, T Essington, R D. Holt, J B.C. Jackson, R J. Marquis, L Oksanen, T Oksanen, R T. Paine, Ellen Pikitch, W J. Ripple, S Sandin, M Scheffer, T W. Schoener, J B. Shurin, A R.E. Sinclair, M E. Soulé, and D A. Wardle. 2011. Trophic downgrading of Planet Earth. *Science* 333: 301-306. DOI: 10.1126/science.1205106
92. Chapin, F. S., M. E. Power, S. T. A. Pickett, A. Freitag, J. A. Reynolds, R. B. Jackson, D. M. Lodge, C. S. Duke, S. L. Collins, A. G. Power, and A. Bartuska. 2011. Earth Stewardship: science for action to sustain the human-earth system. *Ecosphere* **art89**: doi:10.1890/ES1811-00166.00161.
93. Furey, P. C., R. L. Lowe, M. E. Power, and A. M. Campbell-Craven. 2012. Midges, Cladophora, and epiphytes: shifting interactions through succession. *Freshwater Science* **31**:93-107. (formerly *J. North Amer. Benthol. Soc.*)
94. Sarah J. Kupferberg<sup>a</sup>, Wendy J. Palen<sup>b</sup>, Amy J. Lind<sup>c</sup>, Steve Bobzien<sup>d</sup>, Alessandro Catenazzi<sup>e</sup>, Joe Drennan<sup>f</sup>, Mary E. Power<sup>a</sup> Effects of flow regimes altered by dams on survival, population declines, and range-wide losses of California river-breeding frogs. *Conservation biology*, *in press*.
95. Estes, J.A., J. Brashares and M.E. Power. 2012. Predicting and detecting reciprocity between indirect ecological interactions and evolution. *American Naturalist*, *in press*.

---

#### Reviews, Compilations, Reports and Commentary

1. F. Stuart Chapin, III, Mary Power, Stewart Pickett, David Carter, Robert Jackson, and Cliff Duke. 2010. Earth Stewardship: A framework to transform the trajectory of society's relationship to the biosphere. Ecological Society of America (<http://www.esa.org/earthstewardship/>). White Paper submitted in response to the National Science Foundation's "Dear Colleague Letter for SBE 2020: Future Research in the Social, Behavioral & Economic Sciences (NSF 10-069)" which invited groups and individuals to outline grand challenge questions to guide strategic planning in NSF's Directorate for the Social, Behavioral, and Economic Sciences. Creative Commons Attribution 3.0 license held by the Ecological Society of America.
2. F. Stuart Chapin, III, Mary E. Power, and Jonathan J. Cole. 2010. Coupled Biogeochemical Cycles as a Binding Thread for Planetary Stewardship. *Frontiers in Ecology and Environment* 8:
3. Mary E. Power, and F. Stuart Chapin III (compilers). 2010. Planetary Stewardship in a Changing World: Paths Towards Resilience and Sustainability. *Ecological Society of America Bulletin*: 164-195.
4. Power, M.E. and F.S. Chapin III. 2009. Planetary Stewardship. Invited Editorial, *Frontiers in Ecology and Environment* 7: 5.

5. Power, M.E. 2007. Engaging dynamic systems: review of B. Walker and D. Salt 2006. Resiliency Thinking. Sustaining ecosystems and people in a changing world. *BioScience* 57: 3-4.
6. Rainey, W.E., M.E. Power and S.M. Clinton. 2006. Temporal and spatial variation in aquatic insect emergence and bat activity in a restored floodplain wetland. Final Report to CALFED.
7. Travis, J. R. Lande, M. Mangel, R. A. Myers, P. Peterson, M. Power, and D. Simberloff. 2005. Recovery Science Review Panel Report December 2004. Northwest Fisheries Science Center, Seattle WA. (anadromous versus resident salmonid conservation issues) [http://research.nwfsc.noaa.gov/trt/rsrpreportsept30\\_2004b.pdf](http://research.nwfsc.noaa.gov/trt/rsrpreportsept30_2004b.pdf)
6. Travis, J., R. Lande, M. Mangel, R. A. Myers, P. Peterson, M. Power, and D. Simberloff. 2004. Recovery Science Review Panel Report Aug 30-Sept. 1 2004. Northwest Fisheries Science Center, Seattle WA. (hatchery versus wild salmon conservation issues) [http://research.nwfsc.noaa.gov/trt/rsrpreportsept30\\_2004b.pdf](http://research.nwfsc.noaa.gov/trt/rsrpreportsept30_2004b.pdf)
8. Power, M.E. 2003. Bed texture, food web structure, and juvenile salmonid rearing in North Coast California rivers. Technical Completion Report, University of California Water Resources Center UCAL-WRC-W-947.
9. Power, M.E. 2002. Preface: Shigeru Nakano's fundamental contributions to our knowledge of trophic exchange between streams and watersheds. in *Ecology of Stream and Forest – Monographs of Nakano Shigeru*. Hokkaido University Press, Hokkaido, Japan (In Japanese).
10. Wiens, J.A., V. H.Dale, F. Davis, J. J.Ewel, M. L.Hunter,Jr., J. C.Ogden, M. E. Power, M. A.Shannon. 2001. Report of the External Science Review Committee. The Nature Conservancy. <http://www.conserveonline.org/2001/06/b/exsciencereviewweb>.
11. Golet G.H.; Roberts, M.D.; Peterson, D.R.; Jukkola, D.E.; Crone, E.E.; Geupel, G.R.; Small, S.L.; Greco, S.E.; Holl, K.D.; Larsen, E.W.; Ligon, F.K.; Orr, B.K.; Vick, J.C.; Power, M.E.; Rainey, W.E.; Silveira, J.G.; Wilson, D.S. [In press]. Using science to evaluate restoration efforts and ecosystem health on the Sacramento River Project, California. In: Faber, P.M., editor. Proceedings of the riparian habitat and floodplains conference. March 12-25, 2001, Sacramento, CA
12. Dunne, T., J. Agee, S. Beissinger, W.E. Dietrich, D. Gray, M.E. Power, V.H. Resh, and K. Rodrigues. 2001. A scientific basis for the prediction of cumulative watershed effects. University of California Wildland Resource Center Report No. 46. 103 pp. <http://nature.berkeley.edu/forestry>
13. Laurance, W. F. R. K. Didham, and M. E. Power. 2001. Ecological boundaries: A search for synthesis. *Trends in Ecology and Evolution* 16: 70-71.
14. Power, M.E. 2000. What enables trophic cascades? Commentary on Polis et al. *Trends in Evolution and Ecology* 15: p. 443-444.
15. Power, M.E. 1998. Aquatic ecosystem health in western watersheds. p. 5-6. summarized in 1998 Second Annual Chautauqua, Western Water Governance, Hatfield Institute for International Understanding, Southwestern Oregon Community College, Coos Bay, OR Aug. 31-Sept. 2, 1998. Kareiva, P., Andelman, S., Doak, D., Elder, B., Groom, M., Hoekstra, J., Hood, L., James, F., Lamoreux, J., LeBuhn, G., McCulloch, C., Regetz, J., Savage, L., Ruckelshaus, M., Skelly, D., Wilbur, H., Zamudio, K., and the NCEAS HCP Working Group\*. 1998. Using science in habitat conservation plans. *American Institute of Biological Sciences and National Center for Ecological Analysis and Synthesis*, Santa Barbara, CA. [<http://www.nceas.ucsb.edu/>]
16. Power, M.E. 1997. Estimating impacts of a dominant detritivore in a neotropical stream. *Trends in Ecology and Systematics* 12: 47-49.
17. Parker, M.S. and M.E. Power. 1997. Effect of stream flow regulation and absence of scouring floods on trophic transfer of biomass to fish in Northern California rivers. Technical Completion Report, University of California Water Resources Center UCAL-WRC-W-825.
18. Power, M.E., S.J. Kupferberg, G.W. Minshall, M.C. Molles and M.S. Parker. 1997. Sustaining Western Aquatic Food Webs. pp. 45-61 in W.C. Minckley (ed.) *Aquatic Ecosystems Symposium*, Tempe AZ. Report to the Western Water Policy Review , a Presidential Advisory Commission.
19. Carpenter, S., T. Frost, L. Persson, M. Power, and D. Soto. 1995. Lakes and rivers. pp. 157-164 In H.A. Mooney and J. Lubchenco. *SCOPE Global Biodiversity Assessment*, UNEP.
20. Power, M.E. and L. S. Mills. 1995. The Keystone Cops meet in Hilo. *Trends in Evolution and Ecology* 10: 182-184.



21. Power, M.E., Tilman, D., Carpenter, S.R., Huntly, N., Leibold M., Morin, P., Menge, B.A., Estes, J.A., Ehrlich, P.R., Hixon, M., Lodge, D.M., McPeck, M.A., Fauth, J.E., Reznick, D., Crowder, L.B., Holbrook, S.J., Peckarsky, B.L., Gill, D.E., Antonovics, J., Polis, G.A., Wake, D.B., Orians, G., Ketterson, E.D., Marschall, E., and S.P. Lawler. 1995. The role of experiments in ecology. *Science* 270:561.