

## Appendix B. References

### Introduction

Gifford, R.M. The Global Carbon Cycle: a Viewpoint on the Missing Sink. *Australian Journal of Plant Physiology*, **21**, 1–15.

Field, C. B. Field, David B. Lobell, Halton A. Peters, Nona R. Chiariell, *Annual Review of Environment and Resources*, 2007, 32.

Schimel D., House J.I., Hibbard K., Bousquet P., Peylin P., et al. (2001), Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems, *Nature*, **414**, 169-172)

Parmesan, Camille, Gary Yohe, A globally coherent fingerprint of climate change impacts across natural systems, *Nature* **421**, 37-42 2003 | doi:10.1038/.

Lodge, D.M., S. Williams, H. MacIsaac, K. Hayes, B. Leung, L. Loope, S. Reichard, R.N. Mack, P.B. Moyle, M. Smith, D.A. Andow, J.T. Carlton, and A. McMichael. 2006. Biological invasions: recommendations for policy and management [Position Paper for the *Ecological Society of America*].

### Agriculture

Adams, C.D., S. Spitzer, and R.M. Cowan, 1996: Biodegradation of nonionic surfactants and effects of oxidative pretreatment. *J Environ Eng*, **122**, 477-483.

Adams, S. R., K.E. Cockshull, and C.R.J. Cave, 2001: Effect of temperature on the growth and development of tomato fruits. *Ann. Bot.*, **88**, 869-877.

Adams, R.M., B.A. McCarl, K. Segerson, C. Rosenzweig, K.J. Bryant, B.L. Dixon, R. Connor, R.E. Evenson, and D. Ojima, 1999: The economic effects of climate change on U.S. agriculture. In: *The Economics of Climate Change* [Mendelsohn, R. and J. Neumann (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 19–54.

Aerts, M., P. Cockrell, G. Nuessly, R. Raid, T. Schueneman, D. Seal, 1999: Crop profile for corn (sweet) in Florida. <http://www.impcenters.org/CropProfiles/docs/FLcorn-sweet.html>.

Afinowicz J.D., C.L. Munster, B.P. Wilcox, and R.E. Lacey, 2005: A process for assessing wooded plant cover by remote sensing. *Rangeland Ecol Manage*, **58**,184-190.

Ainsworth, E. A. and S.P. Long, 2005: What have we learned from 15 years of free-air CO<sub>2</sub> enrichment (FACE)? A meta-analytic review of the responses of photosynthesis, canopy properties and plant production to rising CO<sub>2</sub>. *New Phytologist*, **165**, 351-372.

Ainsworth, E. A. and A.Rogers, 2007: The response of photosynthesis and stomatal conductance to rising [CO<sub>2</sub>]: mechanisms and environmental interactions. *Plant, Cell and Environment*, **30**, 258-270.

Ainsworth, E.A., P.A. Davey, C.J. Bernacchi, O.C. Dermody, E.A. Heaton, D.J. Moore, P.B. Morgan, S.A. Naidu, Hyung-Shim Yoo Ra, Xin-Guang Zhu, P.S. Curtis and S.P. Long. 2002: A meta-analysis of

- 1 elevated [CO<sub>2</sub>] effects on soybean (*Glycine max*) physiology, growth and yield. *Global Change Biology*, **8**,  
2 695-709.
- 3 Alagarswamy, G., K.J. Boote, L.H. Allen, Jr., and J.W. Jones, 2006: Evaluating the CROPGRO-Soybean  
4 model ability to simulate photosynthesis response to carbon dioxide levels. *Agronomy J.*, **98**,34-42.
- 5 Alagarswamy, G, and J. T. Ritchie. 1991. Phasic development in CERES-sorghum model, chapter 13, pp  
6 143-152 *In* Hodges, T (ed.) *Predicting crop phenology*. CRC Press, Boca Raton.
- 7 Allard V, P.C.D. Newton PCD, M. Lieffering J.F. Soussana, P. Grieu, and C. Matthews, 2004: Elevated  
8 CO<sub>2</sub> effects on decomposition processes in a grazed grassland. *Global Change Biology*, **10**,1553-1564.
- 9 Allen, L. H., Jr., and K. J. Boote, 2000: Crop ecosystem responses to climatic change: Soybean. Chapter  
10 7. pp. 133-160. *In* K. R. Reddy and H. F. Hodges, *Climate change and global crop productivity*. CAB  
11 International., New York, NY.
- 12 Allen, L. H., Jr., D. Pan, K. J. Boote, N. B. Pickering, and J. W. Jones, 2003: Carbon dioxide and  
13 temperature effects on evapotranspiration and water-use efficiency of soybean. *Agronomy J.*, **95**,1071-  
14 1081.
- 15 Allen, R.G., F.N. Gichuki, and C. Rosenzweig, 1991: CO<sub>2</sub>-induced climatic changes and irrigation-water  
16 requirements. *Journal of Water Resources Planning and Management*, **117**,157-178.
- 17 Allen R.G., Walter I.A., Elliot R.L., Howell T.A., Itenfisu D., Jensen M.E., Snyder R.L. 2005: *The ASCE*  
18 *Standardized Reference Evapotranspiration Equation*, American Society of Civil Engineers, Reston, VA.
- 19 Alley, R.B., T. Berntsen. N.L. Bindoff, Z. Chen, A. Chidthaisong, P. Friedlingstein P, J. Gregory and 26  
20 others. 2007: *Climate Change 2007: The Physical Science Basis, Summary for Policy Makers*. -21. 2007.  
21 Geneva, Switzerland, *IPCC Secretariat. Working Group I Fourth Assessment Report of the*  
22 *Intergovernmental Panel on Climate Change 2-2-2007*.
- 23 Alocilja, E. C., and J. T. Ritchie, 1991: A model for the phenology of rice. Chapter 16, pp 181-189. *In*  
24 Hodges, T (ed.) *Predicting crop phenology*. CRC Press, Boca Raton.
- 25 Amthor, J. S., 1999: Increasing atmospheric CO<sub>2</sub> concentration, water use, and water stress: scaling up  
26 from the plant to the landscape. p. 33-59. *In* Y. Luo and H.A. Mooney (ed.) *Carbon Dioxide and*  
27 *Environmental Stress*, Academic Press, San Diego.
- 28 Amthor, J. S. 2001: Effects of atmospheric CO<sub>2</sub> concentration on wheat yield: review of results from  
29 experiments using various approaches to control CO<sub>2</sub> concentration. *Field Crops Res*, **73**,1-34.
- 30 Amundson, J. L., T. L. Mader, R. J. Rasby, and Q. S. Hu, 2005: Temperature and temperature-humidity  
31 index effects on pregnancy rate in beef cattle. *Proc. 17<sup>th</sup> Intl. Congress on Biometeorology*, September  
32 2005, Detscher Wetterdienst, Offenbach, Germany.
- 33 Amundson, J. L., T. L. Mader, R. J. Rasby, and Q. S. Hu., 2006: Environmental effects on pregnancy rate  
34 in beef cattle. *J. Anim. Sci*, **84**,3415-3420.
- 35 An Y, S. Wan, X. Zhou, A.A. Subedar, L.L. Wallace and Y.Luo , 2005, Plant nitrogen concentration, use  
36 efficiency, and contents in a tallgrass prairie ecosystem under experimental warming. *Global Change*  
37 *Biology*, **11**,1733-1744.

- 1 Andre, M., and H. du Cloux, 1993: Interaction of CO<sub>2</sub> enrichment and water limitations on photosynthesis  
2 and water use efficiency in wheat *Plant Physiol. and Biochem*, 31,103-112.
- 3 Applegate, R.D. 2005: Tall fescue, factsheet. Plant Conservation Alliance's Alien Plant Working Group.  
4 <http://www.nps.gov/plants/alien/fact/loar1.htm> (Accessed 3/6/2007).
- 5 Archer S, D.S. Schimel, and E.A. Holland, 1995: Mechanisms of shrubland expansion: land use, climate or  
6 CO<sub>2</sub>? *Climatic Change*, **29**, 91-99.
- 7 Ashmore. M.R. 2002: Effects of oxidants at the whole plant and community level. In: JNB Bell, M  
8 Treshow, eds, *Air Pollution and Plant Life*, John Wiley, Chichester, pp 89 – 118.
- 9 Ashmore, M.R. 2005: Assessing the future global impacts of ozone on vegetation. *Plant Cell Environ*, 28,  
10 949-964.
- 11 Austin AT, and L. Vivanco, 2006: Plant litter decomposition in a semi-arid ecosystem controlled by  
12 photodegradation. *Nature*, **442**, 555-558.
- 13 Badeck FW, A. Bondeau, K.Bottcher, D. Doktor, W. Lucht, J. Schaber, and S.Sitch, 2004: Responses of  
14 spring phenology to climate change. *New Phytol*, **162**, 295-309.
- 15 Badu-Apraku, B., R. B. Hunter, and M. Tollenaar, 1983: Effect of temperature during grain filling on  
16 whole plant and grain yield in maize (*Zea mays* L.). *Can J. Plant Sci*, 63,357-xxx).
- 17 Baker BB, J.D., Hanson, R.M. Bourdon and J.B. Eckert , 1993: The potential effects of climate change on  
18 ecosystem processes and cattle production on U.S. rangelands. *Climatic Change*, **25**, 97-117.
- 19 Baker, J.T., and L.H. Allen, Jr., 1993a: Contrasting crop species responses to CO<sub>2</sub> and temperature: rice,  
20 soybean, and citrus. *Vegetatio*, **104/105**, 239-260.
- 21 Baker, J.T., and L.H. Allen, Jr. 1993b: Effects of CO<sub>2</sub> and temperature on rice: A summary of five  
22 growing seasons. *J. Agric. Meteorol.*, **48**, 575-582.
- 23 Baker, J. T., L. H. Allen, Jr., and K. J. Boote., 1989: Response of soybean to air temperature and carbon  
24 dioxide concentration, *Crop Sci*, **29**,9 8-105.
- 25 Baker, J.T., K. J. Boote, and L.H. Allen, Jr.,1995: Potential climate change effects on rice: Carbon dioxide  
26 and temperature. pp. 31-47. In C. Rosenzweig, J. W. Jones, and L. H. Allen, Jr. (eds.). *Climate Change  
27 and Agriculture: Analysis of Potential International Impacts*, ASA Spec. Pub. No. 59, ASA-CSSA-SSSA,  
28 Madison, Wisconsin, USA.
- 29 Balaguer, L., J.D. Barnes, A. Panicucci, and A.M. Borland,1995: Production and utilization of assimilates  
30 in wheat (*Triticum aestivum* L.) leaves exposed to elevated O<sub>3</sub> and/or CO<sub>2</sub>. *New Phytol.*,**129**, 557-568.
- 31 Barnes, J.D., J.H. Ollerenshaw, and C.P. Whitfield, 1995: Effects of elevated CO<sub>2</sub> and/or O<sub>3</sub> on growth,  
32 development and physiology of wheat (*Triticum aestivum* L.). *Global Change Biology*, **1**, 101-114.
- 33 Bartlett D.T., L.A. Torrell, N.R. Rimbey, L.W. Van Tassell, and D.W. McCollum, 2002: Valuing grazing  
34 use on public land. *J. Range Manage*, **55**, 426-438.

- 1 Batts, G. R., J. I. L. Morison, R. H. Ellis, P. Hadley, and T. R. Wheeler, 1997: Effects of CO<sub>2</sub> and  
2 temperature on growth and yield of crops of winter wheat over several seasons. *European J. of Agronomy*,  
3 7, 43-52.
- 4 Baylis, M., and A. K. Githeko, 2006: T7.3 The effects of climate change on infectious diseases of animals.  
5 Foresight:  
6 [http://www.foresight.gov.uk/previous\\_projects/detection\\_and\\_identification\\_of\\_infectious\\_diseases/Reports](http://www.foresight.gov.uk/previous_projects/detection_and_identification_of_infectious_diseases/Reports_and_Publications/Final_Reports/Index.html)  
7 [s\\_and\\_Publications/Final\\_Reports/Index.html](http://www.foresight.gov.uk/previous_projects/detection_and_identification_of_infectious_diseases/Reports_and_Publications/Final_Reports/Index.html)
- 8 Beeri, O., R. Phillips, J. Hendrickson, A.B. Frank, and S. Kronberg. 2007: Estimating forage quantity and  
9 quality using aerial hyperspectral imagery for northern mixed-grass prairie. *Remote Sensing of*  
10 *Environment* doi:10.1016/j.rse.2007.02.027
- 11 Bender, J., U. Hertstein, and C. Black, 1999: Growth and yield responses of spring wheat to increasing  
12 carbon dioxide, ozone and physiological stresses: a statistical analysis of 'ESPACE-wheat' results.  
13 *European J. of Agronomy*, **10**, 185-195.
- 14 Bernacchi, C. J., B. A. Kimball, D. R. Quarles, S. P. Long, and D. R. Ort, 2007: Decreases in stomatal  
15 conductance of soybean under open-air elevation of CO<sub>2</sub> are closely coupled with decreases in ecosystem  
16 evapotranspiration. *Plant Physiol*, **143**, 134-144.
- 17 Bernacchi, C. J., A.D.B. Leakey, L.E. Heady, P.B. Morgan, F.G. Dohleman, J.M. McGrath, K.M. Gillespie,  
18 V.E. Wittig, A. Rogers, S.P. Long, and D.R. Ort, 2006: Hourly and seasonal variation in photosynthesis  
19 and stomatal conductance of soybean grown at future CO<sub>2</sub> and ozone concentrations for 3 years under fully  
20 open-air field conditions. *Plant, Cell and Environment*, **29**, 2077-2090.
- 21 Billings S.A., S.M. Schaeffer, and R.D. Evans, 2004: Soil microbial activity and N availability with  
22 elevated CO<sub>2</sub> in Mojave Desert soils. *Global Biogeochemical Cycles*, **18**, GA1011,  
23 doi:10.1029/2003GB002137.
- 24 Black, V.J., C.R. Black, J.A. Roberts, and C.A. Stewart, 2000: Impact of ozone on the reproductive  
25 development of plants. *New Phytol*, **147**, 421-447.
- 26 Boesch, D.F., R.B. Brinsfield, and R.E. Magnien, 2001: Chesapeake Bay eutrophication: scientific  
27 understanding, ecosystem restoration, and challenges for agriculture. *J. Environ. Qual*, **30**, 303-320.
- 28 Bolhuis, C. G., and W. deGroot, 1959: Observations on the effect of varying temperature on the flowering  
29 and fruit set in three varieties of groundnut. *Netherlands J. of Agric. Sci*, **7**, 317-326.
- 30 Bond, W.J., and G.F. Midgley. 2000. A proposed CO<sub>2</sub>-controlled mechanism of woody plant invasion in  
31 grasslands and savannas. *Global Change Biology* **6**:865-869
- 32 Booker, F.L., K.O. Burkey, W.A. Pursley, and A.S. heagle. 2007: Elevated carbon dioxide and ozone  
33 effects on peanut: I. Gas-exchange, biomass, and leaf chemistry. *Crop Sci*, **47**, 1475-1487.
- 34 Boote, K. J., J. W. Jones, and N. B. Pickering, 1996: Potential uses and limitations of crop models.  
35 *Agronomy J.*, **88**, 704-716
- 36 Boote, K. J., J. W. Jones, and G. Hoogenboom, 1998: Simulation of crop growth: CROPGRO Model.  
37 Chapter 18. pp. 651-692. In R. M. Peart and R. B. Curry (eds.). *Agricultural Systems Modeling and*  
38 *Simulation*. Marcel Dekker, Inc, New York.

- 1 Boote, K. J., J. W. Jones, W. D. Batchelor, E. D. Nafziger, and O. Myers, 2003: Genetic coefficients in the  
2 CROPGRO-soybean model: Links to field performance and genomics. *Agronomy J.* **95**, 32-51.
- 3 Boote, K. J., L. H. Allen, P. V. V. Prasad, J. T. Baker, R. W. Gesch, A. M. Snyder, D. Pan, and J. M. G.  
4 Thomas, 2005: Elevated temperature and CO<sub>2</sub> impacts on pollination, reproductive growth, and yield of  
5 several globally important crops. *J. Agric. Meteorol.* **60**, 469-474.
- 6 Boote, K. J., N. B. Pickering, and L. H. Allen, Jr., 1997: Plant modeling: Advances and gaps in our  
7 capability to project future crop growth and yield in response to global climate change. pp 179-228. In: L.  
8 H. Allen, Jr., M. B. Kirkham, D. M. Olszyk, and C. E. Whitman (eds.) Advances in carbon dioxide effects  
9 research. *ASA Special Publication No. 61*, ASA-CSSA-SSSA, Madison, WI.
- 10 Booth D.T., and S.E. Cox, 2006: Very-large scale aerial photography for rangeland monitoring. *Geocarto*  
11 *International*, **21**, 27-34.
- 12 Bowler J.M., and M.C. Press, 1996: Effects of elevated CO<sub>2</sub>, nitrogen form and concentration on growth  
13 and photosynthesis of a fast- and slow-growing grass. *New Phytologist*, **132**, 391-401.
- 14 Brady N.C. 1990: *The Nature and Property of Soils*, 10<sup>th</sup> Edition, MacMillan Publishing Company, New  
15 York, 621 pp.
- 16 Briske D.D., S.D. Fuhlendorf, and F.E. Smeins, 2005: State-and-transition models, thresholds, and  
17 rangeland health: A synthesis of ecological concepts and perspectives. *Rangeland Ecol Manage*, **58**, 1-10.
- 18 Brown, P. W. 1987. *User's guide to the Arizona Meteorological Network*. City of Phoenix, Water  
19 Conservation and Resource Div. and Arizona Cooperative Extension, Phoenix, AZ.
- 20 Brown-Brandl, T. M., J. A. Nienaber, R. A. Eigenberg, G.L. Hahn and H. Freetly, 2003: Thermoregulatory  
21 responses of feeder cattle. *J. Therm. Biol.*, **28**, 149-157.
- 22 Bunce, J. A. 2000: Acclimation of photosynthesis to temperature in eight cool and warm climate  
23 herbaceous C<sub>3</sub> species: Temperature dependence of parameters of a biochemical photosynthesis model.  
24 *Photosynthesis Research*, **63**, 59-67.
- 25 Burkey, K.O., F.L. Booker, W.A. Pursley, and A.S. Heagle. 2007: Elevated carbon dioxide and ozone  
26 effects on peanut: II. Seed yield and quality. *Crop Sci*, **47**, 1488-1497.
- 27 Butterfield, H.S., and C.M. Malmstrom, 2006: Experimental use of remote sensing by private range  
28 managers and its influence on management decisions. *Rangeland Ecol Manage*, **59**, 541-548.
- 29 Caley, C. Y., C. M. Duffus, and B. Jeffcoat, 1990: Effects of elevated temperature and reduced water  
30 uptake on enzymes of starch synthesis in developing wheat grains. *Aust. J. Plant Physiol*, **17**, 431-439.
- 31 Cambardella, C.A., and E.T. Elliott, 1994: Carbon and nitrogen dynamics of soil organic-matter fractions  
32 from cultivated grassland soils. *Soil Science Society of America Journal*, **58**, 123-130.
- 33 Chapin, F.S. 1980: The mineral nutrition of wild plants. *Ann. Rev. Ecol. Syst.* **11**, 233-260.
- 34 Chapin, F.S. III, G.R. Shaver, A.E. Giblin, K.J. Nadelhoffer, and J.A. Laundre, 1995: Responses of arctic  
35 tundra to experimental and observed changes in climate. *Ecology*, **76**, 694-711.

- 1 Chowdhury, S. I. C., and I. F. Wardlaw, 1978: The effect of temperature on kernel development in cereals.  
2 *Aust. J. Agric. Res*, **29**, 205-233.
- 3 Clark, P.E., and S.P. Hardegree, 2005: Quantifying vegetation change by point sampling landscape  
4 photography time series. *Rangeland Ecol Manage*, **58**, 588-597.
- 5 Cleland, E.E., N.R. Chiariello, S.P. Loarie, H.A. Mooney, and C.B. Field, 2006: Diverse responses of  
6 phenology to global changes in a grassland ecosystem. *PNAS*, **103**, 13740-13744.
- 7 Coakley, S.M., H. Scherm, and S. Chakraborty, 1999: Climate change and plant disease management. *Annu*  
8 *Rev Phytopath*, **37**, 399-426.
- 9 Commuri, P. D., and R. D. Jones, 2001: High temperatures during endosperm cell division in maize: a  
10 genotypic comparison under *in vitro* and field conditions. *Crop Sci*, **41**, 1122-1130.
- 11 Cotrufo, M.F., P. Ineson, and A. Scott. 1998: Elevated CO<sub>2</sub> reduces the nitrogen concentration of plant  
12 tissues. *Global Change Biology*, **4**, 43-54.
- 13 Coviella, C., and J. Trumble, 1999: Effects of elevated atmospheric carbon dioxide on insect-plant  
14 interactions. *Conserv Biol*, **13**, 700-712.
- 15 Cox, F. R. 1979: Effect of temperature treatment on peanut vegetative and fruit growth. *Peanut Sci*, **6**, 14-  
16 17.
- 17 Crafts-Brandner, S. J., and M. E. Salvucci, 2002: Sensitivity of photosynthesis in a C-4 plant, maize, to  
18 heat stress. *Plant Physiol*, **129**, 1773-1780.
- 19 Craufurd, P. Q., P. V. V. Prasad, and V. G. Kakani, 2003: Heat tolerance in groundnut. *Field Crops Res*,  
20 **80**, 63-77.
- 21 Curtis, P. S. and X. Wang, 1998: A meta-analysis of elevated CO<sub>2</sub> effects on woody plant mass, form, and  
22 physiology. *Oecologia*, **113**, 299-313.
- 23 Dahl, B.E., and R.E. Sosebee, 1991: Impacts of weeds on herbage production. In: James, L.F., J.O. Evans,  
24 M.H. Ralphs, and R.D. Child (eds.) *Noxious Range Weeds*. Westview, Boulder, pp. 153-164.
- 25 Davidson, E.A. and I.A. Janssens, 2006: Temperature sensitivity of soil carbon decomposition and  
26 feedbacks to climate change. *Nature*, **440**, 165-173. doi:10.1038.
- 27 Davis, M. S., T. L. Mader, S. M. Holt, and A. M. Parkhurst, 2003: Strategies to reduce feedlot cattle heat  
28 stress: effects on tympanic temperature. *J. Anim. Sci*, **81**, 649-661.
- 29 Dentener F., D. Stevenson, J. Cofala, R. Mechler, M. Amann, P. Bergamaschi, F. Raes, and R. Derwent,  
30 2005: The impact of air pollutant and methane emission controls on tropospheric ozone and radiative  
31 forcing: CTM calculations for the period 1990-2030. *Atmos Chem Phys*, **5**, 1731-1755.
- 32 Dermody, O., S.P. Long, and E.H. DeLucia, 2006: How does elevated CO<sub>2</sub> or ozone affect the leaf-area  
33 index of soybean when applied independently? *New Phytol*, **169**, 145-155.
- 34 Dijkstra, F.A., S.E. Hobbie, and P. Reich, 2006: Soil processes affected by sixteen grassland species grown  
35 under different environmental conditions. *Soil Sci. Soc. Am. J*, **70**, 770-777.

- 1 Dijkstra, F.A., S.E. Hobbie, P.B. Reich, and J.M.H. Knops, 2005: Divergent effects of elevated CO<sub>2</sub>, N  
2 fertilization, and plant diversity on soil C and N dynamics in a grassland field experiment. *Plant and Soil*,  
3 **272**, 41-52.
- 4 Donnelly, A., M.B. Jones, J.I. Burke, and B. Schnieders, 2000: Elevated CO<sub>2</sub> provides protection from O<sub>3</sub>  
5 induced photosynthetic damage and chlorophyll loss in flag leaves of spring wheat (*Triticum aestivum* L.,  
6 cv. 'Minaret'). *Agric. Ecosys. Environ*, **80**, 159-168.
- 7 Downs, R. W. 1972: Effect of temperature on the phenology and grain yield of *Sorghum bicolor*. *Aust. J.*  
8 *Agric. Res*, **23**, 585-594.
- 9 De Koning, A. N. M. 1996: Quantifying the responses to temperature of different plant processes involved  
10 in growth and development of glasshouse tomato. *Acta Hort*, **406**, 99-104.
- 11 Drake, B.G., M.A. González-Meler, and S.P. Long, 1997: More efficient plants: a consequence of rising  
12 atmospheric CO<sub>2</sub>? *Annual Review of Plant Physiology and Plant Molecular Biology*, **48**, 609-639.
- 13 Duchowski, P., and A. Brazaityte, 2001: Tomato photosynthesis monitoring in investigations on tolerance  
14 to low temperatures. *Acta Hort*, **562**, 335-339.
- 15 Duff, G. C., and M. L. Galyean, 2007: Board-invited review: Recent advances in management of highly  
16 stressed, newly received feedlot cattle. *J. Anim. Sci*, **85**, 823-840.
- 17 Dukes, J.S., N.R. Chiariello, E.E. Cleland, L.A. Moore, M.R. Shaw, S. Thayer S, T. Tobeck, H.A. Mooney,  
18 and C.B. Field, 2005: Responses of grassland production to single and multiple global environmental  
19 changes. *PLoS Biology*, **3**, e319.
- 20 Dupuis, L. and C. Dumas, 1990: Influence of temperature stress on *in vitro* fertilization and heat shock  
21 protein synthesis in maize (*Zea mays* L.) reproductive systems. *Plant Physiol*, **94**, 665-670.
- 22 Edwards, G. E., and N. R. Baker, 1993: Can CO<sub>2</sub> assimilation in maize be predicted accurately from  
23 chlorophyll fluorescence analysis. *Photosynth. Res*, **37**, 89-102.
- 24 Eigenberg, R. A., T. M. Brown-Brandl, J. A. Nienaber and G. L. Hahn, 2005: Dynamic response indicators  
25 of heat stress in shaded and non-shaded feedlot cattle. Part 2: Predictive relationships. *Biosystems*  
26 *Engineering*, **91**, 111-118.
- 27 Egli, D. B., and I. F. Wardlaw, 1980: Temperature response of seed growth characteristics of soybean.  
28 *Agronomy J.*, **72**, 560-564.
- 29 Ehleringer, J.R., S.L. Phillips, W.S.F. Schuster, and D.R. Sandquist, 1991: Differential utilization of  
30 summer rains by desert plants. *Oecologia*, **88**, 430-434.
- 31 Elagoz, V., and W.J. Manning, 2005: Responses of sensitive and tolerant bush beans (*Phaseolus vulgaris*  
32 L.) to ozone in open-top chambers are influenced by phenotypic differences, morphological characteristics,  
33 and the chamber environment. *Environ Pollut*, **136**, 371-383
- 34 Entry, J.A., R.E. Sojka, and G.E. Shewmaker, 2002: Management of irrigated agriculture to increase  
35 organic carbon storage in soils. *Soil Sci. Soc. Am. J*, **66**, 1957-1964.
- 36 Epstein, H.E., I.C. Burke, and W.K. Lauenroth, 2002: Regional patterns of decomposition and primary  
37 production rates in the U.S. Great Plains. *Ecology*, **83**, 320-327.

- 1 Epstein, H.E., R.A. Gill, J.M. Paruelo, W.K. Lauenroth, G.J. Jia, and I.C. Burke, 2002: The relative  
2 abundance of three plant functional types in temperature grasslands and shrublands of North and South  
3 America: effects of projected climate change. *Journal of Biogeography*, **29**, 875-888.
- 4 Everitt, J.H., C. Yang, R.S. Fletcher, and D.L. Drawe, 2006: Evaluation of high-resolution satellite imagery  
5 for assessing rangeland resources in south Texas. *Rangeland Ecol Manage*, **59**, 30-37.
- 6 Farquhar, G. D, and S. von Cammerer, 1982: Modelling of photosynthetic response to environmental  
7 conditions. P. 549-587. In O. L. Lange et al. (eds.) *Encyclopedia of plant physiology*. NS. Vol. 12B.  
8 Physiological Plant Ecology II. Springer-Verlag, Berlin.
- 9 Fay, P.A., J.D. Carlisle, A.K. Knapp, J.M. Blair, and S.L. Collins, 2003: Productivity responses to altered  
10 rainfall patterns in a C4-dominated grassland. *Oecologia*, **137**, 245-251.
- 11 Field, C.B., R.B. Jackson, and H.A. Mooney, 1995: Stomatal responses to increased CO<sub>2</sub>: implications  
12 from the plant to the global scale. *Plant, Cell and Environment*, **18**, 1214-1225.
- 13 Field, C.B., C.P. Lund, N.R. Chiariello, and B.E. Mortimer, 1997: CO<sub>2</sub> effects on the water budget of  
14 grassland microcosm communities. *Global Change Biology*, **3**, 197-206.
- 15 Finnan, J.M., A. Donnelly, J.L. Burke, and M.B. Jones, 2002: The effects of elevated concentrations of  
16 carbon dioxide and ozone on potato (*Solanum tuberosum* L.) yield. *Agric. Ecosys. Environ*, **88**, 11-22.
- 17 Fonseca, A. E., and M. E. Westgate, 2005: Relationship between desiccation and viability of maize pollen.  
18 *Field Crops Research*, **94**, 114-125.
- 19 Food and Agriculture Organization, 2000: Pastoralism in the new millennium, *Food and Agriculture*  
20 *Organization of the United Nations, Animal Production and Health Paper 150*, 93pp, Rome, Italy.
- 21 Frank, K. L. 2001: Potential effects of climate change on warm season voluntary feed intake and associated  
22 production of confined livestock in the United States. M.S. thesis. Kansas State University, Manhattan.
- 23 Frank, K. L., T. L. Mader, J. A. Harrington, G. L. Hahn, and M. S. Davis, 2001: Climate change effects on  
24 livestock production in the Great Plains. Proc. 6th Intl. Livest. Envir. Symp., Amer. Soc. Agric. Eng., St.  
25 Joseph, MI. p.351-358.
- 26 Franklin, D.H., M.L. Cabrera, L.T. West, V.H. Calvert, and J.A. Rema, 2007: Aerating grasslands: Effects  
27 on runoff and phosphorus losses from applied broiler litter. *J. Environ. Qual*, **36**, 208-215.
- 28 Franzluebbers, A.J. 2006: Short-term responses of soil C and N fractions to tall fescue endophyte infection.  
29 *Plant Soils*, **282**, 153-164.
- 30 Franzluebbers, A.J., and J.A. Stuedemann, 2005: Bermudagrass management in the southern piedmont  
31 USA: VII. Soil-profile organic carbon and total nitrogen. *Soil Sci. Soc. Am. J*, **69**, 1455-1462.
- 32 Franzluebbers, A.J., and J.A. Stuedemann, 2006: Pasture and cattle responses to fertilization and endophyte  
33 association in the southern Piedmont, USA. *Agric. Ecosys. Environ*, **114**, 217-225.
- 34 Franzluebbers, A.J., and R.F. Follett, 2005: Greenhouse gas contributions and mitigation potential in  
35 agricultural regions of North America: Introduction. *Soil Tillage Res*, **83**, 1-8.



- 1 Gaughan J. B., T. L. Mader, S. M. Holt, M. J. Jose, and K. J. Rowan, 1999: Heat tolerance of Boran and  
2 Tuli crossbred steers. *J. Anim. Sci.*, **77**, 2398-2405.
- 3 Gaughan, J. B., S. M. Holt, G. L. Hahn, T. L. Mader, and R. Eigenberg, 2000: Respiration rate – is it a  
4 good measure of heat stress in cattle? *Asian-Australian J. Anim. Sci.* 13:329-332 (ARD No. 12903). Hahn,  
5 G.L. 1981. Housing and management to reduce climatic impacts on livestock. *J. Anim. Sci.*, **52**, 175-186.
- 6 Gaughan, J. B., W. M. Kreikemeier, and T. L. Mader, 2005: Hormonal growth-promotant effects on grain-  
7 fed cattle maintained under different environments. *Intl. J. Biomet*, **49**, 396-402 (ARD No. 14392).
- 8 Gaughan, J. B., J. Goopy and J. Spark, 2002: Excessive heat load index for feedlot cattle. Meat and  
9 Livestock-Australia Project Rept, FLOT.316. MLA, Ltd., Locked Bag 991, N. Sydney NSW, 2059  
10 Australia.
- 11 Gedney, N., P.M. Cox, R.A. Betts, O. Boucher, C. Huntingford, and P.A. Stott, 2006: Detection of a direct  
12 carbon dioxide effect in continental river runoff records. *Nature*, **439**, 835-838.
- 13 Gielen, B., H.J. De Boeck, C.M.H.M. Lemmens, R. Valcke, I. Nijs, and R. Ceulemans, 2005: Grassland  
14 species will not necessarily benefit from future elevated air temperatures: a chlorophyll fluorescence  
15 approach to study autumn physiology. *Phys. Plant*, **125**, 52-63.
- 16 Gill, R.A., L.J. Anderson, H.W. Polley, H.B. Johnson, and R.B. Jackson, 2006: Potential nitrogen  
17 constraints on soil carbon sequestration under low and elevated atmospheric CO<sub>2</sub>. *Ecology*, **87**, 41-52.
- 18 Gill, R.A., H.W. Polley, H.B. Johnson, L.J. Anderson, H. Maherali, and R.B. Jackson, 2002: Non-linear  
19 grassland responses to past and future atmospheric CO<sub>2</sub>. *Nature*, **417**, 279-282.
- 20 Goho, A. 2004: Gardeners anticipate climate change. *Amer Gardener*, **83**, 36-41.
- 21 Goudriaan, J., and M. H. Unsworth, 1990: Implications of increasing carbon dioxide and climate change for  
22 agricultural productivity and water resources. P. 111-130. In B. A. Kimball et al. (eds). *Impact of carbon*  
23 *dioxide, trace gases, and climate change on global agriculture*. ASA Spec. Publ. **53**. ASA, Madison, WI.
- 24 Grimm, S. S., J. W. Jones, K. J. Boote, and D. C. Herzog, 1994: Modeling the occurrence of reproductive  
25 stages after flowering for four soybean cultivars. *Agronomy J.*, **86**, 31-38.
- 26 Grimm, S. S., J. W. Jones, K. J. Boote, and J. D. Hesketh, 1993, Parameter estimation for predicting  
27 flowering date of soybean cultivars. *Crop Sci*, **33**, 137-144.
- 28 Gross, Y, and J. Kigel, 1994: Differential sensitivity to high temperature of stages in the reproduction  
29 development of common beans (*Phaseolus vulgaris* L.). *Field Crops Res*, **36**, 201-212.
- 30 Hahn, G.L. 1981: Housing and management to reduce climatic impacts on livestock. *J. Anim. Sci.*, **52**, 175-  
31 186.
- 32 Hahn, G.L., 1995: Environmental management for improved livestock performance, health and well-being.  
33 *Japanese J. Lvstk. Mgt*, **30**, 113-127.
- 34 Hahn, G.L. 1999: Dynamic responses of cattle to thermal heat loads. *J. Anim. Sci.* **77**, 10-20.

- 1 Hahn, G.L., T. Brown-Brandl, R. A. Eigenberg, J. B. Gaughan, T. L. Mader, and J. A. Nienaber, 2005:  
2 Climate change and livestock: challenges and adaptive responses of animals and production systems. *17th*  
3 *Intl. Conf. on Biometeorology*. September 2005, Garmisch-Partenkirchen, Bavaria, Germany.
- 4 Hahn, G. L., Y. R. Chen, J. A. Nienaber, R. A. Eigenberg and A. M. Parkhurst, 1992: Characterizing  
5 animal stress through fractal analysis of thermoregulatory responses. *J. Thermal Biol*, **17**, 115-120.
- 6 Hahn, G. L. and T. L. Mader, 1997: Heat waves in relation to thermoregulation, feeding behavior and  
7 mortality of feedlot cattle. *Proc., 5th Intl. Livest. Environ. Symp*: 563-571. St. Joseph, Mich.: ASAE.
- 8 Hahn, G.L., T.L. Mader, J.B. Gaughan, Q. Hu and J.A. Nienaber, 1999: Heat waves and their impacts on  
9 feedlot cattle. *Proc. 15th Intl. Cong. of Biomet. and Intl. Cong. on Urban Climatology*., Sydney, Australia.
- 10 Hahn, L., T. Mader, D. Spiers, J. Gaughan, J. Nienaber, R. Eigenberg, T. Brown-Brandl, Q Hu, D. Griffin,  
11 L. Hungerford, A. Parkhurst, M. Leonard, W. Adams, and L. Adams, 2001: Heat wave impacts on feedlot  
12 cattle: Considerations for improved environmental management. *Proc. 6th Intl. Livest. Envir. Symp., Amer.*  
13 *Soc. Agric. Eng.*, St. Joseph, MI. p. 129-130.
- 14 Hall, A. E. 1992: Breeding for heat tolerance. P. 129-168. In: *Plant breeding reviewers*. Vol. **10**. John  
15 Wiley & Sons, New York.
- 16 Hamilton, J.G., O. Dermody, M. Aldea, A.R. Zangerl, A. Rogers, M.R. Berenbaum, and E.H. DeLucia,  
17 2005: Anthropogenic changes in tropospheric composition increase susceptibility of soybean to insect  
18 herbivory. *Environ Entom*, **34**, 479-455.
- 19 Hanson, J.D., B.B. Baker, and R.M. Bourdon, 1993: Comparison of the effects of different climate change  
20 scenarios on rangeland livestock production. *Agricultural Systems*, **41**, 487-502.
- 21 Harley, P.C., J.A. Weber and D.M. Gates, 1985: Interactive effects of light, leaf temperature, CO<sub>2</sub> and O<sub>2</sub>  
22 on photosynthesis in soybean. *Planta*, **165**, 249-263.
- 23 Harrington R., R. Fleming, and I.P. Woiwood, 2001: Climate change impacts on insect management and  
24 conservation in temperate regions: can they be predicted? *Agric Forest Entom*, **3**, 233-240.
- 25 Hatfield, J.L., and J.H. Prueger, 2004: Impact of Changing Precipitation Patterns on Water Quality. *Journal*  
26 *Soil and Water Conservation*, **59**, 51-58.
- 27 Heagle, A.S. 1989: Ozone and crop yield. *Ann Rev Phytopath*, **27**, 397-423.
- 28 Heitschmidt, R.K., and M.R. Haferkamp, 2003: Ecological consequences of drought and grazing on  
29 grasslands of the northern Great Plains. In: Weltzin JF, McPherson GR (eds) *Changing precipitation*  
30 *regimes and terrestrial ecosystems*, University of Arizona Press, Tucson, pp. 107-126.
- 31 Henry, H.A.L., J.D. Juarez, C.B. Field, and P.M. Vitousek, 2005: Interactive effects of elevated CO<sub>2</sub>, N  
32 deposition and climate change on extracellular enzyme activity and soil density fractionation in a California  
33 annual grassland. *Global Change Biology*, **11**, 1808-1815.
- 34 Henry, H.A.L., E.E. Cleland, C.B. Field, and P.M. Vitousek 2005: Interactive effects of elevated CO<sub>2</sub>, N  
35 deposition and climate change on plant litter quality in a California annual grassland. *Oecologia*, **142**, 465-  
36 473.
- 37 Herrero, M. P., and R. R. Johnson, 1980: High temperature stress and pollen viability in maize. *Crop Sci*,  
38 **20**, 796-800.

- 1 Hesketh, J. D., D. L. Myhre, and C. R. Willey, 1973: Temperature control of time intervals between  
2 vegetative and reproductive events in soybeans. *Crop Sci*, **13**, 250-254.
- 3 Hileman, D. R., G. Huluka, P. K. Kenjige, N. Sinha, N. C. Bhattacharya, P. K. Biswas, K. F. Lewin, J.  
4 Nagy, and G. R. Hendrey, 1994: Canopy photosynthesis and transpiration of field-grown cotton exposed to  
5 free-air CO enrichment (FACE) and differential irrigation. *Agr. For. Met*, **70**, 189-207.
- 6 Hobbins, M. T., J.A. Ramirez, and T.C. Brown, 2004: Trends in pan evaporation and actual evaporation  
7 across the conterminous U.S.: Paradoxical or complementary? *Geophysical Research Letters*, **31**, L13503 (5  
8 pp).
- 9 Hodges, T., and J. T. Ritchie, 1991: The CERES-Wheat phenology model, chapter 12, pp 115-131. In  
10 Hodges, T (ed.) *Predicting crop phenology*. CRC Press, Boca Raton.
- 11 Horie, T., J. T. Baker, H. Nakagawa, T. Matsui, and H. Y. Kim. 2000. Crop ecosystem responses to  
12 climatic change: Rice. Chapter 5. pp. 81-106. In K. R. Reddy and H. F. Hodges, *Climate change and*  
13 *global crop productivity*. CAB International., New York, NY.
- 14 Hubbard, K.G., D.E. Stooksbury and G.L. Hahn, 1999: A climatological perspective on feedlot cattle  
15 performance and mortality related to the Temperature-Humidity Index. *Jour. Prod. Agric*, **12**, 650-653.
- 16 Hui, D., Y. Luo, W. Cheng, J.S. Coleman, D. Johnson, and D.A. Sims, 2001: Canopy radiation- and water-  
17 use efficiencies as affected by elevated CO<sub>2</sub>. *Global Change Biol*, **7**, 75-91.
- 18 Hunsaker, D. J., B. A. Kimball, P. J. Pinter, Jr., G. W. Wall, and R. L. LaMorte, 1997: Soil water balance  
19 and wheat evapotranspiration as affected by elevated CO<sub>2</sub> and variable soil nitrogen. In: Annual Research  
20 Report 1997. U.S. Water Conservation Laboratory, ARS, Phoenix, AZ, pp. 67-70.
- 21 Hungate, B.A., F.S. Chapin III, H. Zhong, E.A. Holland, and C.B. Field, 1997: Stimulation of grassland  
22 nitrogen cycling under carbon dioxide enrichment. *Oecologia*, **109**, 149-153.
- 23 Hungate, B.A., J.S. Dukes, M.R. Shaw, Y. Luo, and C.B. Field, 2003: Nitrogen and climate change.  
24 *Science*, **302**, 1512-1513.
- 25 Hungate, B.A., C.H. Jaeger III, G. Gamara, F.S. Chapin III, and C.B. Field, 2000: Soil microbiota in two  
26 annual grasslands: responses to elevated atmospheric CO<sub>2</sub>. *Oecologia*, **124**, 589-598.
- 27 Hungate, B.A., D.W. Johnson, P. Dijkstra, G. Hymus, P. Stiling, J.P. Megonigal, A.L. Pagel, J.L. Moan, F.  
28 Day, J. Li, C.R. Hinkle, and B.G. Drake, 2006: Nitrogen cycling during seven years of atmospheric CO<sub>2</sub>  
29 enrichment in a scrub oak woodland. *Ecology*, **87**, 26-40.
- 30 Huxman, T.E., and S.D. Smith, 2001: Photosynthesis in an invasive grass and native forb at elevated CO<sub>2</sub>  
31 during an El Niño year in the Mojave Desert. *Oecologia*, **128**, 193-201.
- 32 Idso, S. B., B. A. Kimball, M. G. Anderson, and J. R. Mauney, 1987: Effects of atmospheric CO<sub>2</sub>  
33 enrichment on plant growth: The interactive role of air temperature. *Agric. Ecosys. Environ*, **20**, 1-10.
- 34 IPCC, 2001: [Houghton, J.T., Y. Ding, D.J. Griggs, M. No-guer, P.J. Van der Linden, X. Dai X, K.  
35 Maskell, and C.A. Johnson (Eds.)] *Climate Change 2001: The Scientific Basis, Contribution from Working*  
36 *Group I to the Third Assessment Report, Inter-governmental Panel for Climate Change*. Cambridge  
37 University Press, Cambridge, UK.

- 1 Izaurrealde, R.C., N.J. Rosenberg, R.A. Brown, and A.M. Thomson, 2003: Integrated assessment of Hadley  
2 Centre climate change projections on water resources and agricultural productivity in the conterminous  
3 United States. II. Regional agricultural productivity in 2030 and 2095. *Agric. For. Meteor.*, **117**, 97-122.
- 4 Jastrow, J.D., R.M. Miller, R. Matamala, R.J. Norby, T.W. Boutton, C.W. Rice, and C.E. Owensby, 2005:  
5 Elevated atmospheric carbon dioxide increases soil carbon. *Global Change Biology*, **11**, 2057-2064.
- 6 Jifon, J., and D.W. Wolfe, 2005: High temperature-induced sink limitation alters growth and photosynthetic  
7 acclimation response to elevated CO<sub>2</sub> in beans. *J Amer Soc Hort Sci*, **130**, 515-520
- 8 Jones, P., J. W. Jones, and L.H. Allen, Jr, 1985: Seasonal carbon and water balances of soybeans grown  
9 under stress treatments in sunlit chambers. *Trans. ASAE*, **28**, 2021-2028.
- 10 Jones, R. J., S. Ouattar, and R. K. Crookston, 1984: Thermal environment during endosperm cell division  
11 and grain filling in maize: Effects on kernel growth and development *in vitro*. *Crop Sci*, **24**, 133-137.
- 12 Kakani, V. G., K. R. Reddy, S. Koti, T. P. Wallace, P. V. V. Prasad, V. R. Reddy, and D. Zhao, 2005:  
13 Differences in *in vitro* pollen germination and pollen tube growth of cotton cultivars in response to high  
14 temperature. *Annals of Bot.*, **96**, 59-67.
- 15 Kandeler, E., A.R. Mosier, J.A. Morgan, D.G. Milchunas, J.Y. King, S. Rudolph, and D. Tscherko, 2006:  
16 Response of soil microbial biomass and enzyme activities to the transient elevation of carbon dioxide in a  
17 semi-arid grassland. *Soil Biology & Biochemistry*, **38**, 2448-2460.
- 18 Karsten, H.D., and M. Carlassare, 2002: Describing the botanical composition of a mixed species  
19 northeastern U.S. pasture rotationally grazed by cattle. *Crop Sci*, **42**, 882-889.
- 20 Kimball, B.A, 1983: Carbon dioxide and agricultural yield. An assemblage of 430 prior observations.  
21 *Agronomy J.*, **75**, 779-788.
- 22 Kimball, B. A. Global change and water resources. 2007: *Irrigation of Agricultural Crops Monograph*.  
23 Lascano, R. J. Sojka R. E.
- 24 Kimball B.A., and C.J. Bernacchi, 2006: Evapotranspiration, canopy temperature, and plant water relations.  
25 In: *Managed Ecosystems and CO<sub>2</sub>: Case Studies, Processes, and Perspectives* pp. 311-324. Springer-Verlag,  
26 Berlin.
- 27 Kimball, B.A., and S.B. Idso, 1983: Increasing atmospheric CO<sub>2</sub>: Effects on crop yield, water use, and  
28 climate. *Agricultural Water Management*, **7**, 55-72.
- 29 Kimball, B. A., and J. R. Mauney, 1993: Response of cotton to varying CO<sub>2</sub>, irrigation, and nitrogen:  
30 yield and growth. *Agronomy J.*, **85**, 706-712.
- 31 Kimball BA, K. Kobayashi, and M. Bindi, 2002: Responses of agricultural crops to free-air CO<sub>2</sub>  
32 enrichment. *Advances in Agronomy*, **77**, 293-368.
- 33 Kimball, B. A., P. J. Pinter, R. L. Garcia, R. L. LaMorte, G. W. Wall, D. J. Hunsaker, G. Wechsung, F.  
34 Wechsung, and T. Kartschall, 1995: Productivity and water use of wheat under free-air CO<sub>2</sub> enrichment.  
35 *Global Change Biol*, **1**, 429-442.
- 36 Kim, H.Y., T. Horie, H. Nakagawa, and K. Wada, 1996: Effects of elevated CO<sub>2</sub> concentration and high  
37 temperature on growth and yield of rice. II. The effect of yield and its component of Akihikari rice. *Jap. J.*  
38 *Crop Sci*, **65**, 644-651.

- 1 King, K.M. and D.H. Greer, 1986: Effects of carbon dioxide enrichment and soil water on maize.  
2 *Agronomy J.*, **78**, 515-521.
- 3 Kiniry, J. R., and R. Bonhomme. 1991: Predicting maize phenology, chapter 11, pp 115-131. *In*: Hodges,  
4 T (ed.) *Predicting crop phenology*. CRC Press, Boca Raton.
- 5 Kirschbaum, M.U.F. 2006: The temperature dependence of organic-matter decomposition—still a topic of  
6 debate. *Soil Biol. Biochem*, **38**, 2510–2518.
- 7 Knapp, P.A., P.T. Soulè, and H.D. Grissino-Mayer, 2001: Detecting potential regional effects of increased  
8 atmospheric CO<sub>2</sub> on growth rates of western juniper. *Global Change Biology*, **7**, 903-917.
- 9 Knapp, A.K., P.A. Fay, J.M. Blair, S.L. Collins, M.D. Smith, J.D. Carlisle, C.W. Harper, B.T. Danner,  
10 M.S. Lett, and J.K. McCarron, 2002: Rainfall variability, carbon cycling, and plant species diversity in a  
11 mesic grassland. *Science*, **298**, 2202-2205.
- 12 Knapp, A.K., and M.D. Smith, 2001: Variation among biomes in temporal dynamics of aboveground  
13 primary production. *Science*, **291**, 481-484.
- 14 Knops, J.M.H., K.L. Bradley, and D.A. Wedin, 2002: Mechanisms of plant species impacts on ecosystem  
15 nitrogen cycling. *Ecology Letters*, **5**, 454-466.
- 16 Kobza, J. and G. E. Edwards, 1987: Influences of leaf temperature on photosynthetic carbon metabolism in  
17 wheat. *Plant Physiol*, **83**, 69-74
- 18 Krug, H. 1997: Environmental influences on development, growth and yield. *In*: Wien, H.C. (ed.) *The*  
19 *Physiology of Vegetable Crops*. CAB International. Wallingford, UK.
- 20 Kuykendall, H.A., M.L. Cabrera, C.S. Hoveland, M.A. McCann, and L.T. West, 1999: Stocking method  
21 effects on nutrient runoff from pastures fertilized with broiler litter. *J. Environ. Qual*, **28**, 1886-1890.
- 22 Kuzyakov, Y. 2002: Review: Factors affecting rhizosphere priming effects. *J. Plant Nutr. Soil Sci*, **165**,  
23 382-396.
- 24 Laing, D. R., P. G. Jones, and J. H. Davis, 1984: Common bean (*Phaseolus vulgaris* L.). pp. 305-351. *In*  
25 P. R. Goldsworthy and N. M. Fisher (eds.). *The physiology of tropical field crops*. John Wiley and Sons,  
26 New York.
- 27 Lal, R., R.F. Follett, and J.M. Kimble, 2003: Achieving soil carbon sequestration in the United States: A  
28 challenge to the policy makers. *Soil Sci*, **168**, 827-845.
- 29 Lawlor, D. W., and R. A. C. Mitchell, 2000: Crop ecosystem responses to climatic change: Wheat.  
30 Chapter 4. pp. 57-80. *In* K. R. Reddy and H. F. Hodges, *Climate change and global crop productivity*.  
31 CAB International., New York, NY.
- 32 Lawson, T., J. Craigon, C.R. Black, J.J. Colls, G. Landon, and J.D.B. Weyers, 2002: Impact of elevated  
33 CO<sub>2</sub> and O<sub>3</sub> on gas exchange parameters and epidermal characteristics in potato (*Solanum tuberosum* L.)  
34 **53**, 737-746.
- 35 Leakey, A. D. B., M. Uribeharrea, E. A. Ainsworth, S. L. Naidu, A. Rogers, D. R. Ort, and S. P. Long,  
36 2006: Photosynthesis, productivity, and yield of maize are not affected by open-air elevation of CO<sub>2</sub>  
37 concentration in the absence of drought. *Plant Physiol*, **140**, 779-790.

- 1 Liebig, M.A., J.A. Morgan, J.D. Reeder, B.H. Ellert, H.T. Gollany, and G.S. Schuman, 2005: Greenhouse  
2 gas contributions and mitigation potential of agricultural practices in northwestern USA and western  
3 Canada. *Soil & Tillage Research*, **83**, 25-52.
- 4 Lobell, D. B., and G. P. Asner, 2003: Climate and management contributions to recent trends in U.S.  
5 agricultural yields. *Science*, **299**, 1032.
- 6 Lobell, D. B., and C. B. Field, 2007: Global scale climate-crop yield relationships and the impact of recent  
7 warming. *Environ. Res Lett*, **2**, 1-7.
- 8 Long, S. P. 1991: Modification of the response of photosynthetic productivity to rising temperature by  
9 atmospheric CO<sub>2</sub> concentrations: has its importance been underestimated? *Plant Cell and Environ*, **14**,  
10 729-739.
- 11 Long, S. P., E. A. Ainsworth, A. D. B. Leakey, J. Nosberger, and D. R. Ort, 2006: Food for thought:  
12 lower-than-expected crop yield stimulation with rising CO<sub>2</sub> concentrations. *Science*, **213**, 1918-1921.
- 13 Lund, H.G. 2007: Accounting for the World's Rangelands. *Rangelands*, **29**, 3-10.
- 14 Luo, Y., D. Hui, and D. Zhang, 2006: Elevated CO<sub>2</sub> stimulate net accumulations of carbon and nitrogen in  
15 land ecosystems: a meta-analysis. *Ecology*, **87**, 53-63.
- 16 Luo, Y., B. Su, W.S. Currie, J.S. Dukes, A. Finzi, U. Hartwig, B. Hungate, R.E. McMurtrie, R. Oren, W.J.  
17 Parton, D.E. Pataki, M.R. Shaw, D.R. Zak, and C.B. Field, 2004: Progressive nitrogen limitation of  
18 ecosystem responses to rising atmospheric carbon dioxide. *BioScience*, **54**, 731-739.
- 19 Mader, T. L. 2003: Environmental stress in confined beef cattle. *J. Anim Sci.* **81** (electronic suppl. 2), 110-  
20 119.
- 21 Mader, T. L., J. M. Dahlquist, and J. B. Gaughan. 1997a: Wind Protection effects and airflow patterns in  
22 outside feedlots. *J. Anim. Sci.*, **75**, 26-36.
- 23 Mader, T. L., J. M. Dahlquist, G. L. Hahn, and J. B. Gaughan, 1999a: Shade and wind barrier effects on  
24 summer-time feedlot cattle performance. *J. Anim Sci*, **77**, 2065-2072.
- 25 Mader, T. L., M. S. Davis, and J. B. Gaughan, 2007: Effect of sprinkling on feedlot microclimate and cattle  
26 behavior. *Intl. J Biomet.* (In press).
- 27 Mader, T. L. and M. S. Davis, 2004: Effect of management strategies on reducing heat stress of feedlot  
28 cattle: feed and water intake. *J. Anim. Sci*, **82**, 3077-3087.
- 29 Mader, T. L., M.S. Davis, and T. Brown-Brandl, 2006: Environmental factors influencing heat stress in  
30 feedlot cattle. *J. Anim. Sci*, **84**, 712-719.
- 31 Mader, T. L., L. R. Fell, and M. J. McPhee, 1997b: Behavior response of non-Brahman cattle to shade in  
32 commercial feedlots. Proc. 5th Int. Livest. Envir. Symp. p. 795-802. *Amer. Soc. Agric. Eng.*, St. Joseph,  
33 MI.
- 34 Mader, T. L., J. M. Gaughan, and B. A. Young, 1999b: Feedlot diet roughage level of Hereford cattle  
35 exposed to excessive heat load. *Prof. Anim. Sci*, **15**, 53-62.

- 1 Mader, T. L., S. M. Holt, G. L. Hahn, M. S. Davis and D. E. Spiers, 2002: Feeding strategies for managing  
2 heat load in feedlot cattle. *J. Anim. Sci*, **80**, 2373-2382.
- 3 Mader, T.L. and W. M. Kreikemeier, 2006: Effects of growth-promoting agents and season on blood  
4 metabolites and body temperature in heifers. *J. Anim. Sci*, **84**, 1030-1037.
- 5 Magliulo, V., M. Bindi, and G. Rana, 2003: Water use of irrigated potato (*Solanum tuberosum* L.) grown  
6 under free air carbon dioxide enrichment in central Italy. *Agriculture, Ecosystems and Environment*, **97**, 65-  
7 80.
- 8 Maroco, J.P., G.E. Edwards and M.S.B. Ku, 1999: Photosynthetic acclimation of maize to growth under  
9 elevated levels of carbon dioxide. *Planta*, **210**, 115-125.
- 10 Maiti, R. K. 1996: Sorghum science. *Science Publishers, Inc.*, Lebanon, New Hampshire, USA.
- 11 Matsui, T., O.S. Namuco, L.H. Ziska and T. Horie, 1997: Effects of high temperature and CO<sub>2</sub>  
12 concentration on spikelet sterility in *indica* rice. *Field Crops Res*, **51**, 213-219.
- 13 Matsushima, S., T. Tanaka, and T. Hoshino, 1964: Analysis of yield determining process and its  
14 application to yield-prediction and culture improvement of lowland rice. LXX. Combined effect of air  
15 temperature and water temperature at different stages of growth on the grain yield and its components of  
16 lowland rice. *Proc. Crop Sci. Soc. Jpn*, **33**, 53-58.
- 17 Mauney, J. R., B. A. Kimball, P. J. Pinter, Jr., R. L. LaMorte, K. F. Lewin, J. Nagy, and G. R. Hendrey,  
18 1994: Growth and yield of cotton in response to free-air carbon dioxide enrichment (FACE) environment.  
19 *Agric and Forest Meteorol*, **70**, 49-67.
- 20 Medlyn, B.E., C.V.M. Barton, M.S.J. Broadmeadow, R. Ceulemans, P. De Angelis, M. Forstreuter, M.  
21 Freeman, S.B. Jackson, S. Kellomaki, E. Laitat, A. Rey, P. Roberntz, B.D. Sigurdsson, J. Strassmeyer, K.  
22 Wang, P.S. Curtis, and P.G. Jarvis, 2001: Stomatal conductance of forest species after long-term exposure  
23 to elevated CO<sub>2</sub> concentration: a synthesis. *New Phytol*, **149**, 247-264.
- 24 Meeting, F.B., J.L. Smith, J.S. Amthor, and R.C. Izaurralde, 2001: Science needs and new technology for  
25 increasing soil carbon sequestration. *Climatic Change*, **51**, 11-34.
- 26 Milchunas, D.G., A.R. Mosier, J.A. Morgan, D.R. LeCain, J.Y. King, and J.A. Nelson, 2005: Elevated CO<sub>2</sub>  
27 and defoliation effects on a shortgrass steppe: forage quality versus quantity for ruminants. *Agriculture,*  
28 *Ecosystems and Environment*, **111**, 166-184.
- 29 Miller, J.E., A.S. Heagle, and W.A. Pursley, 1998: Influence of ozone stress on soybean response to carbon  
30 dioxide enrichment: II. Biomass and development. *Crop Sci*, **38**, 122-128.
- 31 Mills, G., G. Ball, F. Hayes, J. Fuhrer, L. Skarby, B. Gimeno, L. De Temmerman, and A. Heagle, 2000:  
32 Development of a multi-factor model for predicting the effects of ambient ozone on the biomass of white  
33 clover. *Environ Pollut*, **109**, 533-542.
- 34 Mitchell, M.A., P.J. Kettlewell, R.R. Hunter and A.J. Carlisle, 2001: Physiological stress response  
35 modeling--applications to the broiler transport thermal environment. Proc. 6th Int'l Lvstk. Environ. Symp.,  
36 *Am. Soc. Agric. Eng.*, St Joseph MI. pp 550-555.
- 37 Mitchell, R. A. C., V. J. Mitchell, S. P. Driscoll, J. Franklin, and D. W. Lawlor, 1993: Effects of increased  
38 CO<sub>2</sub> concentration and temperature on growth and yield of winter wheat at two levels of nitrogen  
39 application. *Plant Cell Environ*, **16**, 521-529.

- 1 Montaigne, F. 2004: The heat is on: eco-signs. *National Geographic*, **206**, 34-55.
- 2 Moore, J.L., S.M. Howden, G.M. McKeon, J.O. Carter, and J.C. Scanlan, 2001: The dynamics of grazed  
3 woodlands in southwest Queensland, Australia, and their effect on greenhouse gas emissions.  
4 *Environmental International*, **27**, 147–153.
- 5 Morgan, J.A. 2005. Rising atmospheric CO<sub>2</sub> and global climate change: Management implications for  
6 grazing lands. pp. 245-272 in: S.G. Reynolds and J. Frame (eds) Grasslands: Developments Opportunities  
7 Perspectives. *FAO and Science Pub. Inc.*
- 8 Morgan, J.A., D.R. LeCain, A.R. Mosier, and D.G. Milchunas, 2001: Elevated CO<sub>2</sub> enhances water  
9 relations and productivity and affects gas exchange in C3 and C4 grasses of the Colorado shortgrass steppe.  
10 *Global Change Biology*, **7**, 451-466.
- 11 Morgan, J.A., A.R. Mosier, D.G. Milchunas, D.R. LeCain, J.A. Nelson, and W.J. Parton, 2004a: CO<sub>2</sub>  
12 enhances productivity, alters species composition, and reduces digestibility of shortgrass steppe vegetation.  
13 *Ecological Application*, **14**, 208-219.
- 14 Morgan, J.A., D.E. Pataki, C. Körner, H. Clark, S.J. Del Grosso, J.M. Grünzweig, A.J., Knapp, A.R.  
15 Mosier, P.C.D. Newton, P.A. Niklaus, J.B. Nippert, R.S. Nowak, W.J. Parton, H.W. Polley, and M.R.  
16 Shaw, 2004b: Water relations in grassland and desert ecosystems exposed to elevated atmospheric CO<sub>2</sub>.  
17 *Oecologia*, **140**, 11-25.
- 18 Morgan, P.B., E.A. Ainsworth, and S.P. Long, 2003: How does elevated ozone impact soybean? A meta-  
19 analysis of photosynthesis, growth and yield. *Plant Cell Environ*, **26**, 1317-1328.
- 20 Morgan, P.B., C.J. Bernacchi, D.R. Ort, and S.P. Long, 2004: An in vivo analysis of the effect of season-  
21 long open-air elevation of ozone to anticipated 2050 levels on photosynthesis in soybean. *Plant Physiol*,  
22 **135**, 2348-2357.
- 23 Morgan, P.B., T.A. Mies, G.A. Bollero, R.L. Nelson, and S.P. Long, 2006: Season-long elevation of ozone  
24 concentration to projected 2050 levels under fully open-air conditions substantially decreases the growth  
25 and production of soybean. *New Phytol*, **170**, 333-343.
- 26 Morgan, J.A., D.G. Milchunas, D.R. LeCain, M.S. West and A. Mosier. Carbon dioxide enrichment alters  
27 plant community structure and accelerates shrub growth in the shortgrass steppe. *Proceedings of the Natl*  
28 *Academy of Sciences* (in press)
- 29 Morison, J. I. L. 1987: Intercellular CO<sub>2</sub> concentration and stomatal response to CO<sub>2</sub>. p. 229-251. In E.  
30 Zeiger, G. D. Farquhar, and I. R. Cowan (eds.) *Stomatal function*. Stanford Univ. Press, Stanford, CA.
- 31 Moura, D.J., I.A. Naas, K.B. Sevegnani and M.E. Corria, 1997: The use of enthalpy as a thermal comfort  
32 index. Proc. 5th Int'l. Lvstk. Environ. Symp., *Am. Soc. Agric. Eng.*, St. Joseph, MI. pp 577-583.
- 33 Murphy, K.L., I.C. Burke, M.A. Vinton, W.K. Lauenroth, M.R. Aguiar, D.A. Wedin, R.A. Virginia, and  
34 P.N. Lowe, 2002: Regional analysis of litter quality in the central grassland region of North America.  
35 *Journal of Vegetation Science*, **13**, 395-402.
- 36 Muchow, R. C., T. R. Sinclair, and J. M. Bennett, 1990: Temperature and solar-radiation effects on  
37 potential maize yield across locations. *Agronomy J.*, **82**, 338-343.
- 38 Nakagawa, H., T. Horie, and H. Y. Kim, 1994: Environmental factors affecting rice responses to elevated  
39 carbon dioxide concentrations. *Intl. Rice Res. Note*, **19**, 45-46.



- 1 Nelson, J.A., J.A. Morgan, D.R. LeCain, A.R. Mosier, D.G. Milchunas and W.J. Parton. 2004: Elevated  
2 CO<sub>2</sub> increases soil moisture and enhances plant water relations in a long-term field study in the semi-arid  
3 shortgrass steppe of Northern Colorado. *Plant and Soil*, **259**, 169-179.
- 4 Newman, J.A., M.L. Abner, R.G. Dado, D.J. Gibson, A. Brookings, and A.J. Parsons, 2003: Effects of  
5 elevated CO<sub>2</sub>, nitrogen and fungal endophyte-infection on tall fescue: growth, photosynthesis, chemical  
6 composition and digestibility. *Global Change Biology*, **9**, 425-437.
- 7 Newman, Y. C., L. E. Sollenberger, K. J. Boote, L. H. Allen, Jr., J. M. Thomas, and R. C. Littell, 2006:  
8 Nitrogen fertilization affects bahiagrass response to elevated atmospheric carbon dioxide. *Agronomy J.*, **98**,  
9 382-387.
- 10 Newman, Y.C., L.E. Sollenberger, K.J. Boote, L.H. Allen, Jr., and R. C. Littell, 2001: Carbon dioxide and  
11 temperature effects on forage dry matter production. *Crop Sci*, **41**, 399-406.
- 12 Newton, P.C.D., H. Clark, C.C. Bell, and E.M. Glasgow, 1996, Interaction of soil moisture and CO<sub>2</sub> on the  
13 above-ground growth rate, root length density, and gas exchange of turves from temperature pastures. *J.*  
14 *Exp. Botany*, **47**, 771-779.
- 15 Niklaus, P.A., J. Alpehi, D. Ebersberger, C. Kampichlers, E. Kandeler, and D. Tschlerko, 2003: Six years of  
16 in situ CO<sub>2</sub> enrichment evoke changes in soil structure and soil biota of nutrient-poor grassland. *Global*  
17 *Change Biology*, **9**, 585-600.
- 18 Noormets, A., A. Sôber, E.J. Pell, R.E. Dickson, G.K. Podila, J. Sôber, J.G. Isebrands, and D.F. Karnosky,  
19 2001: Stomatal and non-stomatal limitation to photosynthesis in two trembling aspen (*Populus tremuloides*  
20 Michx.) clones exposed to elevated CO<sub>2</sub> and/or O<sub>3</sub>. *Plant, Cell and Environment*, **24**, 327-336.
- 21 Norby, R.J., M.F. Cortufo, P. Ineson, E.G. O'Neill, and J.G. Canadell, 2001: Elevated CO<sub>2</sub>, litter chemistry,  
22 and decomposition: a synthesis. *Oecologia*, **127**, 153-165.
- 23 NRC. 1981: Effect of environment on nutrient requirements of domestic animals. National Research  
24 Council, *National Academy Press*, Washington, D.C.
- 25 NRC. 1987: Predicting Feed Intake of Food-Producing Animals. National Academy Press, Washington,  
26 D.C.
- 27 NRCS [Natural Resources Conservation Service], 2003: National range and pasture handbook. USDA-  
28 NRCS, *Grazing Lands Technology Institute*. Washington, DC.
- 29 Oberhuber, W., and G. E. Edwards, 1993: Temperature dependence of the linkage of quantum yield of  
30 photosystem II to CO<sub>2</sub> fixation in C<sub>4</sub> and C<sub>3</sub> plants. *Plant Physiol*, **101**, 507-512.
- 31 Ong, C. K. 1986: Agroclimatological factors affecting phenology of groundnut. Pages 115--125. In:  
32 Agrometeorology of Groundnut: *Proceedings of an International Symposium*, 21-26 Aug 1985, ICRISAT  
33 Sahelian Center, Niamey, Niger. ICRISAT, Patancheru, A.P. 502 324, India.
- 34 Ottman, M. J., B. A. Kimball, P. J. Pinter, G. W. Wall, R. L. Vanderlip, S. W. Leavitt, R. L. LaMorte, A.  
35 D. Matthias, and T. J. Brooks, 2001: Elevated CO<sub>2</sub> increases sorghum biomass under drought conditions.  
36 *New Phytologist*, **15**, 261-273.
- 37 Owens, L.B., W.M. Edwards, and R.W. VanKeuren. 1997. Runoff and sediment losses resulting from  
38 winter feeding on pastures. *J. Soil Water Conserv* **52**, 194-197,

- 1 Owensby, C.E., P.I. Coyne, and L.M. Auen, 1993: Nitrogen and phosphorus dynamics of a tallgrass prairie  
2 ecosystem exposed to elevated carbon dioxide. *Plant, Cell and Environment*, **16**, 843-850.
- 3 Owensby, C.E., R.C. Cochran, and L.M. Auen, 1996: Effects of elevated carbon dioxide on forage quality  
4 for ruminants. In: Körner, Ch. and F.A. Bazzaz (eds.) *Carbon Dioxide, Populations and Communities*.  
5 Academic Press, San Diego, pp. 363-371.
- 6 Owensby, C.E., J.M. Ham, A.K. Knapp, and L.M. Auen, 1999: Biomass production and species  
7 composition change in a tallgrass prairie ecosystem after long-term exposure to elevated atmospheric CO<sub>2</sub>.  
8 *Global Change Biology*, **5**, 497-506.
- 9 Pan, D. 1996: Soybean responses to elevated temperature and doubled CO<sub>2</sub>. Ph.D. dissertation.  
10 University of Florida, Gainesville, Florida, USA. 227 p.
- 11 Pareulo, J.M., and W.K. Lauenroth, 1996: Relative abundance of plant functional types in grasslands and  
12 shrublands of North America. *Ecological Applications*, **6**, 1212-1224.
- 13 Parton, W.J., J.A. Morgan, G. Wang, and S. DelGrosso. 2007: Projected ecosystem impact of the prairie  
14 heating and CO<sub>2</sub> enrichment experiment. *New Phytologist*, (in press)
- 15 Parton, W.J., D.S. Schimel, C.V. Cole, and D.S. Ojima, 1987: Analysis of factors controlling soil organic  
16 matter levels in Great Plains grasslands. *Soil Science Society of America Journal*, **51**, 1173-1179.
- 17 Parton, W., W.L. Silver, I.C. Burke, L. Grassens, M.E. Harmon, W.S. Currie, J.Y. King, E.C. Adair, L.A.  
18 Brandt, S.C. Hart, and B. Fasth, 2007: Global-scale similarities in nitrogen release patterns during long-  
19 term decomposition. *Science*, **315**, 361-364.
- 20 Patterson, D.T., J.K. Westbrook, R.J.C. Joyce, P.D. Lingren, and J. Rogasik, 1999: Weeds, insects and  
21 diseases. *Climatic Change*, **43**, 711-727.
- 22 Paulsen, G. M. 1994: High temperature responses of crop plants. In: K. J. Boote, J. M. Bennett, T. R.  
23 Sinclair, and G. M. Paulsen (eds.) *Physiology and Determination of Crop Yield*. ASA-CSSA-SSSA,  
24 Madison, WI. Pp. 365-389.
- 25 Peat, M. M., S. Sato, and R. G. Gardner. 1998: Comparing heat stress effects on male-fertile and male-  
26 sterile tomatoes. *Plant Cell Environ*, **21**, 225-231.
- 27 Peet, M.M., and D.W. Wolfe, 2000: Crop ecosystem responses to climate change- vegetable crops. In:  
28 Reddy KR, Hodges HF (eds) *Climate Change and Global Crop Productivity*. CABI Publishing. New York.
- 29 Pendall, E., S. Del Grosso, J.Y. King, D.R. LeCain, D.G. Milchunas, J.A. Morgan, A.R. Mosier, D.S.  
30 Ojima, W.A. Parton, P.P. Tans, and J.W.C. White, 2003: Elevated atmospheric CO<sub>2</sub> effects and soil water  
31 feedbacks on soil respiration components in a Colorado grassland. *Global Biogeochemical Cycles*, **17**,  
32 1046, doi:1029/2001GB001821.
- 33 Pendall, E., S. Bridgman, P.J. Hanson, B. Hungate, D.W. Kicklighter, D.W. Johnson, B.E. Law, Y. Luo,  
34 J.P. Megonigal, M. Olsrud, M.G. Ryan, and S. Wan, 2004: Below-ground process responses to elevated  
35 CO<sub>2</sub> and temperature: a discussion of observations, measurement methods, and models. *New Phytologist*,  
36 **162**, 311-322.
- 37 Peng, S., J. Huang, J.E. Sheehy, R.C. Lanza, R.M. Visperas, X. Zhong, G.S. Centeno, G.S. Khush, and K.G.  
38 Cassman, 2004: Rice yields decline with higher night temperatures from global warming. *Proceedings of*

- 1 *the National Academy of Sciences of the United States of America,*  
2 <http://www.pnas.org/cgi/content/full/101/27/9971>, 10 pp.
- 3 Penuelas, .J, and M. Estiarte, 1997: Trends in plant carbon concentration and plant demand for N  
4 throughout the century. *Oecologia*, **109**, 69-73.
- 5 Pepper, D.A., S. Del Grosso, R.E. McMurtrie, and W.J. Parton, 2005: Simulated carbon sink response of  
6 shortgrass steppe, tallgrass prairie and forest ecosystems to rising [CO<sub>2</sub>], temperature and nitrogen input.  
7 *Global Biogeochemical Cycles*, **19**, GB 1004. pp. 20.
- 8 Pickering, N. B., J. W. Jones, and K. J. Boote, 1995: Adapting SOYGRO V5.42 for prediction under  
9 climate change conditions. In: C. Rosenzweig, J. W. Jones, and L. H. Allen, Jr. (eds.). *Climate Change*  
10 *and Agriculture: Analysis of Potential International Impacts*, ASA Spec. Pub. No. 59, ASA-CSSA-SSSA,  
11 Madison, WI. pp. 77-98
- 12 Piper, E. L., K. J. Boote, and J. W. Jones, 1998: Evaluation and improvement of crop models using regional  
13 cultivar trial data. *Applied Engineering in Agriculture*, **14**, 435-446.
- 14 Polley, H.W. 1997: Implications of rising atmospheric carbon dioxide for rangelands. *J. Range Manage*,  
15 **50**, 561-577.
- 16 Polley, H.W., W.A. Dugas, P.C. Mielnick, and H.B., Johnson, 2007: C3-C4 composition and prior carbon  
17 dioxide treatment regulate the response of grassland carbon and water fluxes to carbon dioxide. *Functional*  
18 *Ecology*, **21**, 11-18.
- 19 Polley, H.W., H.B. Johnson, and J.D. Derner, 2003: Increasing CO<sub>2</sub> from subambient to superambient  
20 concentrations alters species composition and decreases above-ground biomass in a C3/C4 grassland. *New*  
21 *Phytologist*, **160**, 319-327.
- 22 Polley, H.W., J.A. Morgan, B.D. Campbell, M. Stafford Smith, 2000: Crop ecosystem responses to climatic  
23 change: rangelands. In: Reddy, K.R., and H.F. Hodges (eds.) *Climate change and global crop productivity*.  
24 CABI, Wallingford, Oxon, UK, pp. 293-314.
- 25 Prasad, P. V. V., K. J. Boote, and L. H. Allen, Jr. 2006a: Adverse high temperature effects on pollen  
26 viability, seed-set, seed yield and harvest index of grain-sorghum [*Sorghum bicolor* (L.) Moench] are more  
27 severe at elevated carbon dioxide due to high tissue temperature. *Agric and For. Met*, **139**, 237-251.
- 28 Prasad, P. V. V., K. J. Boote, L. H. Allen, Jr., J. E. Sheehy, and J. M. G. Thomas, 2006b: Species, ecotype  
29 and cultivar differences in spikelet fertility and harvest index of rice in response to high temperature stress.  
30 *Field Crops Research*, **95**, 398-411.
- 31 Prasad, P.V.V., K.J. Boote, L.H. Allen, Jr., and J.M.G. Thomas, 2002 ; Effects of elevated temperature and  
32 carbon dioxide on seed-set and yield of kidney bean (*Phaseolus vulgaris* L.). *Global Change Biol*, **8**, 710-  
33 721.
- 34 Prasad, P. V. V., K. J. Boote, L. H. Allen, Jr., and J. M. G. Thomas, 2003 ; Supra-optimal temperatures are  
35 detrimental to peanut (*Arachis hypogaea* L) reproductive processes and yield at ambient and elevated  
36 carbon dioxide. *Global Change Biology*, **9**, 1775-1787.
- 37 Prasad, P. V. V., P. Q. Craufurd, V. G. Kakani, T. R. Wheeler, and K. J. Boote, 2001 ; Influence of high  
38 temperature during pre- and post-anthesis stages of floral development on fruit-set and pollen germination  
39 in peanut. *Aust. J. Plant Physiol*, **28**, 233-240.

- 1 Rae, A.M., R. Ferris, M.J. Tallis, and G. Taylor, 2006: Elucidating genomic regions determining enhanced  
2 leaf growth and delayed senescence in elevated CO<sub>2</sub>. *Plant, Cell & Environment*, **29**, 1730-1741.
- 3 Read, J.J., J.A. Morgan, N.J. Chatterton, and P.A. Harrison. 1997: Gas exchange and carbohydrate and  
4 nitrogen concentrations in leaves of *Paspopyrum smithii* (C3) and *Bouteloua gracilis* (C4) at different  
5 carbon dioxide concentrations and temperatures. *Ann. Bot.*, **79**, 197-206
- 6 Reddy, K. R., G. H. Davidonis, A. S. Johnson, and B. T. Vinyard, 1999: Temperature regime and carbon  
7 dioxide enrichment alter cotton boll development and fiber properties. *Agronomy J.* **91**, 851-858.
- 8 Reddy, K. R., H. F. Hodges, and B. A. Kimball, 2000: Crop ecosystem responses to climatic change:  
9 Cotton. Chapter 8. pp. 161-187. In: K. R. Reddy and H. F. Hodges, *Climate change and global crop*  
10 *productivity*. CAB International., New York, NY.
- 11 Reddy, K. R., H. F. Hodges, and J. M. McKinion, 1995: Carbon dioxide and temperature effects on Pima  
12 cotton growth. *Agriculture, Ecosystems & Environment*, **54**, 17-29.
- 13 Reddy, K. R., H. F. Hodges, and J. M. McKinion, 1997: A comparison of scenarios for the effect of global  
14 climate change on cotton growth and yield. *Aust. J. Plant Physiol.*, **24**, 707-713.
- 15 Reddy, K. R., H. F. Hodges, J. M. McKinion, and G. W. Wall, 1992a: Temperature effects on Pima cotton  
16 growth and development. *Agronomy J.*, **84**, 237-243.
- 17 Reddy, K. R., H. F. Hodges, and V. R. Reddy, 1992b: Temperature effects on cotton fruit retention.  
18 *Agronomy J.*, **84**, 26-30.
- 19 Reddy, K. R., P. V. Vara Prasad, and V. G. Kakani, 2005: Crop responses to elevated carbon dioxide and  
20 interactions with temperature: *Cotton. J. of Crop Improvement*, **13**, 157-191.
- 21 Reddy, V. R., D. N. Baker, and H. F. Hodges, 1991: Temperature effects on cotton canopy growth,  
22 photosynthesis, and respiration. *Agronomy J.*, **83**, 699-704.
- 23 Reddy, V. R., K. R. Reddy, and H. F. Hodges, 1995: Carbon dioxide enrichment and temperature effects  
24 on cotton canopy photosynthesis, transpiration, and water use efficiency. *Field Crops Research*, **41**, 13-23.
- 25 Reich, P.B., S.E. Hobbie, T. Lee, D.S. Ellsworth, J.B. West, D. Tilman, J.M.H. Knops, S. Naeem, and J.  
26 Trost, 2006a: Nitrogen limitation constrains sustainability of ecosystem response to CO<sub>2</sub>. *Nature*, **440**,  
27 922-924.
- 28 Reich, P.B., B.A. Hungate, and Y. Luo, 2006b: Carbon-nitrogen interactions in terrestrial ecosystems in  
29 response to rising atmospheric carbon dioxide. *Annu. Rev. Ecol. Syst.*, **37**, 611-636.
- 30 Riesterer, J.L., D.J. Undersander, M.D. Casler, and D.K. Combs, 2000: Forage yield of stockpiled perennial  
31 grasses in the Upper Midwest USA. *Agronomy J.*, **92**, 740-747.
- 32 Ritchie, J.T. 1972: Model for predicting evaporation from a row crop with incomplete cover. *Water*  
33 *Resources Research*, **8**, 1204-1213.
- 34 Rötter, R., and S.C. Van De Geijn, 1999: Climate change effects on plant growth, crop yield and livestock.  
35 *Climatic Change*, **43**, 651-681.

- 1 Rudgers, J.A., J.M. Koslow, and K. Clay, 2004: Endophytic fungi alter relationships between diversity and  
2 ecosystem properties. *Ecol. Letters*, **7**, 42–51. doi:10.1046/j.1461-0248.2003.00543.x.
- 3 Rudorff, B.F.T., C.L. Mulchi, C.S.T. Daughtry, and E.H. Lee, 1996: Growth, radiation use efficiency, and  
4 canopy reflectance of wheat and corn grown under elevated ozone and carbon dioxide atmospheres.  
5 *Remote Sens Environ*, **55**, 163-173
- 6 Runge, E. C. A. 1968: Effect of rainfall and temperature interactions during the growing season on corn  
7 yield. *Agronomy J.*, **60**, 503-507.
- 8 Rustad, L.E., J.L. Campbell, G.M. Marion, R.J. Norby, M.J. Mitchell, A.E. Hartley, J.H.C. Cornelissen,  
9 and J. Gurevitch, 2001: A meta-analysis of the response of soil respiration, net nitrogen mineralization,  
10 and aboveground plant growth to experimental ecosystem warming. *Oecologia*, **126**, 543-562.
- 11 Salem, M. A., V. G. Kakani, S. Koti, and K. R. Reddy, 2007: Pollen-based screening of soybean genotypes  
12 for high temperature, *Crop Sci*, **47**, 219-231.
- 13 Sasek, T.W., and B.R. Strain, 1990: Implications of atmospheric CO<sub>2</sub> enrichment and climatic change for  
14 the geographical distribution of two introduced vines in the USA. *Climatic Change*, **16**, 31-51.
- 15 Satake, T, and S. Yoshida, 1978: High temperature-induced sterility in *indica* rice at flowering. *Jpn. J.*  
16 *Crop Sci*, **47**, 6-17.
- 17 Sato, S., M. M. Peet, and J. F. Thomas, 2000: Physiological factors limit fruit set of tomato (*Lycopersicon*  
18 *esculentum* Mill.) under chronic high temperature stress. *Plant Cell Environment*, **23**, 719-726.
- 19 Sau, F., K. J. Boote, W. M. Bostick, J. W. Jones, and M. I. Minguez, 2004: Testing and improving  
20 evapotranspiration and soil water balance of the DSSAT crop models. *Agronomy J.*, **96**, 1243-1257.
- 21 Saxe, H., D.S. Ellsworth, and J. Heath, 1998: Tree and forest functioning in an enriched CO<sub>2</sub> atmosphere.  
22 *New Phytologist*, **139**, 395-436.
- 23 Schlesinger, W.H. 2006: Carbon trading. *Science*, **314**, 1217.
- 24 Schoper, J. B., R. J. Lambert, B. L. Vasilas, and M. E. Westgate, 1987: Plant factors controlling seed set in  
25 maize. *Plant Physiol*, **83**, 121-125.
- 26 Schuman, G.E., J.E. Herrick, and H.H. Janzen, 2001: The dynamics of soil carbon in rangelands. pp. 267–  
27 290, in: R.F. Follett, J.M. Kimble and R. Lal (eds). *The Potential of U.S. Grazing Lands to Sequester*  
28 *Carbon and Mitigate the Greenhouse Effect*. Boca Raton, FL: Lewis Publishers.
- 29 Schuman, G.E., H.H. Janzen, and J.E. Herrick, 2002: Soil carbon dynamics and potential carbon  
30 sequestration by rangelands. *Environmental Pollution*, **116**, 391-396.
- 31 Semmartin, M., M.R. Aguiar, R.A. Distel, A.S. Moretto, and C.M. Ghera, 2004: Litter quality and nutrient  
32 cycling affected by grazing-induced species replacements along a precipitation gradient. *OIKOS*, **107**, 148-  
33 160.
- 34 Sexton, P. J., J. W. White, and K. J. Boote, 1994: Yield-determining processes in relation to cultivar seed  
35 size of common bean. *Crop Sci*, **34**, 84-91.

- 1 Shaeffer, S.M., S.A. Billings, and R.D. Evans, 2007: Laboratory incubations reveal potential responses of  
2 soil nitrogen cycling in soil C and N availability in Mojave Desert soils exposed to elevated atmospheric  
3 CO<sub>2</sub>. *Global Change Biology*, **13**, 1-12.
- 4 Shaw, M.R., E.S. Zavaleta, N.R. Chiariello, E.E. Cleland, H.A. Mooney, and C.B. Field, 2002: Grassland  
5 responses to global environmental changes suppressed by elevated CO<sub>2</sub>. *Science*, **298**, 1987-1990.
- 6 Sherry, R.A., X. Zhou, S. Gu, J.A. Arnone III, D.S. Schimel, P.S. Verburg, L.L. Wallace, and Y. Luo,  
7 2007: Divergence of reproductive phenology under climate warming. *PNAS*, **104**, 198-202.
- 8 Six, J., R.T. Conant, E.A. Paul, and K. Paustian, 2002: Stabilization mechanisms of soil organic matter:  
9 Implications for C-saturation of soils. *Plant Soil*, **241**, 155–176.
- 10 Smith, S.D., T.E. Huxman, S.F. Zitzer, T.N. Charlet, D.C. Housman, J.S. Coleman, L.K. Fenstermaker,  
11 J.R. Seemann, and R.S. Nowak, 2000: Elevated CO<sub>2</sub> increases productivity and invasive species success in  
12 an arid ecosystem. *Nature*, **408**, 79-82.
- 13 Snyder, A. M. 2000: The effects of elevated carbon dioxide and temperature on two cultivars of rice. M.S.  
14 Thesis, University of Florida, Gainesville, Florida, USA. 167 p.
- 15 Sofield, I., L. T. Evans, M. G. Cook, and I. F. Wardlaw, 1977: Factors influencing the rate and duration of  
16 grain filling in wheat. *Aust. J. Plant Physiol*, **4**, 785-797.
- 17 Sofield, I., L. T. Evans, and I. F. Wardlaw, 1974: The effects of temperature and light on grain filling in  
18 wheat. P. 909-915. In R. L. Bialeski et al. (eds.) Mechanisms of regulation of plant growth. *Bull. 12. R.*  
19 *Soc. N.Z.*, Wellington, N.Z.
- 20 Sprott, L.R., G.E. Selk, and D. C. Adams, 2001: Review: Factors affecting decisions on when to calve beef  
21 females. *Prof. Anim. Sci*, **17**, 238-246.
- 22 Stockle, C.O., P.T. Dyke, J.R. Williams, C.A. Jones, and N.J. Rosenberg, 1992a: A method for estimating  
23 the direct and climatic effects of rising atmospheric carbon dioxide on growth and yield of crops: Part II --  
24 Sensitivity analysis at three sites in the Midwestern USA. *Agricultural Systems*, **38**, 239-256.
- 25 Stockle, C.O., J.R. Williams, N.J. Rosenberg, and C.A. Jones, 1992b: A method for estimating the direct  
26 and climatic effects of rising atmospheric carbon dioxide on growth and yield of crops: Part 1 --  
27 Modification of the EPIC model for climate change analysis. *Agricultural Systems*, **38**, 225-238.
- 28 Squires, V.R., and A. Sidahmed, 1997: Livestock management in dryland pastoral systems: Prospects and  
29 problems. *Annals of Arid Zone*, **36**, 79–96.
- 30 Stephenson, N.L. 1990: Climatic control of vegetation distribution: the role of the water balance. *American*  
31 *Naturalist*, **135**, 649-670.
- 32 Sustainable Rangeland Roundtable Members (2006) Progress Report  
33 <http://sustainableangelands.warnercnr.colostate.edu/Images/ProgressReport.pdf>
- 34 Suter, D, J. Nösberger, and A. Lüscher, 2001: Response of perennial ryegrass to Free-Air CO<sub>2</sub> Enrichment  
35 (FACE) is related to the dynamics of sward structure during regrowth. *Crop Sci*, **41**, 810-817.
- 36 Svejcar, T.J., J. Bates, R.F. Angell, and R. Miller, 2003: The influence of precipitation timing on the  
37 sagebrush steppe ecosystem. In: Weltzin JF, McPherson GR (eds) *Changing precipitation regimes and*  
38 *terrestrial ecosystems*, University of Arizona Press, Tucson, pp. 90-106.

- 1 Tashiro, T., and I. F. Wardlaw, 1990: The response to high temperature shock and humidity changes prior  
2 to and during the early stages of grain development in wheat. *Aust. J. Plant Physiol*, **17**, 551-561.
- 3 Temple, P.J. 1990: Growth form and yield responses of 4 cotton cultivars to ozone. *Agron J*, **82**, 1045-  
4 1050
- 5 Thomas, J.M.G. 2001: Impact of elevated temperature and carbon dioxide on development and composition  
6 of soybean seed. Ph.D. Dissertation. University of Florida. Gainesville, Florida, USA. 185 p.
- 7 Thomson A.M., R.A. Brown, N.J. Rosenberg, R.C. Izaurralde, and V.W. Benson, 2005: Climate change  
8 impacts for the conterminous USA: An integrated assessment Part 3. Dryland production of grain and  
9 forage crops. *Climatic Change*, **69**, 43-65.
- 10 Thornley, J.H.M., and M.G.R. Cannell, 1997: Temperate grassland responses to climate change: an  
11 analysis using the Hurley Pasture Model. *Ann. Botany*, **80**, 205-221.
- 12 Thornley, J.H.M., and M.G.R. Cannell, 2000: Dynamics of mineral N availability in grassland ecosystems  
13 under increased [CO<sub>2</sub>]: hypotheses evaluated using the Hurley Pasture model. *Plant Soil*, **224**, 153–170.
- 14 Tingey, D.T., K.D. Rodecap, E.H. Lee, W.E. Hogsett, and J.W. Gregg, 2002: Pod development increases  
15 the ozone sensitivity of *Phaseolus vulgaris*. *Water Air Soil Poll*, **139**, 325-341.
- 16 Tommasi, P.D., V. Magliulo, R. Dell'Aquila, F. Miglietta, A. Zaldei, and G. Gaylor, 2002: Water  
17 consumption of a CO<sub>2</sub> enriched poplar stand. *Atti del Convegno CNR-ISAFOM*, Ercolano, Italy.
- 18 Tracy, B.F., and M.A. Sanderson, 2000: Patterns of plant species richness in pasture lands of the northeast  
19 United States. *Plant Ecol*, **149**, 169–180.
- 20 Triggs, J.M., B.A. Kimball, P.J. Pinter Jr, G.W. Wall, M.M. Conley, T.J. Brooks, R.L. LaMorte, N.R.  
21 Adam, M.J. Ottman, A.D. Matthias, S.W. Leavitt, and R.S. Cerveny, 2004: Free-air carbon dioxide  
22 enrichment (FACE) effects on energy balance and evapotranspiration of sorghum. *Agricultural and Forest*  
23 *Meteorology*, **124**, 63-79.
- 24 Tubiello, F. N., J. S. Amthor, K. J. Boote, M. Donatelli, W. Easterling, G. Fischer, R. M. Gifford, M.  
25 Howden, J. Reilly, and C. Rosenzweig, 2007: Crop response to elevated CO<sub>2</sub> and world food supply: A  
26 comment on “Food for Thought...” by Long et al., *Science* 312:1918-1921, 2006. *European J. Agronomy*,  
27 **26**, 215-223.
- 28 Van Groenigen, K.-J., J. Six, B.A. Hungate, M. –A, Graaff, N. Van Breemen, and C. van Kessel, 2006:  
29 Element interactions limit soil carbon storage. *PNAS*, **103**, 6571-6574.
- 30 Van Kooten, G.C. 2006: Economic of forest and agricultural carbon sinks. Chapter 19 In Bhatti, J.S., R.  
31 Lal, M.J. Apps, and M.A. Price (eds), *Climate Change and Managed Ecosystems*, 375-395, Taylor &  
32 Francis Group, New York.
- 33 Villalobos, F. J. and E. Fereres, 1990: Evaporation measurements beneath corn, cotton, and sunflower  
34 canopies. *Agron. J*, **82**, 1153-1159.
- 35 Vitousek, P.M. 1990: Biological invasions and ecosystem processes: Towards an integration of population  
36 biology and ecosystem studies. *Oikos*, **57**, 7-13.
- 37 Vogel, K.P., M.R. Schmer, and R.B. Mitchell. 2005: Plant adaptation regions: Ecological and climatic  
38 classification of plant materials. *Rangeland Ecol. Manage*, **58**, 315–319.

- 1 Vu, J. C. V., J. T. Baker, A. H. Pennanen, L. H. Allen, Jr., G. Bowes, and K. J. Boote. 1998: Elevated CO<sub>2</sub>  
2 and water deficit effects on photosynthesis, ribulose biphosphate carboxylase-oxygenase, and  
3 carbohydrate metabolism in rice. *Physiologia Plantarum*, **103**, 327-339.
- 4 Wall, G. W., T. J. Brooks, R. Adam, A. B. Cousins, B. A. Kimball, P. J. Pinter, R. L. LaMorte, L. trigs, M.  
5 J. Ottman, S. W. Leavitt, A. D. Matthias, D. G. Williams, and A. N. Webber, 2001: Elevated atmospheric  
6 CO<sub>2</sub> improved sorghum plant water status by ameliorating the adverse effects of drought. *New Phytologist*,  
7 **152**, 231-248.
- 8 Wall, G. W., R. L. Garcia, B. A. Kimball, D. J. Hunsaker, P. J. Pinter, Jr., S. P. Long, C. P. Osborne, D. L.  
9 Hendrix, F. Wechsung, G. Wechsung, S W. Leavitt, R. L. LaMorte, and S. B. Idso, 2006: Interactive  
10 effects of elevated carbon dioxide and drought on wheat. *Agron. J*, **98**, 354-381.
- 11 Walther G-R., 2002: Ecological responses to recent climate change. *Nature*, **416**, 389-395.
- 12 Wan S, D. Hui, L. Wallace, and Y. Luo, 2005: Direct and indirect effects of experimental warming on  
13 ecosystem carbon processes in a tallgrass prairie. *Global Biogeochemical Cycles*, 19, 2014,  
14 doi:10.1029/2004GB002315.
- 15 Wand, S.J.E., G.F. Midgley, M.H. Jones, and P.S. Curtis., 1999: Responses of wild C4 and C3 grasses  
16 (Poaceae) species to elevated atmospheric CO<sub>2</sub> concentration: a meta-analytic test of current theories and  
17 perceptions. *Global Change Biology*, **5**, 723-741.
- 18 Wardle, D.A., R.D. Bardgett, J.N. Klironomos, H. Setälä, W.H. van der Putten, and D.H. Wall., 2004:  
19 Ecological linkages between aboveground and belowground biota. *Science*, **304**, 1629-1633.
- 20 Weatherly H.E., S.F. Zitzer, J.S. Coleman, and J.A. Arnone III, 2003: In situ litter decomposition and litter  
21 quality in a Mojave Desert ecosystem: effects of elevated atmospheric CO<sub>2</sub> and interannual climate  
22 variability. *Global Change Biology*, 9, 1223-1233.
- 23 Weber K.T. 2006: Challenges of integrating geospatial technologies into rangeland research and  
24 management. *Rangeland Ecol Manage*, **59**, 38-43.
- 25 Weltzin J.F., and G.R. McPherson, 1997: Spatial and temporal soil moisture resource partitioning by trees  
26 and grasses in a temperate savanna, Arizona, USA. *Oecologia*, **112**, 156-164.
- 27 Weltzin, J.F., and G.R. McPherson, 2003: Response of southwestern oak savannas to potential future  
28 precipitation regimes. In: Weltzin JF, McPherson GR (eds) *Changing precipitation regimes and terrestrial*  
29 *ecosystems*, University of Arizona Press, Tucson, pp. 127-146.
- 30 Westwood, M.N., 1993: *Temperate Zone Pomology*. Timber Press. Portland, OR.
- 31 Whitney, S., J. Whalen, M. VanGessel, B. Mulrooney, 2000: Crop profiles for corn (sweet) in Delaware.  
32 <http://www.impcenters.org/CropProfiles/docs/DEcorn-sweet.html>.
- 33 Williams, J. H., J. H. H. Wilson, and G. C. Bate, 1975: The growth of groundnuts (*Arachis hypogaea* L. cv.  
34 Makulu Red) at three altitudes in Rhodesia. *Rhod. J. Agric. Res.*, **13**, 33-43.
- 35 Wilsey, B.J., 1996: Urea additions and defoliation affect plant responses to elevated CO<sub>2</sub> in a C3 grass from  
36 Yellowstone National Park. *Oecologia*, **108**, 321-327.
- 37 Wilsey, B.J. 2001: Effects of elevated CO<sub>2</sub> on the response of *Phleum pratense* and *Poa pratensis* to  
38 aboveground defoliation and root-feeding nematodes. *Int. J. Plant Sci.*, **162**, 1275-1282.



- 1 Wolfe, D.W. 1994: Physiological and growth responses to atmospheric CO<sub>2</sub> concentration. In: Pessaraki M  
2 (ed) *Handbook of Plant and Crop Physiology*. Marcel Dekker. New York.
- 3 Wolfe, D.W., M.D. Schwartz, A.N. Lakso, Y. Otsuki, R.M. Pool, and N.J. Shaulis, 2005: Climate change  
4 and shifts in spring phenology of three horticultural woody perennials in northeastern USA. *Internat J*  
5 *Biometeorol*, **49**, 303-309.
- 6 Wullschleger, S.D., and R.J. Norby, 2001: Sap velocity and canopy transpiration in a sweetgum stand  
7 exposed to free-air CO<sub>2</sub> enrichment (FACE). *New Phytologist*, **150**, 489-498.
- 8 Yoshimoto, M., H. Oue, and K. Kobayashi, 2005: Responses of energy balance, evapotranspiration, and  
9 water use efficiency of canopies to free-air CO<sub>2</sub> enrichment. *Agricultural and Forest Meteorology*, **133**,  
10 226-246.
- 11 Young, J.A., 1991: Cheatgrass. In: James, L.F., J.O. Evans, M.H. Ralphs, and R.D. Child, (eds.) *Noxious*  
12 *Range Weeds*. Westview Press, Boulder, pp. 408-418.
- 13 Zavaleta, E.S., M.R. Shaw, N.R. Chiariello, B.D. Thomas, E.E. Cleland, C.B. Field, and H.A. Mooney,  
14 2003a: Grassland responses to three years of elevated temperature, CO<sub>2</sub>, precipitation, and N deposition.  
15 *Ecological Monographs*, **73**, 585-604.
- 16 Zavaleta, E.S., B.D. Thomas, N.R. Chiariello, G.P. Asner, M.R. Shaw, and C.B. Field, 2003b: Plants  
17 reverse warming effect on ecosystem water balance. *Proceedings National Academy of Sciences, USA*,  
18 **100**, 9892-9893.
- 19 Ziska, L.H. 2003: Evaluation of the growth response of six invasive species to past, present and future  
20 carbon dioxide concentrations. *J Exp Bot*, **54**, 395-404.
- 21 Ziska, L.H. and J.A. Bunce, 1997: Influence of increasing carbon dioxide concentration on the  
22 photosynthetic and growth stimulation of selected C4 crops and weeds. *Photosynthesis Research*, **54**, 199-  
23 208.
- 24 Ziska, L.H., and K. George, 2004: Rising carbon dioxide and invasive, noxious plants: potential threats and  
25 consequences. *World Resource Rev*, **16**, 427-447.
- 26 Ziska, L.H., J.B. Reeves, and B. Blank, 2005: The impact of recent increases in atmospheric CO<sub>2</sub> on  
27 biomass production and vegetative retention of Cheatgrass (*Bromus tectorum*): implications for fire  
28 disturbance. *Global Change Biology*, **11**, 1325-1332.
- 29 Ziska, L.H., J.R. Teasdale, and J.A. Bunce, 1999: Future atmospheric carbon dioxide may increase  
30 tolerance to glyphosate. *Weed Sci*, **47**, 608-615.
- 31 Ziska, L. H., W. Weerakoon, O. S. Namuco, and R. Pamplona, 1996: The influence of nitrogen on the  
32 elevated CO<sub>2</sub> response in field-grown rice. *Aust. J. Plant Physiol*, **23**, 45-52.

33  
34

## 35 Land Resources

- 1 Aber, J., W. McDowell, K. Nadelhoffer, A. Magill, G. Berntson, M. Kamakea, S. McNulty, W. Currie, L.  
2 Rustad, and I. Fernandez. 1998. Nitrogen saturation in temperate forest ecosystems - Hypotheses revisited.  
3 *BioScienc,e* **48**, 921-934.
- 4 Abrahams, A. D., A. J. Parsons, and S. H. Luk. 1988. Hydrologic and sediment responses to simulated  
5 rainfall on desert hill slopes in southern Arizona. *Catena*, **15**,103-117.
- 6 Adams, A. B., R. B. Harrison, R. S. Sletten, B. D. Strahm, E. C. Turnblom, and C. M. Jensen. 2005.  
7 Nitrogen-fertilization impacts on carbon sequestration and flux in managed coastal Douglas-fir stands of  
8 the Pacific Northwest. *Forest Ecology and Management*, **220**, 313-325.
- 9 Albaugh, T. J., H. L. Allen, P. M. Dougherty, L. W. Kress, and J. S. King. 1998. Leaf area and above- and  
10 belowground growth responses of loblolly pine to nutrient and water additions. *Forest Science* **44**:317-328.
- 11 Amiro, B. D., J. B. Todd, B. M. Wotton, K. A. Logan, M. D. Flannigan, B. J. Stocks, J. A. Mason, D. L.  
12 Martell, and K. G. Hirsch. 2001. Direct carbon emissions from Canadian forest fires, 1959-1999. Canadian  
13 *Journal of Forest Research-Revue Canadienne De Recherche Forestiere* **31**, 512-525.
- 14 Amthor, J. S. 2000. The McCree-de Wit-Penning de Vries-Thornley respiration paradigms: 30 years later.  
15 *Annals of Botany* **86**,1-20.
- 16 Archer, S. 1994. Woody plant encroachment into southwestern grasslands and savannas: rates, patterns and  
17 proximate causes. Pages 13-68 in M. Vavra, W. Laycock, and R. Pieper, editors. Ecological implications of  
18 livestock herbivory in the West. Society for Range Management, Denver, CO.
- 19 Archer, S. 1996. Assessing and interpreting grass-woody plant dynamics. Pages 101-134 in J. Hodgson and  
20 A. Illius, editors. The ecology and management of grazing systems. CAB International, Wallingford, Oxon,  
21 United Kingdom.
- 22 Archer, S., D. S. Schimel, and E. A. Holland. 1995. Mechanisms of shrubland expansion: land use, climate  
23 or CO<sub>2</sub>? *Climatic Change*, **29**, 91-99.
- 24 Archer, S., T. W. Boutton, and K. A. Hibbard. 2001. Trees in grasslands: biogeochemical consequences of  
25 woody plant expansion. Pages 115-138 in E.-D. Schulze, M. Heimann, S. Harrison, E. Holland, J. Lloyd, I.  
26 Prentice, and D. Schimel, editors. Global biogeochemical cycles in the climate system. *Academic Press*,  
27 San Diego.
- 28 Arriaga, L., A. E. Castellanos, E. Moreno, and J. Alaron. 2004. Potential ecological distribution of alien  
29 invasive species and risk assessment: a case study of buffelgrass in arid regions of Mexico. *Conservation*  
30 *Biology*, **18**,1504-1514.
- 31 Ashmore, M. R. 2002. Effects of oxidants at the whole plant and community level. Pages 89-118 in J. N.  
32 B. Bell and M. Treshow, editors. Air pollution and plant life. John Wiley, Chichester, UK.
- 33 Ashmore, M. R. 2005. Assessing the future global impacts of ozone on vegetation. *Plant Cell and*  
34 *Environment*, **28**, 949-964.
- 35 Asner, G. P., C. E. Borghi, and R. A. Ojeda. 2003. Desertification in central Argentina: changes in  
36 ecosystem carbon and nitrogen from imaging spectroscopy. *Ecological Applications*, **13**: 629-648.
- 37 Asner, G. P., S. Archer, R. F. Hughes, J. Ansley, and C. A. Wessman. 2003. Net changes in regional woody  
38 vegetation cover and carbon storage in Texas drylands. *Global Change Biology*, **9**,1937-1999.

- 1 Asner, G., and S. Archer. 2007. Environmental consequences: global carbon cycle. in H. Mooney, H.  
2 Steinfeld, F. Schneider, S. Tarawali, and B. Toutain, editors. *Livestock in a Changing Landscape: An*  
3 *Integrated Analysis and Global Consultation*. United Nations FAO/LEAD/SCOPE, Rome (In Press).
- 4 Atkin, O. K., and M. G. Tjoelker. 2003. Thermal acclimation and the dynamic response of plant respiration  
5 to temperature. *Trends in Plant Science*, **8**, 343-351.
- 6 Atkin, O. K., E. J. Edwards, and B. R. Loveys. 2000. Response of root respiration to changes in  
7 temperature and its relevance to global warming. *New Phytologist*, **147**, 141-154.
- 8 Auble, G. T., J. M. Friedman, and M. L. Scott. 1994. Relating riparian vegetation to present and future  
9 streamflows. *Ecological Applications*, **4**, 544-554.
- 10 Ayres, M. P., and M. J. Lombardero. 2000. Assessing the consequences of global change for forest  
11 disturbance from herbivores and pathogens. *Science of the Total Environment*, **262**, 263-286.
- 12 Bachelet, D., R. P. Neilson, J. M. Lenihan, and R. J. Drapek. 2001. Climate change effects on vegetation  
13 distribution and carbon budget in the United States. *Ecosystems*, **4**, 164-185.
- 14 Baldocchi, D., E. Falge, L. H. Gu, R. Olson, D. Hollinger, S. Running, P. Anthoni, C. Bernhofer, K. Davis,  
15 R. Evans, J. Fuentes, A. Goldstein, G. Katul, B. Law, X. H. Lee, Y. Malhi, T. Meyers, W. Munger, W.  
16 Oechel, K. T. P. U, K. Pilegaard, H. P. Schmid, R. Valentini, S. Verma, T. Vesala, K. Wilson, and S.  
17 Wofsy. 2001. FLUXNET: A new tool to study the temporal and spatial variability of ecosystem-scale  
18 carbon dioxide, water vapor, and energy flux densities. *Bulletin of the American Meteorological Society*  
19 **82**:2415-2434.
- 20 Bale, J. S., G. J. Masters, I. D. Hodkinson, C. Awmack, T. M. Bezemer, V. K. Brown, J. Butterfield, A.  
21 Buse, J. C. Coulson, J. Farrar, J. E. G. Good, R. Harrington, S. Hartley, T. H. Jones, R. L. Lindroth, M. C.  
22 Press, I. Symnioudis, A. D. Watt, and J. B. Whittaker. 2002. Herbivory in global climate change research:  
23 direct effects of rising temperature on insect herbivores. *Global Change Biology*, **8**, 1-16.
- 24 Beatley, J. 1967. Survival of winter annuals in northern Mojave Desert. *Ecology*, **48**, 745-759.
- 25 Bebi, P., D. Kulakowski, and T. T. Veblen. 2003. Interactions between fire and spruce beetles in a  
26 subalpine rocky mountain forest landscape. *Ecology*, **84**:362-371.
- 27 Bechtold, W. A., and P. L. Patterson, editors. 2005. Forest inventory and analysis national sample design  
28 and estimation procedures, General Technical Report SRS-80. USDA Forest Service, Asheville, NC, USA.
- 29 Benavides-Solorio, J., and L. H. MacDonald. 2001. Post-fire runoff and erosion from simulated rainfall on  
30 small plots, Colorado Front Range. *Hydrological Processes*, **15**, 2931-2952.
- 31 Bennett, I. 1959. Glaze- its meteorology and climatology, geographic distribution, and economic effects,  
32 Technical Report EP-105. U.S. Army Quartermaster Research and Engineering Command, Natick, MA.
- 33 Berg, E. E., J. D. Henry, C. L. Fastie, A. D. De Volder, and S. M. Matsuoka. 2006. Spruce beetle outbreaks  
34 on the Kenai Peninsula, Alaska, and Kluane National Park and Reserve, Yukon Territory: Relationship to  
35 summer temperatures and regional differences in disturbance regimes. *Forest Ecology and Management*  
36 **227**:219-232.
- 37 Bethlahmy, N. 1974. More streamflow after a bark beetle epidemic. *Journal of Hydrology*, **23**, 185-189.

- 1 Bigler, C., D. Kulakowski, and T. T. Veblen. 2005. Multiple disturbance interactions and drought influence  
2 fire severity in Rocky Mountain subalpine forests. *Ecology*, **86**, 3018-3029.
- 3 Birdsey, R. A., and G. M. Lewis. 2002. Carbon in U.S. Forests and Wood Products, 1987-1997: State-by-  
4 State Estimates, GTR-NE-310. United States Department of Agriculture, Forest Service, Northeastern  
5 Research Station, Newtown Square, PA.
- 6 Bisal, F. 1960. The effect of raindrop size and impact velocity on sand splash. *Canadian Journal of Soil*  
7 *Science*, **49**, 242-245.
- 8 Black, T. A., W. J. Chen, A. G. Barr, M. A. Arain, Z. Chen, Z. Nestic, E. H. Hogg, H. H. Neumann, and P.  
9 C. Yang. 2000. Increased carbon sequestration by a boreal deciduous forest in years with a warm spring.  
10 *Geophysical Research Letters*, **27**, 1271-1274.
- 11 Boisvenue, C., and S. W. Running. 2006. Impacts of climate change on natural forest productivity -  
12 evidence since the middle of the 20th century. *Global Change Biology* 12:862-882.
- 13 Bond, W. J., and G. F. Midgley. 2000. A proposed CO<sub>2</sub>-controlled mechanism of woody plant invasion in  
14 grasslands and savannas. *Global Change Biology* 6:865-869.
- 15 Boutton, T. W., S. R. Archer, and A. J. Midwood. 1999. Stable isotopes in ecosystem science: structure,  
16 function and dynamics of a subtropical savanna. *Rapid Communications in Mass Spectrometry* **13**:1263-  
17 1277.
- 18 Bowers, J. E. 2005. Effects of drought on shrub survival and longevity in the northern Sonoran Desert.  
19 *Journal of The Torrey Botanical Society* **132**, 421-431.
- 20 Bradley, B. A., R. A. Houghton, J. F. Mustard, and S. P. Hamburg. 2006. Invasive grass reduces  
21 aboveground carbon stocks in shrublands of the Western U.S.. *Global Change Biology* **12**,1815-.
- 22 Bragg, D. C., M. G. Shelton, and B. Zeide. 2003. Impacts and management implications of ice storms on  
23 forests in the southern United States. *Forest Ecology and Management*, **186**, 99-123.
- 24 Breshears, D. D., J. J. Whicker, M. P. Johansen, and J. E. Pinder. 2003. Wind and water erosion and  
25 transport in semi-arid shrubland, grassland and forest ecosystems: quantifying dominance of horizontal  
26 wind-driven transport. *Earth Surface Processes and Landforms*, **28**,1189-1209.
- 27 Breshears, D. D., N. S. Cobb, P. M. Rich, K. P. Price, C. D. Allen, R. G. Balice, W. H. Romme, J. H.  
28 Kastens, M. L. Floyd, J. Belnap, J. J. Anderson, O. B. Myers, and C. W. Meyer. 2005. Regional vegetation  
29 die-off in response to global-change-type drought. *Proceedings of the National Academy of Sciences of the*  
30 *United States of America*, **102**,15144-15148.
- 31 Brock, J. H. 1994. Tamarix spp. (salt cedar), an invasive exotic woody plant in arid and semi-arid riparian  
32 habitats of western USA. Pages 27-44 in L. C. de Wall et al., eds. *Ecology and Management of Invasive*  
33 *Riverside Plants*. John Wiley, Hoboken, New Jersey.
- 34 Brooks, M. L. 2003. Effects of increased soil nitrogen on the dominance of alien annual plants in the  
35 Mojave Desert. *J of Applied Ecology* **40**, 344-353.
- 36 Brooks, M. L., and K. H. Berry. 2006. Dominance and environmental correlates of alien annual plants in  
37 the Mojave Desert, USA. *J of Arid Environments*, **67**:100-124.

- 1 Brooks, M. L., C. M. D'Antonio, D. M. Richardson, J. B. Grace, J. E. Keeley, J. M. DiTomaso, R. J.  
2 Hobbs, M. Pellant, and D. Pyke. 2004. Effects of invasive alien plants on fire regimes. *BioScience*, 54,677-  
3 688.  
4
- 5 Brooks, R. T. 2004. Early regeneration following the presalvage cutting of hemlock from hemlock-  
6 dominated stands. *Northern Journal of Applied Forestry*, **21**, 12-18.
- 7 Brown, D. E., editor. 1994. Biotic communities of the American Southwest United States and Mexico.  
8 University of Utah Press, Salt Lake City.
- 9 Brown, T. J., B. L. Hall, and A. L. Westerling. 2004. The impact of twenty-first century climate change on  
10 wildland fire danger in the western United States: An applications perspective. *Climatic Change*, **62**, 365-  
11 388.
- 12 Bruhn, D., J. W. Leverenz, and H. Saxe. 2000. Effects of tree size and temperature on relative growth rate  
13 and its components of *Fagus sylvatica* seedlings exposed to two partial pressures of atmospheric [CO<sub>2</sub>].  
14 *New Phytologist*, **146**, 415-425.
- 15 Bunn, S. E., M.C. Thoms, S.K. Hamilton, and S.J. Capon. 2006. Flow variability in dryland rivers: boom,  
16 bust, and the bits in between. *River Research and Applications*, **22**, 179-186.
- 17 Butin, E., A. H. Porter, and J. Elkinton. 2005. Adaptation during biological invasions and the case of  
18 *Adelges tsugae*. *Evolutionary Ecology Research*, **7**, 887-900.
- 19 Byrne, T., C. Stonestreet, and B. Peter. 2006. Characteristics and utilization of post-mountain pine beetle  
20 wood in solid wood products. Pages 233-253 in L. Safranyik and B. Wilson, editors. *The Mountain Pine  
21 Beetle: A Synthesis of Biology, Management, and Impacts on Lodgepole Pine*. Pacific Forestry Centre,  
22 Canadian Forest Service, Natural Resources Canada, Victoria, BC, Canada.
- 23 Calkin, D. E., K. M. Gebert, J. G. Jones, and R. P. Neilson. 2005. Forest service large fire area burned and  
24 suppression expression trends, 1970-2002. *J of Forestry*, **103**, 179-183.
- 25 Canadell, J., R. B. Jackson, J. R. Ehleringer, H. A. Mooney, O. E. Sala, and E. D. Schulze. 1996. Maximum  
26 rooting depth of vegetation types at the global scale. *Oecologia*, **108**, 583-595.
- 27 Cannell, M. G. R., J. H. M. Thornley, D. C. Mobbs, and A. D. Friend. 1998. UK conifer forests may be  
28 growing faster in response to increased N deposition, atmospheric CO<sub>2</sub> and temperature. *Forestry*, **71**,277-  
29 296.
- 30 Carroll, A. L., S. W. Taylor, J. Regniere, and L. Safranyik. 2004. Effects of climate change on range  
31 expansion by the mountain pine beetle in British Columbia. Pages 223-232 in *Mountain Pine Beetle  
32 Symposium: Challenges and Solutions*. Natural Resources Canada, Canadian Forest Service, Pacific  
33 Forestry Centre, Kelowna, BC.
- 34 CCSP\_4.2. 2007. Thresholds of change in ecosystems. U.S. Climate Change Science Program Synthesis  
35 and Assessment Product 4.2.
- 36 Chadwick, O. A., L. A. Derry, P. M. Vitousek, B. J. Huebert, and L. O. Hedin. 1999. Changing sources of  
37 nutrients during four million years of ecosystem development. *Nature*, **397**, 491-497.
- 38 Chavez, P. S., Jr., D. J. Mackinnon, R. L. Reynolds, and M. G. Velasco. 2002. Use of satellite and ground-  
39 based images to monitor dust storms and map landscape vulnerability to wind erosion. Page 98 in

- 1 Proceedings of ICAR5/GCTE-SEN Joint Conference, International Center for Arid and Semiarid Lands  
2 Studies, Texas Tech University, Lubbock, Texas, USA.
- 3 Chomette, O., M. Legrand, and B. Marticorena. 1999. Determination of the wind speed threshold for the  
4 emission of desert dust using satellite remote sensing in the thermal infrared. *J of Geophysical Research*,  
5 **104**, 31207-31215.
- 6 Christensen, N. S., A. W. Wood, N. Voisin, D. P. Lettenmaier, and R. N. Palmer. 2004. The effects of  
7 climate change on the hydrology and water resources of the Colorado River basin. *Climatic Change*, **62**,  
8 337-363.
- 9 Chuine, I., and E. G. Beaubien. 2001. Phenology is a major determinant of tree species range. *Ecology*  
10 *Letters*, **4**, 500-510.
- 11 Cleverly, J. R., C.N. Dahm, J.R. Thibault, D.E. McDonnell, and J.E.A. Coonrod. 2006. Riparian  
12 ecohydrology: regulation of water flux from the ground to the atmosphere in the Middle Rio Grande, New  
13 Mexico. *Hydrological Processes*, **20**, 3207-3225.
- 14 Cohen, S., K. Miller, K. Duncan, E. Gregorich, P. Groffman, P. Kovacs, V. Magaña, D. McKnight, E.  
15 Mills, and D. Schimel. 2001. North America. in J. J. MCCarthy, O. F. Canziani, N. A. Leary, D. J. Dokken,  
16 and K. S. White, editors. *Climate Change 2001: Impacts, Adaptation and Vulnerability*. Intergovernmental  
17 Panel on Climate Change, Washington, D.C.
- 18 Cobb, R. C., D. A. Orwig, and S. Currie. 2006. Decomposition of green foliage in eastern  
19 hemlock forests of southern New England impacted by hemlock woolly adelgid  
20 infestations. *Canadian Journal of Forest Research-Revue Canadienne De Recherche*  
21 *Forestiere*, **36**, 1331-1341.
- 22 Cole, K. 1985. Past rates of change, species richness and a model of vegetation inertia in the Grand  
23 Canyon, Arizona. *American Naturalist*, **125**, 289-303.
- 24 Colorado State Forest Service. 2007. 2006 Report on the Health of Colorado's Forests. Colorado  
25 Department of Natural Resources, Division of Forestry.
- 26 Conant, R. T., J. M. Klopatek, R. C. Malin, and C. C. Klopatek. 1998. Carbon pools and fluxes along an  
27 environmental gradient in northern Arizona. *Biogeochemistry*, **43**, 43-61.
- 28 Conil, S., and A. Hall. 2006. Local regimes of atmospheric variability: A case study of southern California.  
29 *J of Climate*, **19**, 4308-4325.
- 30 Constantz, J., A.E. Stewart, R. Niswonger, and L. Sarma. 2002. Analysis of temperature profiles for  
31 investigating stream losses beneath ephemeral channels. *Water Resources Research*, **38**, 52.51 - 52.13.
- 32 Constantz, J., and C.L. Thomas. 1997. Streambed temperature profiles as indicators of percolation  
33 characteristics beneath arroyos in the Middle Rio Grande basin, USA. *Hydrological Processes*, **11**, 1621-  
34 1634.
- 35 Cornelis, W. M., D. Gabriels, and R. Hartmann. 2004. A parameterisation for the threshold shear velocity  
36 to initiate deflation of dry and wet sediment. *Geomorphology*, **59**, 43-51.
- 37 Costanza, R., R. d'Arge, R. deGroot, S. Farber, M. Grasso, B. Hannon, K. Limburg, S. Naeem, R. V. Oneill,  
38 J. Paruelo, R. G. Raskin, P. Sutton, and M. vandenBelt. 1997. The value of the world's ecosystem services  
39 and natural capital. *Nature*, **387**, 253-260.

- 1 Cowley, D. E. 2006. Strategies for ecological restoration of the Middle Rio Grande in New Mexico and  
2 recovery of the endangered Rio Grande silvery minnow. *Reviews in Fisheries Science*, **14**, 169-186.
- 3 Curtis, P. S., and X. Wang. 1998. A meta-analysis of elevated CO<sub>2</sub> effects on woody plant mass, form and  
4 physiology. *Oecologia*, **113**, 299-313.
- 5 da Silva, R. R., G. Bohrer, D. Werth, M. J. Otte, and R. Avissar. 2006. Sensitivity of ice storms in the  
6 southeastern United States to Atlantic SST - Insights from a case study of the December 2002 storm.  
7 *Monthly Weather Review*, **134**, 1454-1464.
- 8 Dahm, C. N., J. R. Cleverly, J. E. A. Coonrod, J. R. Thibault, D. E. McDonnell, and D. J. Gilroy. 2002.  
9 Evapotranspiration at the land/water interface in a semi-arid drainage basin. *Freshwater Biology*, **47**, 831-  
10 843.
- 11 Daily, G. C., T. Soderqvist, S. Aniyar, K. Arrow, P. Dasgupta, P. R. Ehrlich, C. Folke, A. Jansson, B. O.  
12 Jansson, N. Kautsky, S. Levin, J. Lubchenco, K. G. Maler, D. Simpson, D. Starrett, D. Tilman, and B.  
13 Walker. 2000. Ecology - The value of nature and the nature of value. *Science*, **289**, 395-396.
- 14 Dale, V. H., L. A. Joyce, S. McNulty, R. P. Neilson, M. P. Ayres, M. D. Flannigan, P. J. Hanson, L. C.  
15 Irland, A. E. Lugo, C. J. Peterson, D. Simberloff, F. J. Swanson, B. J. Stocks, and B. M. Wotton. 2001.  
16 Climate change and forest disturbances. *BioScience*, **51**, 723-734.
- 17 Danby, R. K., and D. S. Hik. 2007. Responses of white spruce (*Picea glauca*) to experimental warming at a  
18 subarctic alpine treeline. *Global Change Biology*, **13**, 437-451.
- 19 Daniels, T. 1999. When city and country collide. Island Press, Washington, DC.
- 20 D'Antonio, C. M., and P. M. Vitousek. 1992. Biological invasions by exotic grasses, the grass fire cycle,  
21 and global change. *Annual Review of Ecology and Systematics*, **23**, 63-87.
- 22 Davidson, E. A., and I. A. Janssens. 2006. Temperature sensitivity of soil carbon decomposition and  
23 feedbacks to climate change. *Nature*, **440**, 165-173.
- 24 de Graaff, M. A., K. J. van Groenigen, J. Six, B. Hungate, and C. van Kessel. 2006. Interactions between  
25 plant growth and soil nutrient cycling under elevated CO<sub>2</sub>: a meta-analysis. *Global Change Biology*, **12**,  
26 2077-2091.
- 27 Denning, A. S., editor. 2005. Science Implementation Strategy for the North American Carbon Program.  
28 Report of the NACP Implementation Strategy Group of the U.S. Carbon Cycle Interagency Working  
29 Group. U.S. Carbon Cycle Science Program, Washington, DC.
- 30 Dole, K. P., M. E. Loik, and L. C. Sloan. 2003. The relative importance of climate change and the  
31 physiological effects of CO<sub>2</sub> on freezing tolerance for the future distribution of *Yucca brevifolia*. *Global  
32 and Planetary Change*, **36**, 137-146.
- 33 Drezner, T. D. 2006. Saguaro (*Carnegiea gigantea*) densities and reproduction over the northern Sonoran  
34 Desert. *Physical Geography*, **27**, 505-518.
- 35 Duce, R. A., and N. W. Tindale. 1991. Atmospheric transport of iron and its deposition in the ocean.  
36 *Limnology and Oceanography*, **36**, 1715-1726.
- 37 Duffy, P. A., J. E. Walsh, J. M. Graham, D. H. Mann, and T. S. Rupp. 2005. Impacts of large-scale  
38 atmospheric-ocean variability on Alaskan fire season severity. *Ecological Applications*, **15**, 1317-1330.

- 1 Easterling, D. R. 2002. Recent changes in frost days and the frost-free season in the United States. Bulletin  
2 of the American Meteorological Society 83: doi: 10.1175/1520-0477.
- 3 Ehleringer, J. R., T. E. Cerling, and B. R. Helliker. 1997. C-4 photosynthesis, atmospheric CO<sub>2</sub> and  
4 climate. *Oecologia*, **112**, 285-299.
- 5 Ellison, W. D. 1944. Studies of raindrop erosion. *Agricultural Engineering*, **25**, 131-136, 181-182.
- 6 Eschtruth, A. K., N. L. Cleavitt, J. J. Battles, R. A. Evans, and T. J. Fahey. 2006. Vegetation dynamics in  
7 declining eastern hemlock stands: 9 years of forest response to hemlock woolly adelgid infestation.  
8 *Canadian Journal of Forest Research-Revue Canadienne De Recherche Forestiere*, **36**,1435-1450.
- 9 Fagre, D. B., D. L. Peterson, and A. E. Hessler. 2003. Taking the pulse of mountains: Ecosystem responses to  
10 climatic variability. *Climatic Change*, **59**, 263-282.
- 11 Fang, C. M., P. Smith, J. B. Moncrieff, and J. U. Smith. 2005. Similar response of labile and resistant soil  
12 organic matter pools to changes in temperature. *Nature*, **433**, 57-59.
- 13 Farid, A., D. C. Goodrich, and S. Sorooshian. 2006. Using airborne lidar to discern age classes of  
14 cottonwood trees in a riparian area. *Western Journal of Applied Forestry*, **21**, 149-158.
- 15 Feng, S., and Q. Hu. 2004. Changes in agro-meteorological indicators in the contiguous United States:  
16 1951–2000. *Theoretical and Applied Climatology*, **78**, 247-264.
- 17 Fenn, M. E., J. S. Baron, E. B. Allen, H. M. Reuth, K. R. Nydick, L. Geiser, W. D. Bowman, J. O.  
18 Sickman, T. Meixner, D. W. Johnson, and P. Neitlich. 2003. Ecological effects of nitrogen deposition in the  
19 western United States. *BioScience*, **53**, 404-420.
- 20 Ferguson, A. 2004. Challenges and solutions - An industry perspective. Pages 223-232 in Mountain Pine  
21 Beetle Symposium: Challenges and Solutions. Natural Resources Canada, Canadian Forest Service, Pacific  
22 Forestry Centre, Kelowna, BC.
- 23 Finzi, A. C., D. J. P. Moore, E. H. DeLucia, J. Lichter, K. S. Hofmockel, R. B. Jackson, H. S. Kim, R.  
24 Matamala, H. R. McCarthy, R. Oren, J. S. Phippen, and W. H. Schlesinger. 2006. Progressive nitrogen  
25 limitation of ecosystem processes under elevated CO<sub>2</sub> in a warm-temperate forest. *Ecology*, **87**, 15-25.
- 26 Finzi, A. C., E. H. DeLucia, J. G. Hamilton, D. D. Richter, and W. H. Schlesinger. 2002. The nitrogen  
27 budget of a pine forest under free air CO<sub>2</sub> enrichment. *Oecologia*, **132**, 567-578.
- 28 Fisher, J. I., A. D. Richardson, and J. F. Mustard. 2007. Phenology model from surface meteorology does  
29 not capture satellite-based greenup estimations. *Global Change Biology*, **13**, 707-721.
- 30 Flanner, M. G., C. S. Zender, J. T. Randerson, and P. J. Rasch. 2007. Present day climate forcing and  
31 response from black carbon in snow. *Journal of Geophysical Research-Atmospheres*: (In Press)
- 32 Flannigan, M. D., B. J. Stocks, and B. M. Wotton. 2000. Climate change and forest fires. *Science of the*  
33 *Total Environment*, **262**, 221-229.
- 34 Flannigan, M. D., K. A. Logan, B. D. Amiro, W. R. Skinner, and B. J. Stocks. 2005. Future area burned in  
35 Canada. *Climatic Change*, **72**, 1-16.



- 1 Fleischner, T. L. 1994. Ecological costs of livestock grazing in western North America. *Conservation*  
2 *Biology*, **8**, 629-644.
- 3 Fleming, R. A. 2000. Climate change and insect disturbance regimes in Canada's boreal forests. *World*  
4 *Resources Review*, **12**, 520-555.
- 5 Flowers, R. W., S. M. Salom, and L. T. Kok. 2006. Competitive interactions among two specialist  
6 predators and a generalist predator of hemlock woolly adelgid, *Adelges tsugae* (Hemiptera : Adelgidae) in  
7 south-western Virginia. *Agricultural and Forest Entomology*, **8**, 253-262.
- 8
- 9 Franklin, K. A., K. Lyons, P. L. Nagler, D. Lampkin, E. P. Glenn, F. Molina-Freaner, T. Markow, and A.  
10 R. Huete. 2006. Buffelgrass (*Pennisetum ciliare*) land conversion and productivity in the plains of Sonora,  
11 Mexico. *Biological Conservation*, **127**, 62-71.
- 12 Fredrickson, E., K. M. Havstad, and R. Estell. 1998. Perspectives on desertification: south-western United  
13 States. *J of Arid Environments*, **39**, 191-207.
- 14 Fries, A., D. Lindgren, C. C. Ying, S. Ruotsalainen, K. Lindgren, B. Elfving, and U. Karl mats. 2000. The  
15 effect of temperature on site index in western Canada and Scandinavia estimated from IUFRO Pinus  
16 contorta provenance experiments. *Canadian Journal of Forest Research*, **30**, 921-929.
- 17 Galloway, J. N., F. J. Dentener, D. G. Capone, E. W. Boyer, R. W. Howarth, S. P. Seitzinger, G. P. Asner,  
18 C. C. Cleveland, P. A. Green, E. A. Holland, D. M. Karl, A. F. Michaels, J. H. Porter, A. R. Townsend, and  
19 C. J. Vorosmarty. 2004. Nitrogen cycles: past, present, and future. *Biogeochemistry*, **70**, 153-226.
- 20 Geron, C., A. Guenther, J. Greenberg, T. Karl, and R. Rasmussen. 2006. Biogenic volatile organic  
21 compound emissions from desert vegetation of the southwestern U.S.. *Atmospheric Environment*, **40**, 165-  
22 1660.
- 23 Gibson, K. E. 2006. Mountain pine beetle conditions in whitebark pine stands in the Greater Yellowstone  
24 Ecosystem, 2006. R1Pub06-03, USDA Forest Service, Northern Region, Missoula. Forest Health  
25 Protection Report.
- 26 Gill, R. A., and R. B. Jackson. 2000. Global patterns of root turnover for terrestrial ecosystems. *New*  
27 *Phytologist*, **147**:13-31.
- 28 Gillett, N. P., A. J. Weaver, F. W. Zwiers, and M. D. Flannigan. 2004. Detecting the effect of climate  
29 change on Canadian forest fires. *Geophysical Research Letters*, **31**.
- 30 Gillette, D. A., and A. M. Pitchford. 2004. Sand flux in the northern Chihuahuan Desert, New Mexico,  
31 USA, and the influence of mesquite-dominated landscapes. *Journal of Geophysical Research-Earth*  
32 *Surface*, **109**, F04003.
- 33 Gillson, L. and M.T. Hoffman. 2007. Rangeland ecology in a changing world. *Science*, **315**, 53-54.
- 34 Gitlin, A. R., C. M. Sthultz, M. A. Bowker, S. Stumpf, K. L. Paxton, K. Kennedy, A. Munoz, J. K. Bailey,  
35 and T. G. Whitham. 2006. Mortality gradients within and among dominant plant populations as barometers  
36 of ecosystem change during extreme drought. *Conservation Biology*, **20**, 1477-1486.
- 37 Gonzelez-Meller, M. A., L. Taneva, and R. J. Trueman. 2004. Plant respiration and elevated atmospheric  
38 CO<sub>2</sub> concentration: Cellular responses and global significance. *Annals of Botany*, **94**, 647-656.

- 1 Goodrich, D. C., R. Scott, J. Qi, et al. 2000. Seasonal estimates of riparian evapotranspiration using remote  
2 and in situ measurements. *Agricultural and Forest Meteorology*, **105**, 281-309.
- 3 Goslee, S. C., W. A. Niering, D. L. Urban, and N. L. Christensen. 2005. Influence of environment, history  
4 and vegetative interactions on stand dynamics in a Connecticut forest. *Journal of the Torrey Botanical*  
5 *Society*, **132**, 471-482.
- 6 Gower, S. T., K. A. Vogt, and C. C. Grier. 1992. Carbon dynamics of Rocky Mountain Douglas-fir:  
7 influence of water and nutrient availability. *Ecological Monographs*, **62**, 43-65.
- 8 Gregoire, T. G., and H. T. Valentine. In Press. Sampling strategies for natural resources and the  
9 environment. Chapman&Hall/CRC Press.
- 10 Griffin, D. W., V. H. Garrison, J. R. Herman, and E. A. Shinn. 2001. African desert dust in the Caribbean  
11 atmosphere: microbiology and public health. *Aerobiologia*, **17**, 203-213.
- 12 Grulke, N. E., and P. R. Miller. 1994. Changes in gas exchange characteristics during the life span of giant  
13 sequoia: implications for response to current and future concentrations of atmospheric ozone. *Tree*  
14 *Physiology*, **14**, 659-668.
- 15 Grunzweig, J. M., T. Lin, E. Rotenberg, A. Schwartz, and D. Yakir. 2003. Carbon sequestration in arid-  
16 land forest. *Global Change Biology*, **9**, 791-799.
- 17 Guenther, A., S. Archer, J. Greenberg, P. Harley, D. Helmig, L. Klinger, L. Vierling, M. Wildermuth, P.  
18 Zimmerman, and S. Zitzer. 1999. Biogenic hydrocarbon emissions and land cover/climate change in a  
19 subtropical savanna. *Physics and Chemistry of the Earth (B)*, **24**, 659-667.
- 20 Hall, F. C. 2002. Photo point monitoring handbook: Part A- Field Procedures. USDA Forest Service  
21 Pacific Northwest Station Gen Tech Rep PNW-GTR-526.
- 22 Hamilton, S. K., S. E. Bunn, M. C. Thoms, and J. Marshall. 2005. Persistence of aquatic refugia between  
23 flow pulses in a dryland river system (Cooper Creek, Australia). *Limnology and Oceanography*, **50**, 743-  
24 754.
- 25 Hansen, A. J., and D. G. Brown. 2005. Land-use change in rural America: rates, drivers, and consequences.  
26 *Ecological Applications*, **15**, 1849-1850.
- 27 Hansen, A. J., R. R. Neilson, V. H. Dale, C. H. Flather, L. R. Iverson, D. J. Currie, S. Shafer, R. Cook, and  
28 P. J. Bartlein. 2001a. Global change in forests: Responses of species, communities, and biomes.  
29 *BioScience*, **51**, 765-779.
- 30 Hansen, E. M., and B. Bentz. 2003. Comparison of reproductive capacity among univoltine, semivoltine,  
31 and re-emerged parent spruce beetles (Coleoptera: Scolytidae). *Canadian Entomologist*, **135**, 697-712.
- 32 Hansen, M. E., B. J. Bentz, and D. L. Turner. 2001b. Temperature-based model for predicting univoltine  
33 brood proportions in spruce beetle (Coleoptera: Scolytidae). *Canadian Entomologist*, **133**, 827-841.
- 34 Hanson, P. J., and J. F. Weltzin. 2000. Drought disturbance from climate change: response of United States  
35 forests. *Science of the Total Environment*, **262**, 205-220.
- 36 Hanson, P. J., S. D. Wullschleger, R. J. Norby, T. J. Tschaplinski, and C. A. Gunderson. 2005. Importance  
37 of changing CO<sub>2</sub>, temperature, precipitation, and ozone on carbon and water cycles of an upland-oak forest:  
38 Incorporating experimental results into model simulations. *Global Change Biology*, **11**, 1402-1423.

- 1 Hanson, P. J., Todd D.E, Jr., and J. S. Amthor. 2001. A six-year study of sapling and large-tree growth and  
2 mortality responses to natural and induced variability in precipitation and throughfall. *Tree Physiology*, **21**,  
3 345-358.
- 4 Harden, J. W., S. E. Trumbore, B. J. Stocks, A. Hirsch, S. T. Gower, K. P. O'Neill, and E. S. Kasischke.  
5 2000. The role of fire in the boreal carbon budget. *Global Change Biology*, **6**, 174-184.
- 6 Hargrove, W. W., F. M. Hoffman, and B. E. Law. 2003. New analysis reveals representativeness of the  
7 AmeriFlux network. *EOS Transactions* **84**, 529-535.
- 8 Hart, R. H., and W. A. Laycock. 1996. Repeat photography on range and forest lands in the western United  
9 States. *J of Range Management*, **49**, 60-67.
- 10 Hastings, S. J., W. C. Oechel, and A. Muhlia-Melo. 2005. Diurnal, seasonal and annual variation in the net  
11 ecosystem CO<sub>2</sub> exchange of a desert shrub community (Sarcocaulis) in Baja California, Mexico.  
12 *Global Change Biology*, **11**, 927-939.
- 13 Hereford, R., R. H. Webb, and C. I. Longpré. 2006. Precipitation history and ecosystem response to multi-  
14 decadal precipitation variability in the Mojave Desert region, 1893-2001. *Journal of Arid Environments*,  
15 **67**, 13-34.
- 16 Hicke, J. A., G. P. Asner, J. T. Randerson, C. Tucker, S. Los, R. Birdsey, J. C. Jenkins, and C. Field. 2002a.  
17 Trends in North American net primary productivity derived from satellite observations, 1982-1998. *Global*  
18 *Biogeochemical Cycles*, **16**.
- 19 Hicke, J. A., G. P. Asner, J. T. Randerson, C. Tucker, S. Los, R. Birdsey, J. C. Jenkins, C. Field, and E.  
20 Holland. 2002b. Satellite-derived increases in net primary productivity across North America, 1982-1998.  
21 *Geophysical Research Letters*, **29**.
- 22 Hicke, J. A., J. A. Logan, J. Powell, and D. S. Ojima. 2006. Changing temperatures influence suitability for  
23 modeled mountain pine beetle (*Dendroctonus ponderosae*) outbreaks in the western United States. *Journal*  
24 *of Geophysical Research-Biogeosciences*, **111**, G02019, doi:02010.01029/02005JG000101.
- 25 Hinzman, L. D., N. D. Bettez, W. R. Bolton, F. S. Chapin, M. B. Dyurgerov, C. L. Fastie, B. Griffith, R. D.  
26 Hollister, A. Hope, H. P. Huntington, A. M. Jensen, G. J. Jia, T. Jorgenson, D. L. Kane, D. R. Klein, G.  
27 Kofinas, A. H. Lynch, A. H. Lloyd, A. D. McGuire, F. E. Nelson, W. C. Oechel, T. E. Osterkamp, C. H.  
28 Racine, V. E. Romanovsky, R. S. Stone, D. A. Stow, M. Sturm, C. E. Tweedie, G. L. Vourlitis, M. D.  
29 Walker, D. A. Walker, P. J. Webber, J. M. Welker, K. Winker, and K. Yoshikawa. 2005. Evidence and  
30 implications of recent climate change in northern Alaska and other arctic regions. *Climatic Change*, **72**,  
31 251-298.
- 32 Hobbs, R. J., and L. F. Huenneke. 1992. Disturbance, diversity, and invasion - implications for  
33 conservation. *Conservation Biology*, **6**, 324-337.
- 34 Hobbs, R. J., S. Arico, J. Aronson, J. S. Baron, P. Bridgewater, V. A. Cramer, P. R. Epstein, J. J. Ewel, C.  
35 A. Klink, A. E. Lugo, D. Norton, D. Ojima, D. M. Richardson, E. W. Sanderson, F. Valladares, M. Vila, R.  
36 Zamora, and M. Zobel. 2006. Novel ecosystems: theoretical and management aspects of the new ecological  
37 world order. *Global Ecology and Biogeography*, **15**, 1-7.
- 38 Holechek, J. L., R. D. Pieper, and C. H. Herbel. 2003. Range management: principles and practices. Fifth  
39 edition. Prentice-Hall, London.

- 1 Hollinger, D. Y., J. Aber, B. Dail, E. A. Davidson, S. M. Goltz, H. Hughes, M. Y. Leclerc, J. T. Lee, A. D.  
2 Richardson, C. Rodrigues, N. A. Scott, D. Achuatavariar, and J. Walsh. 2004. Spatial and temporal  
3 variability in forest-atmosphere CO<sub>2</sub> exchange. *Global Change Biology*, **10**, 1689-1706.
- 4 Holmgren, M., and M. Scheffer. 2001. El Niño as a window of opportunity for the restoration of degraded  
5 arid ecosystems. *Ecosystems*, **4**, 151-159.
- 6 Holmgren, M., P. Stapp, C.R. Dickman, C. Gracia, S. Graham, J. Gutierrez, C. Hice, et. al. 2006. Extreme  
7 climatic events shape arid and semi-arid ecosystems. *Frontiers in Ecology and the Environment*, **4**, 87-95.
- 8 Holsten, E. H., R. A. Werner, and R. L. Develice. 1995. Effects of a spruce beetle (Coleoptera: Scolytidae)  
9 outbreak and fire on Lutz spruce in Alaska. *Environmental Entomology*, **24**, 1539-1547.
- 10 Holsten, E. H., R. W. Thier, A. S. Munson, and K. E. Gibson. 1999. The Spruce Beetle. Forest Insect and  
11 Disease Leaflet 127, USDA Forest Service.
- 12 Holzapfel, C., and B. E. Mahall. 1999. Bidirectional facilitation and interference between shrubs and  
13 annuals in the Mojave Desert. *Ecology*, **80**, 1747-1761.
- 14 Hooper, D. U., and L. Johnson. 1999. Nitrogen limitation in dryland ecosystems: response to geographical  
15 and temporal variations in precipitation. *Biogeochemistry*, **46**, 247-293.
- 16 Horton, J. L., T.E. Kolb, and S.C. Hart. 2001a. Responses of riparian trees to interannual variation in  
17 ground water depth in a semi-arid river basin. *Plant Cell and Environment*, **24**, 293-304.
- 18 Horton, J. L., T.E. Kolb, and S.C. Hart. 2001b. Physiological response to groundwater depth varies among  
19 species and with river flow regulation. *Ecological Applications*, **11**, 1046-1059.
- 20 Huenneke, L. F., J. P. Anderson, M. Remmenga, and W. H. Schlesinger. 2002. Desertification alters  
21 patterns of aboveground net primary production in Chihuahuan ecosystems. *Global Change Biology*, **8**,  
22 247-264.
- 23 Hughes, L. 2000. Biological consequences of global warming: is the signal already apparent? *Trends in*  
24 *Ecology & Evolution*, **15**, 56-61.
- 25 Hummel, S., and J. K. Agee. 2003. Western spruce budworm defoliation effects on forest structure and  
26 potential fire behavior. *Northwest Science*, **77**, 159-169.
- 27 Hunter, R. 1991. Bromus invasions on the Nevada Test Site - present status of *B. rubens* and *B. tectorum*  
28 with notes on their relationship to disturbance and altitude. *Great Basin Naturalist*, **51**, 176-182.
- 29 Huxman, T. E., and S. D. Smith. 2001. Photosynthesis in an invasive grass and native forb at elevated CO<sub>2</sub>  
30 during an El Niño year in the Mojave Desert. *Oecologia*, **128**, 193-201.
- 31 Huxman, T. E., K. A. Snyder, D. T. Tissue, A. J. Leffler, K. Ogle, W. T. Pockman, D. R. Sandquist, D. L.  
32 Potts, and S. Schwinning. 2004. Precipitation pulses and carbon fluxes in semiarid and arid ecosystems.  
33 *Oecologia*, **141**, 254-268.
- 34 Hyvonen, R., G. I. Agren, S. Linder, T. Persson, M. F. Cotrufo, A. Ekblad, M. Freeman, A. Grelle, I. A.  
35 Janssens, P. G. Jarvis, S. Kellomaki, A. Lindroth, D. Loustau, T. Lundmark, R. J. Norby, R. Oren, K.  
36 Pilegaard, M. G. Ryan, B. D. Sigurdsson, M. Stromgren, M. van Oijen, and G. Wallin. 2007. The likely  
37 impact of elevated [CO<sub>2</sub>], nitrogen deposition, increased temperature and management on carbon

- 1 sequestration in temperate and boreal forest ecosystems: a literature review. *New Phytologist*, **173**, 463-  
2 480.
- 3 IPCC. 2007. Climate Change 2007: The Physical Science Basis IPCC WGI Fourth Assessment Report,  
4 Policy Maker Summary, Intergovernmental Panel on Climate Change, Working Group I, Fourth  
5 Assessment Report.
- 6 Irvine, J., B. E. Law, M. R. Kurpius, P. M. Anthoni, D. Moore, and P. A. Schwarz. 2004. Age-related  
7 changes in ecosystem structure and function and effects on water and carbon exchange in ponderosa pine.  
8 *Tree Physiology*, **24**, 753-763.
- 9 Ivans, S., L. Higgs, A. Leffler, and C. V. Ivans. 2006. Response of water vapor and CO<sub>2</sub> fluxes in semiarid  
10 lands to seasonal and intermittent precipitation pulses. *Journal of Hydrometeorology*, **7**, 995-1010.
- 11 Jackson, R. B., J. L. Banner, E. G. Jobbagy, W. T. Pockman, and D. H. Wall. 2002. Ecosystem carbon loss  
12 with woody plant invasion of grassland. *Nature*, **418**, 623-626.
- 13 Jastrow, J. D., R. M. Miller, R. Matamala, R. J. Norby, T. W. Boutton, C. W. Rice, and C. E. Owensby.  
14 2005. Elevated atmospheric carbon dioxide increases soil carbon. *Global Change Biology*, **11**, 2057-2064.
- 15 Jepsen, R., R. Langford, J. Roberts, and J. Gailani. 2003. Effects of arroyo sediment influxes on the Rio  
16 Grande River channel near El Paso, Texas. *Environmental & Engineering Geoscience*, **9**, 305-312.
- 17 Jickells, T. D., Z. S. An, K. K. Andersen, et al. 2005. Global iron connections between desert dust, ocean  
18 biogeochemistry and climate. *Science*, **308**:67-71.
- 19 Karlsson, P. E., J. Uddling, S. Braun, M. Broadmeadow, S. Elvira, B. S. Gimeno, D. Le Thiec, E. Oksanen,  
20 K. Vandermeiren, M. Wilkinson, and L. Emberson. 2004. New critical levels for ozone effects on young  
21 trees based on AOT40 and simulated cumulative leaf uptake of ozone. *Atmospheric Environment*, **38**, 2283-  
22 2294.
- 23 Kashian, D. M., W. H. Romme, D. B. Tinker, M. G. Turner, and M. G. Ryan. 2006. Carbon storage on  
24 landscapes with stand-replacing fires. *BioScience* **56**:598-606.
- 25 Kasischke, E. S., and M. R. Turetsky. 2006. Recent changes in the fire regime across the North American  
26 boreal region - Spatial and temporal patterns of burning across Canada and Alaska. *Geophysical Research*  
27 *Letters* **33**.
- 28 Katz, G. L., and P. B. Shafroth. 2003. Biology, ecology and management of *Elaeagnus angustifolia* L.  
29 (Russian olive) in western North America. *Wetlands* **23**, 763-777.
- 30 Keeley, J. E., and C. J. Fotheringham. 2001. Historic fire regime in Southern California shrublands.  
31 *Conservation Biology*, **15**, 1536-1548.
- 32 King, J. S., P. J. Hanson, E. Bernhardt, P. DeAngelis, R. J. Norby, and K. S. Pregitzer. 2004. A multiyear  
33 synthesis of soil respiration responses to elevated atmospheric CO<sub>2</sub> from four forest FACE experiments.  
34 *Global Change Biology*, **10**, 1027-1042.
- 35 Kirschbaum, M. U. F. 2004. Soil respiration under prolonged soil warming: are rate reductions caused by  
36 acclimation or substrate loss? *Global Change Biology*, **10**, 1870-1877.
- 37 Kirschbaum, M. U. F. 2005. A modeling analysis of the interaction between forest age and forest  
38 responsiveness to increasing CO<sub>2</sub> concentration. *Tree Physiology*, **25**, 953-963.

- 1 Kitzberger, T., P. M. Brown, E. K. Heyerdahl, T. W. Swetnam, and T. T. Veblen. 2007. Contingent  
2 Pacific–Atlantic Ocean influence on multi-century wildfire synchrony over western North America.  
3 *Proceedings National Academy of Science*, **104**, 543-548.
- 4 Kitzberger, T., P. M. Brown, E. K. Heyerdahl, T. W. Swetnam, and T. T. Veblen. 2007. Contingent Pacific-  
5 Atlantic Ocean influence on multicentury wildfire synchrony over western North America. *Proceedings of*  
6 *the National Academy of Sciences of the United States of America*, **104**, 543-548.
- 7 Knapp, A. K., and M. D. Smith. 2001. Variation among biomes in temporal dynamics of aboveground  
8 primary production. *Science*, **291**, 481-484.
- 9 Knapp, A. K., P. A. Fay, J. M. Blair, S. L. Collins, M. D. Smith, J. D. Carlisle, C. W. Harper, B. T. Danner,  
10 M. S. Lett, and J. K. McCarron. 2002. Rainfall variability, carbon cycling, and plant species diversity in a  
11 mesic grassland. *Science*, **298**, 2202-2205.
- 12 Knapp, P. A. 1995. Intermountain West lightning-caused fires - climatic predictors of area burned. *Journal*  
13 *of Range Management*, **48**, 85-91.
- 14 Knapp, P. A. 1998. Spatio-temporal patterns of large grassland fires in the Intermountain West, USA.  
15 *Global Ecology and Biogeography Letters*, **7**, 259-272.
- 16 Koch, F. H., H. M. Cheshire, and H. A. Devine. 2006. Landscape-scale prediction of hemlock woolly  
17 adelgid, *Adelges tsugae* (Homoptera : Adelgidae), infestation in the southern Appalachian Mountains.  
18 *Environmental Entomology*, **35**, 1313-1323.
- 19 Koricheva, J., S. Larsson, and E. Haukioja. 1998. Insect performance on experimentally stressed woody  
20 plants: A meta-analysis. *Annual Review of Entomology*, **43**, 195-216.
- 21 Körner, C. 2000. Biosphere responses to CO<sub>2</sub> enrichment. *Ecological Applications*, **10**, 1590-1619.
- 22 Körner, C. 2006. Plant CO<sub>2</sub> responses: an issue of definition, time and resource supply. *New Phytologist*,  
23 **172**, 393-411.
- 24 Körner, C., R. Asshoff, O. Bignucolo, S. Hättenschwiler, S. G. Keel, S. Pelaez-Riedl, S. Pepin, R. T. W.  
25 Siegwolf, and G. Zotz. 2005. Carbon flux and growth in mature deciduous forest trees exposed to elevated  
26 CO<sub>2</sub>. *Science*, **309**, 1360-1362.
- 27 Krieger, D. J. 2001. The economic value of forest ecosystem services: a review. The Wilderness Society,  
28 Washington, DC.
- 29 Kruger, E. L., J. C. Volin, and R. L. Lindroth. 1998. Influences of atmospheric CO<sub>2</sub> enrichment on the  
30 responses of sugar maple and trembling aspen to defoliation. *New Phytologist*, **140**, 85-94.
- 31 Kulakowski, D., and T. T. Veblen. in press. Effect of prior disturbances in the extent and severity of a 2002  
32 wildfire in Colorado subalpine forests. *Ecology*.
- 33 Kupfer, J. A., and J. D. Miller. 2005. Wildfire effects and post-fire responses of an invasive mesquite  
34 population: the interactive importance of grazing and non-native herbaceous species invasion. *Journal of*  
35 *Biogeography*, **32**, 453-466.
- 36 Kurz, W. A., and M. J. Apps. 1999. A 70-year retrospective analysis of carbon fluxes in the canadian forest  
37 sector. *Ecological Applications*, **9**, 526-547.

- 1 Lane, L. J., and M. R. Kidwell. 2003. Hydrology and soil erosion. Pages 92-100 Santa Rita Experimental  
2 Range: 100 years (1903 to 2003) of accomplishments and contributions. Proc. RMRS-P-30, U.S.  
3 Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, UT, Tucson, AZ.
- 4 Lavee, H., A. C. Imeson, and P. Sarah. 1998. The impact of climate change on geomorphology and  
5 desertification along a Mediterranean-arid transect. *Land Degradation and Development*, **9**, 407-422.
- 6 Leathers, C. R. 1981. Plant components of desert dust in Arizona and their significance for man. Pages  
7 191-206 in T. L. Péwé, editor. Desert Dust: Origin, Characteristics, and Effect on Man. Geological Society  
8 of America, Boulder, Colorado.
- 9 Leith, H. 1975. Modelling the primary productivity of the world. Pages 237-263 in H. Leith and R. H.  
10 Whittaker, editors. Primary productivity of the biosphere. Springer-Verlag, New York.
- 11 Lichter, J., S. H. Barron, C. E. Bevacqua, A. C. Finzli, K. E. Irving, E. A. Stemmler, and W. H.  
12 Schlesinger. 2005. Soil carbon sequestration and turnover in a pine forest after six years of atmospheric  
13 CO<sub>2</sub> enrichment. *Ecology*, **86**, 1835-1847.
- 14 Logan, J. A., and J. A. Powell. 2001. Ghost forests, global warming and the mountain pine beetle  
15 (Coleoptera: Scolytidae). *American Entomologist*, **47**, 160-173.
- 16 Logan, J. A., J. Regniere, and J. A. Powell. 2003b. Assessing the impacts of global warming on forest pest  
17 dynamics. *Frontiers in Ecology and the Environment*, **1**, 130-137.
- 18 Logan, J., J. Regniere, and J. A. Powell. 2003a. Assessing the impacts of global warming on forest pest  
19 dynamics. *Frontiers in Ecology and the Environment*, **1**, 130-137.
- 20 Loik, M. E., T. E. Huxman, E. P. Hamerlynck, and S. D. Smith. 2000. Low temperature tolerance and cold  
21 acclimation for seedlings of three Mojave Desert Yucca species exposed to elevated CO<sub>2</sub>. *Journal of Arid*  
22 *Environments*, **46**, 43-56.
- 23 Long, S. P. 1991. Modification of the response of photosynthetic productivity to rising temperature by  
24 atmospheric CO<sub>2</sub> concentrations: has its importance been underestimated? *Plant, Cell, and Environment*,  
25 **14**, 729-740.
- 26 Long, S. P. 1991. Modification of the response of photosynthetic productivity to rising temperature by  
27 atmospheric CO<sub>2</sub> concentrations: Has its importance been underestimated? *Plant, Cell and Environment*,  
28 **14**, 729-739.
- 29 Luk, S. H., A. D. Abrahams, and A. J. Parsons. 1993. Sediment sources and sediment transport by rill flow  
30 and interrill flow on a semiarid piedmont slope, southern Arizona. *Catena*, **20**, 93-111.
- 31 Luo, Y. Q., D. F. Hui, and D. Q. Zhang. 2006. Elevated CO<sub>2</sub> stimulates net accumulations of carbon and  
32 nitrogen in land ecosystems: A meta-analysis. *Ecology*, **87**, 53-63.
- 33 Luo, Y., B. Su, W. S. Currie, J. S. Dukes, A. Finzi, U. Hartwig, B. Hungate, R. E. McMurtrie, R. Oren, W.  
34 J. Parton, D. E. Pataki, M. R. Shaw, D. R. Zak, and C. B. Field. 2004. Progressive nitrogen limitation of  
35 ecosystem responses to rising atmospheric carbon dioxide. *BioScience*, **54**, 731-739.
- 36 Lynch, H. J., R. A. Renkin, R. L. Crabtree, and P. R. Moorcroft. 2006. The influence of previous mountain  
37 pine beetle (*Dendroctonus ponderosae*) activity on the 1988 Yellowstone fires. *Ecosystems*, **9**, 1318-1327.

- 1 MacMahon, J., and F. Wagner. 1985. The Mojave, Sonoran and Chihuahuan Deserts of North America. In:  
2 Noy-Meir, I., Evanari, M., Goodall, D.W. eds. Hot Deserts and Arid Shrublands. *Ecosystems of the World*,  
3 **12A**, Elsevier.
- 4 Magill, A. H., J. D. Aber, W. S. Currie, K. J. Nadelhoffer, M. E. Martin, W. H. McDowell, J. M. Melillo,  
5 and P. Steudler. 2004. Ecosystem response to 15 years of chronic nitrogen additions at the Harvard Forest  
6 LTER, Massachusetts, USA. *Forest Ecology and Management*, **196**, 7-28.
- 7 Maier, C. A., T. J. Albaugh, H. L. Allen, and P. M. Dougherty. 2004. Respiratory carbon use and carbon  
8 storage in mid-rotation loblolly pine (*Pinus taeda* L.) plantations: The effect of site resources on the stand  
9 carbon balance. *Global Change Biology*, **10**, 1335-1350.
- 10 Malmström, C. M., and K. F. Raffa. 2000. Biotic disturbance agents in the boreal forest: considerations for  
11 vegetation change models. *Global Change Biology*, **6**, 35-48.
- 12 Matyssek, R., and H. Sandermann. 2003. Impact of ozone on trees: an ecophysiological perspective. Pages  
13 349–404 in K. Esser, U. Lüttge, W. Beyschlag, and F. Hellwig, editors. *Progress in Botany*, Vol. **64**.  
14 Springer-Verlag, Heidelberg, Germany.
- 15 Mau-Crimmins, T., H.R. Schussman, H.R., Geiger, E.L. 2006. Can the invaded range of a species be  
16 predicted sufficiently using only native-range data?: Lehmann lovegrass (*Eragrostis lehmanniana*) in the  
17 southwestern United States. *Ecological Modelling*, **193**, 736-746.
- 18 McAuliffe, J. R. 2003. The interface between precipitation and vegetation: the importance of soils in arid  
19 and semiarid environments. Pages 9-27 in J. F. Weltzin, McPherson, G.R., editor. *Changing Precipitation*  
20 *Regimes and Terrestrial Ecosystems*. University of Arizona Press, Tucson, AZ, USA.
- 21 McAuliffe, J. R., L. A. Scuderi, and L. D. McFadden. 2006. Tree-ring record of hill slope erosion and  
22 valley floor dynamics: Landscape responses to climate variation during the last 400 yr in the Colorado  
23 Plateau, northeastern Arizona. *Global and Planetary Change*, **50**, 184-201.
- 24 McCarthy, H. R., R. Oren, A. C. Finzi, and K. H. Johnsen. 2006a. Canopy leaf area constrains [CO<sub>2</sub>]-  
25 induced enhancement of productivity and partitioning among aboveground carbon pools. *Proceedings of*  
26 *the National Academy of Sciences of the United States of America*, **103**, 19356-19361.
- 27 McCarthy, H. R., R. Oren, H. S. Kim, K. H. Johnsen, C. Maier, S. G. Pritchard, and M. A. Davis. 2006b.  
28 Interaction of ice storms and management practices on current carbon sequestration in forests with potential  
29 mitigation under future CO<sub>2</sub> atmosphere. *Journal of Geophysical Research-Atmospheres*, **111**.
- 30 McClaran, M. P. 2003. A century of vegetation change on the Santa Rita Experimental Range. Pages 16-33  
31 in Santa Rita Experimental Range: 100 years (1903 to 2003) of accomplishments and contributions. Proc.  
32 RMRS-P-30, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden,  
33 UT, Tucson, AZ.
- 34 McKeen, S. A., G. Wotawa, D. D. Parrish, J. S. Holloway, M. P. Buhr, G. Hubler, F. C. Fehsenfeld, and J.  
35 F. Meagher. 2002. Ozone production from Canadian wildfires during June and July of 1995. *Journal of*  
36 *Geophysical Research-Atmospheres*, **107**.
- 37 McMurtrie, R. E., B. E. Medlyn, and R. C. Dewar. 2001. Increased understanding of nutrient  
38 immobilization in soil organic matter is critical for predicting the carbon sink strength of forest ecosystems  
39 over the next 100 years. *Tree Physiology*, **21**, 831-839.



- 1 McNulty, S. G. 2002. Hurricane impacts on U.S. forest carbon sequestration. *Environmental Pollution*, **11**,  
2 :S17-S24.
- 3 Melillo, J. M., P. A. Steudler, J. D. Aber, K. Newkirk, H. Lux, F. P. Bowles, C. Catricala, A. Magill, T.  
4 Ahrens, and S. Morrisseau. 2002. Soil warming and carbon-cycle feedbacks to the climate system. *Science*,  
5 **298**, 2173-2176.
- 6 Menzel, A., and P. Fabian. 1999. Growing season extended in Europe. *Nature*, **397**, 659-659.
- 7 Millennium-Ecosystem-Assessment. 2005. Ecosystems and Human Well-being: Synthesis. Island Press,  
8 Washington, DC.
- 9 Miller, N. L., and N. J. Schlegel. 2006. Climate change projected fire weather sensitivity: California Santa  
10 Ana wind occurrence. *Geophysical Research Letters*, **33**.
- 11 Miller, S. D. 2003. A consolidated technique for enhancing desert dust storms with MODIS., **30**, 12.11 -  
12 12.14.
- 13 Milly, P. C. D., K. A. Dunne, and A. V. Vecchia. 2005. Global pattern of trends in streamflow and water  
14 availability in a changing climate. *Nature*, **438**, 347-350.
- 15 Monger, H. C., and J. J. Martinez-Rios. 2000. Inorganic carbon sequestration in grazing lands. Pages 87-  
16 118 in J. K. a. R. L. R.F. Follett, editor. *The Potential of U.S. Grazing Lands to Sequester Carbon and*  
17 *Mitigate the Greenhouse Effect*. Lewis Publishers, Boca Raton, Florida.
- 18 Morris, G. A., S. Hersey, A. M. Thompson, S. Pawson, J. E. Nielsen, P. R. Colarco, W. W. McMillan, A.  
19 Stohl, S. Turquety, J. Warner, B. J. Johnson, T. L. Kucsera, D. E. Larko, S. J. Oltmans, and J. C. Witte.  
20 2006. Alaskan and Canadian forest fires exacerbate ozone pollution over Houston, Texas, on 19 and 20  
21 July 2004. *Journal of Geophysical Research-Atmospheres*, **111**.
- 22 Nagel, J. M., T. E. Huxman, K. L. Griffin, and S. D. Smith. 2004. CO<sub>2</sub> enrichment reduces the energetic  
23 cost of biomass construction in an invasive desert grass. *Ecology*, **85**, 100-106.
- 24 NASA-Office-of-Earth-Science. 2004. Earth science applications plan. NASA, Washington, D.C.
- 25 National-Ecological-Observatory-Network. 2006. Integrated science and education plan for the National  
26 Ecological Observatory Network. Available at: <http://www.neoninc.org/>. NEON, Inc., Washington, DC.
- 27 Neilson, R. P. 1986. High resolution climatic analysis and southwest biogeography. *Science*, **232**, 27-34.
- 28 Nelson, A. 1992. Characterizing exurbia. *Journal of Planning Literature*, **6**, 350-368.
- 29 Nettleton, W. D., and M. D. Mays. 2007. Estimated Holocene soil carbon-soil degradation in Nevada and  
30 western Utah, USA. *Catena*, **69**, 220-229.
- 31 Newman, B. D., B. P. Wilcox, S. R. Archer, D. D. Breshears, C. N. Dahm, C. J. Duffy, N. G. McDowell, F.  
32 M. Phillips, B. R. Scanlon, and E. R. Vivoni. 2006. Ecohydrology of water-limited environments: a  
33 scientific vision. *Water Resources Research*, **42**:W06302, doi:06310.01029/02005WR004141.
- 34 Norby, R. J., E. H. DeLucia, B. Gielen, C. Calfapietra, C. P. Giardina, J. S. King, J. Ledford, H. R.  
35 McCarthy, D. J. P. Moore, R. Ceulemans, P. De Angelis, A. C. Finzi, D. F. Karnosky, M. E. Kubiske, M.  
36 Lukac, K. S. Pregitzer, G. E. Scarascia-Mugnozza, W. H. Schlesinger, and R. Oren. 2005. Forest response

- 1 to elevated CO<sub>2</sub> is conserved across a broad range of productivity. *Proceedings of the National Academy of*  
2 *Sciences of the United States of America* **102**, 18052-18056.
- 3 Norby, R. J., J. Ledford, C. D. Reilly, N. E. Miller, and E. G. O'Neill. 2004. Fine-root production  
4 dominates response of a deciduous forest to atmospheric CO<sub>2</sub> enrichment. *Proceedings of the National*  
5 *Academy of Sciences of the United States of America*, **101**, 9689-9693.
- 6 Novak, S. J., and R. N. Mack. 2001. Tracing plant introduction and spread: Genetic evidence from *Bromus*  
7 *tectorum* (Cheatgrass). *BioScience*, **51**, 114-122.
- 8 NWRC. 2007. Northwest Watershed Research Center (NWRC) and the Reynolds Creek Experimental  
9 Watershed (RCEW) USDA-ARS NW Watershed Research, 800 Park Blvd. Plaza IV, S 105 Boise, ID  
10 83712. <http://www.nwrc.ars.usda.gov/>.
- 11 Okin, G. S., and M. C. Reheis. 2002. An ENSO predictor of dust emission in the southwestern United  
12 States. *Geophysical Research Letters*, **29**, 46.41-46.43.
- 13 Okin, G. S., J. E. Herrick, and D. A. Gillette. 2006. Multi-scale controls on and consequences of aeolian  
14 processes in landscape change in arid and semiarid environments. *Journal of Arid Environments*, **65**, 253-  
15 275.
- 16 Olson, D. M., E. Dinerstein, E. D. Wikramanayake, N. D. Burgess, G. V. N. Powell, E. C. Underwood, J.  
17 A. D'Amico, H. E. S. I. Itoua, J. C. Morrison, C. J. Loucks, T. F. Allnutt, T. H. Ricketts, Y. Kura, J. F.  
18 Lamoreux, W. W. Wettengel, P. Hedao, and K. R. Kassem. 2001. Terrestrial ecoregions of the world: a  
19 new map of life on Earth. *BioScience*, **51**, 933-938.
- 20 Oren, R., D. S. Ellsworth, K. H. Johnsen, N. Phillips, B. E. Ewers, C. Maier, K. V. R. Schafer, H.  
21 McCarthy, G. Hendrey, S. G. McNulty, and G. G. Katul. 2001. Soil fertility limits carbon sequestration by  
22 forest ecosystems in a CO<sub>2</sub>-enriched atmosphere. *Nature*, **411**, 469-472.
- 23 Orwig, D. A., D. R. Foster, and D. L. Mausel. 2002. Landscape patterns of hemlock decline in New  
24 England due to the introduced hemlock woolly adelgid. *Journal of Biogeography*, **29**, 1475-1487.
- 25 Overpeck, T., D. Rind, and R. Goldberg. 1990. Climate-induced changes in forest disturbance and  
26 vegetation. *Nature*, **343**, 51-53.
- 27 Owensby, C. E., P. I. Coyne, J. M. Hamm, L. M. Auen, and A. K. Knapp. 1993. Biomass production in a  
28 tallgrass prairie ecosystem exposed to ambient and elevated CO<sub>2</sub>. *Ecological Applications*, **3**, 666-681.
- 29 Painter, T. H., A. P. Barrett, C. Landry, J. Neff, M. P. Cassidy, C. Lawrence, K. E. McBride, and G. L.  
30 Farmer. 2007. Impact of disturbed desert soils on duration of mountain snowcover. *Geophysical Research*  
31 *Letters (In Press)*.
- 32 Palmroth, S., R. Oren, H. R. McCarthy, K. H. Johnsen, A. C. Finzi, J. R. Butnor, M. G. Ryan, and W. H.  
33 Schlesinger. 2006. Aboveground sink strength in forests controls the allocation of carbon below ground and  
34 its [CO<sub>2</sub>] - induced enhancement. *Proceedings of the National Academy of Sciences of the United States of*  
35 *America*, **103**, 19362-19367.
- 36 Pan, Y., R. Birdsey, J. Hom, K. McCullough, and K. Clark. 2006. Improved estimates of net primary  
37 productivity from MODIS satellite data at regional and local scales. *Ecological Applications*, **16**, 125-132.
- 38 Parker, B. L., M. Skinner, S. Gouli, T. Ashikaga, and H. B. Teillon. 1999. Low lethal temperature for  
39 hemlock woolly adelgid (Homoptera : Adelgidae). *Environmental Entomology*, **28**, 1085-1091.

- 1 Parmesan, C., and G. Yohe. 2003. A globally coherent fingerprint of climate change impacts across natural  
2 systems. *Nature* **421**:37-42.
- 3 Parsons, A. J., A. D. Abrahams, and J. Wainwright. 1994. Rainsplash and erosion rates in an inter-rill area  
4 on semiarid grassland, southern Arizona. *Catena*, **22**, 215-226.
- 5 Parsons, A. J., A. D. Abrahams, and J. Wainwright. 1996. Responses of interrill runoff and erosion rates to  
6 vegetation change in southern Arizona. *Geomorphology*, **14**, 311-317.
- 7 Parsons, A. J., A. D. Abrahams, and S. H. Luk. 1991. Size characteristics of sediment in inter-rill overland-  
8 flow on a semiarid hill slope, southern Arizona. *Earth Surface Processes and Landforms*, **16**, 143-152.
- 9 Penuelas, J., and I. Filella. 2001. Phenology - Responses to a warming world. *Science*, **294**, 793-795.
- 10 Pfister, G. G., L. K. Emmons, P. G. Hess, R. Honrath, J. F. Lamarque, M. V. Martin, R. C. Owen, M. A.  
11 Avery, E. V. Browell, J. S. Holloway, P. Nedelec, R. Purvis, T. B. Ryerson, G. W. Sachse, and H.  
12 Schlager. 2006. Ozone production from the 2004 North American boreal fires. *Journal of Geophysical*  
13 *Research-Atmospheres* 111.
- 14 Phillips, N., and R. Oren. 2001. Intra- and inter-annual variation in transpiration of a pine forest. *Ecological*  
15 *Applications*, **11**, 385-396.
- 16 Pierce, J. L., G. A. Meyer, and A. J. T. Jull. 2004. Fire-induced erosion and millennial-scale climate change  
17 in northern ponderosa pine forests. *Nature*, **432**, 87-90.
- 18 Piketh, S. J., P. D. Tyson, and W. Steffen. 2000. Aeolian transport from southern Africa and iron  
19 fertilization of marine biota in the South Indian Ocean. *South African Journal of Geology*, **96**, 244-246.
- 20 Polley, H. W., H. B. Johnson, and C. R. Tischler. 2003. Woody invasion of grasslands: evidence that CO<sub>2</sub>  
21 enrichment indirectly promotes establishment of *Prosopis glandulosa*. *Plant Ecology*, **164**, 85-94.
- 22 Polley, H. W., H. S. Mayeux, H. B. Johnson, and C. R. Tischler. 1997. Atmospheric CO<sub>2</sub>, soil water, and  
23 shrub/grass ratios on rangelands. *J of Range Management*, **50**, 278-284.
- 24 Polley, H., H. Johnson, and J. Derner. 2002. Soil- and plant-water dynamics in a C3/C4 grassland exposed  
25 to a subambient to superambient CO<sub>2</sub> gradient. *Global Change Biology*, **8**, 1118-1129.
- 26 Poorter, H., and M.-L. Navas. 2003. Plant growth and competition at elevated CO<sub>2</sub>: on winners, losers and  
27 functional groups. *New Phytologist*, **157**, 175-198.
- 28 Potts, D. F. 1984. Hydrologic impacts of a large-scale mountain pine beetle (*Dendroctonus ponderosae*  
29 Hopkins) epidemic. *Water Resources Bulletin*, **20**, 373-377.
- 30 Prieur-Richard, A.-H., and S. Lavorel. 2000. Invasions: perspective of diverse plant communities. *Austral*  
31 *Ecology*, **25**, 1-7.
- 32 Raich, J. W., and W. H. Schlesinger. 1992. The global carbon dioxide flux in soil respiration and its  
33 relationship to vegetation and climate. *Tellus*, **44B**, 81-89.
- 34 Randerson, J. T., H. Liu, M. G. Flanner, S. D. Chambers, Y. Jin, P. G. Hess, G. Pfister, M. C. Mack, K. K.  
35 Treseder, L. R. Welp, F. S. Chapin, J. W. Harden, M. L. Goulden, E. Lyons, J. C. Neff, E. A. G. Schuur,  
36 and C. S. Zender. 2006. The impact of boreal forest fire on climate warming. *Science*, **314**, 1130-1132.

- 1 Raphael, M. N. 2003. The Santa Ana winds of California. *Earth Interactions*, 7, 1-13.
- 2 Raupach, M. R., P. J. Rayner, D. J. Barrett, R. S. DeFries, M. Heimann, D. S. Ojima, S. Quegan, and C. C.  
3 Schmullius. 2005. Model-data synthesis in terrestrial carbon observation: methods, data requirements and  
4 data uncertainty specifications. *Global Change Biology*, **11**:378-397.
- 5 Ravi, S., P. D'Odorico, T. M. Over, and T. M. Zobeck. 2006. On the effect of air humidity on soil  
6 susceptibility to wind erosion: the case of air-dry soils. *Geophysical Research Letters*, **31**, Art. No. L09501.
- 7 Regab, R., and C. Prudhomme. 2002. Climate change and water resource management in arid and semi-arid  
8 regions: prospective and challenges for the 21<sup>st</sup> century. *Biosystems Engineering*, **81**, 3-34.
- 9 Reheis, M. C. 2006. A 16-year record of eolian dust in Southern Nevada and California, USA: controls on  
10 dust generation and accumulation. *Journal of Arid Environments*, **67**, 487-520.
- 11 Reynolds, J. F., D. W. Hilbert, and P. R. Kemp. 1993. Scaling ecophysiology from the plant to the  
12 ecosystem: A conceptual framework. Pages 127-140 in J. R. Ehleringer and C. B. Field, editors. In: Scaling  
13 physiological processes: Leaf to globe, San Diego: Academic Press.
- 14 Ries, J. B., and I. Marzolf. 2003. Monitoring of gully erosion in the Central Ebro Basin by large-scale  
15 aerial photography taken from a remotely controlled blimp. *Catena*, **50**, 309-328.
- 16 Roden, J. S., G. G. Lin, and J. R. Ehleringer. 2000. A mechanistic model for interpretation of hydrogen and  
17 oxygen isotope ratios in tree-ring cellulose. *Geochimica et Cosmochimica Acta*, **64**, 21-35.
- 18 Ross, R. M., R. M. Bennett, C. D. Snyder, J. A. Young, D. R. Smith, and D. P. Lemarie. 2003. Influence of  
19 eastern hemlock (*Tsuga canadensis* L.) on fish community structure and function in headwater streams of  
20 the Delaware River basin. *Ecology of Freshwater Fish*, **12**, 60-65.
- 21 Ross, R. M., L. A. Redell, R. M. Bennett, and J. A. Young. 2004. Mesohabitat use of threatened hemlock  
22 forests by breeding birds of the Delaware river basin in northeastern United States. *Natural Areas Journal*,  
23 **24**, 307-315.
- 24 Romme, W. H., J. Clement, J. Hicke, D. Kulakowski, L. H. MacDonald, T. L. Schoennagel, and T. T.  
25 Veblen. 2006. Recent Forest Insect Outbreaks and Fire Risk in Colorado Forests: A Brief Synthesis of  
26 Relevant Research. Colorado Forest Restoration Institute, Colorado State University.
- 27 Roshier, D. A., P. H. Whetton, R. J. Allan, and A. I. Robertson. 2001. Distribution and persistence of  
28 temporary wetland habitats in arid Australia in relation to climate. *Austral Ecology*, **26**, 371-384.
- 29 Rundel, P., and A. Gibson. 1996a. Ecological communities and processes in a Mojave Desert ecosystem:  
30 Rock Valley, Nevada. Cambridge University Press, New York.
- 31 Running, S. W., P. E. Thornton, R. Nemani, and J. M. Glassy. 2000. Global terrestrial gross and net  
32 primary productivity from the earth observing system. Pages 44-57 in O.Sala, R. Jackson, and H.Mooney,  
33 editors. *Methods in Ecosystem Science*. Springer-Verlag, New York.
- 34 Running, S. W., R. R. Nemani, F. A. Heinsch, M. S. Zhao, M. Reeves, and H. Hashimoto. 2004. A  
35 continuous satellite-derived measure of global terrestrial primary production. *BioScience*, **54**, 547-560.
- 36 Rustad, L. E., J. L. Campbell, G. M. Marion, R. J. Norby, M. J. Mitchell, A. E. Hartley, J. H. C.  
37 Cornelissen, and J. Gurevitch. 2001. A meta-analysis of the response of soil respiration, net nitrogen

- 1 mineralization, and aboveground plant growth to experimental ecosystem warming. *Oecologia*, **126**, 543-  
2 562.
- 3 Ryan, M. G., D. Binkley, and J. H. Fownes. 1997. Age-related decline in forest productivity: pattern and  
4 process. *Advances in Ecological Research*, **27**, 213-262.
- 5 Ryan, M. G., D. Binkley, J. H. Fownes, C. P. Giardina, and R. S. Senock. 2004. An experimental test of the  
6 causes of forest growth decline with stand age. *Ecological Monographs*, **74**, 393-414.
- 7 Ryan, M. G., S. Linder, J. M. Vose, and R. M. Hubbard. 1994. Dark respiration in pines. Pages 50-63 in H.  
8 L. Gholz, S. Linder, and R. E. McMurtrie, editors. Ecological Bulletins 43, Environmental constraints on  
9 the structure and productivity of pine forest ecosystems: a comparative analysis. Munksgaard, Uppsala.
- 10 Sage, R. F. 1996. Atmospheric modification and vegetation responses to environmental stress. *Global  
11 Change Biology*, **2**, 79-83.
- 12 Sakai, A., and C. J. Weiser. 1973. Freezing resistance of trees in North-America with reference to tree  
13 regions. *Ecology*, **54**, 118-126.
- 14 Salo, L. F. 2005. Red brome (*Bromus rubens* subsp. *madritensis*) in North America: possible modes for  
15 early introductions, subsequent spread. *Biological Invasions*, **7**, 165-180.
- 16 Salo, L. F., G. R. McPherson, and D. G. Williams. 2005. Sonoran desert winter annuals affected by density  
17 of red brome and soil nitrogen. *American Midland Naturalist*, **153**, 95-109.
- 18 Saxe, H., M. G. R. Cannell, Ø. Johnsen, M. G. Ryan, and G. Vourlitis. 2001. Tree and forest functioning in  
19 response to global warming. *New Phytologist*, **149**, 369-399.
- 20 Scanlon, B. R., D. G. Levitt, R. C. Reedy, K. E. Keese, and M. J. Sully. 2005. Ecological controls on water-  
21 cycle response to climate variability in deserts. *Proceedings National Academy of Science*, **102**:6033–6038.
- 22 Schäfer, K. V. R., R. Oren, D. S. Ellsworth, C. T. Lai, J. D. Herrick, A. C. Finzi, D. D. Richter, and G. G.  
23 Katul. 2003. Exposure to an enriched CO<sub>2</sub> atmosphere alters carbon assimilation and allocation in a pine  
24 forest ecosystem. *Global Change Biology*, **9**, 1378-1400.
- 25 Schlesinger, W. H. 1982. Carbon storage in the caliche of arid soils: A case study from Arizona. *Soil  
26 Science*, **133**, 247-255.
- 27 Schlesinger, W. H. 2000. Carbon sequestration in soils: some cautions amidst optimism. *Agriculture,  
28 Ecosystems & Environment*, **82**, 121-127.
- 29 Schlesinger, W. H., and C. S. Jones. 1984. The comparative importance of overland runoff and mean  
30 annual rainfall to shrub communities of the Mojave Desert. *Botanical Gazette*, **145**, 116-124.
- 31 Schlesinger, W. H., and J. Lichter. 2001. Limited carbon storage in soil and litter of experimental forest  
32 plots under increased atmospheric CO<sub>2</sub>. *Nature*, **411**, 466-469.
- 33 Schlesinger, W. H., J. A. Raikes, A. E. Hartley, and A. E. Cross. 1996. On the spatial pattern of soil  
34 nutrients in desert ecosystems. *Ecology*, **77**, 364-374.
- 35 Schlesinger, W. H., J. F. Reynolds, G. L. Cunningham, L. F. Huenneke, W. M. Jarrell, R. A. Virginia, and  
36 W. G. Whitford. 1990. Biological feedbacks in global desertification. *Science*, **247**, 1043-1048.

- 1 Schlesinger, W. H., S. L. Tartowski, and S. M. Schmidt. 2006. Nutrient cycling within an arid ecosystem.  
2 Pages 133-149 in L. E. H. K.M. Havstad, and W.H. Schlesinger, editor. Structure and Function of a  
3 Chihuahuan Desert Ecosystem: The Jornada Basin LTER. Oxford University Press, Oxford.
- 4 Schmidting, R. C. 1994. Use of provenance tests to predict response to climatic-change - Loblolly-pine  
5 and Norway spruce. *Tree Physiology*, **14**, 805-817.
- 6 Schreuder, H. T., and C. E. Thomas. 1991. Establishing cause-effect relationships using forest survey data.  
7 *Forest Science*, **37**, 1497-1512.
- 8 Schutzenhofer, M. R., and T. J. Valone. 2006. Positive and negative effects of exotic *Erodium cicutarium*  
9 on an arid ecosystem. *Biological Conservation*, **132**, 376-381.
- 10 Schwartz, M. D., R. Ahas, and A. Aasa. 2006. Onset of spring starting earlier across the Northern  
11 Hemisphere. *Global Change Biology*, **12**, 343-351.
- 12 Scott, R. L., T.E. Huxman, D.G. Williams, and D.C. Goodrich. 2006. Ecohydrological impacts of woody  
13 plant encroachment: seasonal patterns of water and carbon dioxide exchange within a semiarid riparian  
14 environment. *Global Change Biology*, **12**, 311-324.
- 15 Sharkey, T. D., and S. S. Yeh. 2001. Isoprene emission from plants. *Annual Review of Plant Physiology*  
16 *and Plant Molecular Biology*, **52**, 407-436.
- 17 Shore, T. L., B. G. Riel, L. Safranyik, and A. Fall. 2006. Decision support systems. Pages 193-230 in L.  
18 Safranyik and W. R. Wilson, editors. The mountain pine beetle: a synthesis of biology, management, and  
19 impacts on lodgepole pine. Natural Resources Canada, Canadian Forest Service, Pacific Forestry Centre,  
20 Victoria, British Columbia.
- 21 Sims, D. A., A. F. Rahman, B. Z. El—Masri, D. D. Baldocchi, L. B. Flanagan, A. H. Goldstein, D. Y.  
22 Hollinger, L. Mission, R. K. Monson, W. C. Oechel, H. P. Schmid, and L. Xu. 2006. On the use of MODIS  
23 EVI to assess gross primary productivity of North American ecosystems. *Journal of Geophysical Research*  
24 **111**:G04015, doi:04010.01029/02006JG000162.
- 25 Skinner, M., B. L. Parker, S. Gouli, and T. Ashikaga. 2003. Regional responses of hemlock woolly adelgid  
26 (Homoptera : Adelgidae) to low temperatures. *Environmental Entomology*, **32**, 523-528.  
27
- 28 Small, M. J., C. J. Small, and G. D. Dreyer. 2005. Changes in a hemlock-dominated forest following  
29 woolly adelgid infestation in southern New England. *Journal of the Torrey Botanical Society*, **132**, 458-  
30 470.
- 31 Smith, E. 1999. Atlantic and east coast hurricanes 1900-98: A frequency and intensity study for the twenty-  
32 first century. *Bulletin of the American Meteorological Society*, **80**, 2717-2720.
- 33 Smith, P. 2004. How long before a change in soil organic carbon can be detected? *Global Change Biology*,  
34 **10**, 1878-1883.
- 35 Smith, S. D., T. E. Huxman, S. F. Zitzer, T.M. Charlet, D. C. Housman, J. S. Coleman, L. K. Fenstermaker,  
36 J. R. Seemann, and R. S. Nowak. 2000. Elevated CO<sub>2</sub> increases productivity and invasive species success  
37 in an arid ecosystem. *Nature*, **408**, 79-82.
- 38 Snyder, C. D., J. A. Young, D. P. Lemarie, and D. R. Smith. 2002. Influence of eastern hemlock (*Tsuga*  
39 *canadensis*) forests on aquatic invertebrate assemblages in headwater streams. *Canadian Journal of*  
40 *Fisheries and Aquatic Sciences*, **59**, 262-275.

- 1  
2 Sokolik, I. N., and O. B. Toon. 1996. Direct radiative forcing by anthropogenic airborne mineral aerosols.  
3 *Nature*, **381**, 681-683.
- 4 Stadler, B., T. Muller, and D. Orwig. 2006. The ecology of energy and nutrient fluxes in hemlock forests  
5 invaded by hemlock woolly adelgid. *Ecology*, **87**, 1792-1804.
- 6 Stadler, B., T. Muller, D. Orwig, and R. Cobb. 2005. Hemlock woolly adelgid in new england forests:  
7 Canopy impacts transforming ecosystem processes and landscapes. *Ecosystems*, **8**, 233-247.
- 8 Stanturf, J. A., S. L. Goodrick, and K. W. Outcalt. 2007. Disturbance and coastal forests: A strategic  
9 approach to forest management in hurricane impact zones. *Forest Ecology and Management*. (In Press)
- 10 Stednick, J. D. 1996. Monitoring the effects of timber harvest on annual water yield. *Journal of Hydrology*,  
11 **176**, 79-95.
- 12 Stohlgren, T. J., D. Binkley, G. W. Chong, M. A. Kalkhan, L. D. Schell, K. A. Bull, Y. Otsuki, G.  
13 Newman, M. Bashkin, and Y. Son. 1999. Exotic plant species invade hot spots of native plant diversity.  
14 *Ecological Monographs*, **69**, 25-46.
- 15 Stohlgren, T. J., K. A. Bull, Y. Otsuki, C. A. Villa, and M. Lee. 1998. Riparian zones as havens for exotic  
16 plant species in the central grasslands. *Plant Ecology*, **138**, 113-125.
- 17 Stoy, P. C., G. G. Katul, M. B. S. Siqueira, J. Y. Juang, K. A. Novick, J. M. Uebelherr, and R. Oren. 2006.  
18 An evaluation of models for partitioning eddy covariance-measured net ecosystem exchange into  
19 photosynthesis and respiration. *Agricultural and Forest Meteorology*, **141**, 2-18.
- 20 Stromberg, J. C., R. Tiller, and B. Richter. 1996. Effects of groundwater decline on riparian vegetation of  
21 semiarid regions: the San Pedro, Arizona. *Ecological Applications*, **6**, 13-131.
- 22 Sullivan, K. A., and A. M. Ellison. 2006. The seed bank of hemlock forests: implications for forest  
23 regeneration following hemlock decline. *Journal of the Torrey Botanical Society*, **133**, 393-402.
- 24 Svejcar, T., J. Bates, R. Angell, and R. Miller. 2003. The influence of precipitation timing on the sagebrush  
25 steppe ecosystem. In J. F. Weltzin and G. R. McPherson, editors. *Changing Precipitation Regimes and*  
26 *Terrestrial Ecosystems: A North American Perspective*. University of Arizona Press, Tucson.
- 27 Swap, R., M. Garstang, S. Greco, R. Talbot, and P. Kallberg. 1992. Saharan dust in the Amazon Basin.  
28 *Tellus Series B-Chemical and Physical Meteorology*, **44**, 133-149.
- 29 SWRC. 2007. Southwest Watershed Research Center and Walnut Gulch Experimental Watershed.  
30 [http://www.ars.usda.gov/SP2UserFiles/Place/53424500/SWRCWGEW\\_2007.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/53424500/SWRCWGEW_2007.pdf) edition. Southwest  
31 Watershed Research Center, 2000 E. Allen Road, Tucson, AZ,  
32 [http://www.ars.usda.gov/SP2UserFiles/Place/53424500/SWRCWGEW\\_2007.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/53424500/SWRCWGEW_2007.pdf).
- 33 Taylor, S. W., A. L. Carroll, R. I. Alfaro, and L. Safranyik. 2006. Forest, climate, and mountain pine beetle  
34 outbreak dynamics in western Canada. Pages 67-94 in L. Safranyik and W. R. Wilson, editors. *The*  
35 *mountain pine beetle: a synthesis of biology, management, and impacts on lodgepole pine*. Natural  
36 Resources Canada, Canadian Forest Service, Pacific Forestry Centre, Victoria, British Columbia.
- 37 The-Heinz-Center. 2002. *The state of the nation's ecosystems*. Cambridge University Press.

- 1 Thomas, C. D., A. M. A. Franco, and J. K. Hill. 2006. Range retractions and extinction in the face of  
2 climate warming. *Trends in Ecology & Evolution*, **21**, 415-416.
- 3 Thornton, P. E., H. Hasenauer, and M. A. White. 2000. Simultaneous estimation of daily solar radiation  
4 and humidity from observed temperature and precipitation: an application over complex terrain in Austria.  
5 *Agricultural and Forest Meteorology*, **104**, 255-271.
- 6 Throop, H. L., E. A. Holland, W. J. Parton, D. S. Ojima, and C. A. Keough. 2004. Effects of nitrogen  
7 deposition and insect herbivory on patterns of ecosystem-level carbon and nitrogen dynamics: results from  
8 the CENTURY model. *Global Change Biology*, **10**, 1092-1105.
- 9 Tickner, D. P., P.G. Angold, A.M. Gurnell, and J.O. Mountford. 2001. Riparian plant invasions:  
10 hydrogeomorphological control and ecological impacts. *Progress in Physical Geography*, **25**, 22-52.
- 11 Tingley, M. W., D. A. Orwig, and R. Field. 2002. Avian response to removal of a forest dominant:  
12 consequences of hemlock woolly adelgid infestations. *Journal of Biogeography*, **29**, 1505-1516.
- 13 Townsend, P. A., K. N. Eshleman, and C. Welcker. 2004. Relationships between stream nitrogen  
14 concentrations and intensity of forest disturbance following gypsy moth defoliation in 2000-2001.  
15 *Ecological Applications*, **14**, 504-516.
- 16 Tran, J. K., T. Ylioja, R. Billings, J. Régnière, and M. P. Ayres. in press. Testing a climatic model to  
17 predict populations dynamics of a forest pest, *Dendroctonus frontalis* (Coleoptera: Scolydidae). *Ecological*  
18 *Applications*.
- 19 Tucker, C. J., D. A. Slayback, J. E. Pinzon, S. O. Los, R. B. Myneni, and M. G. Taylor. 2001. Higher  
20 northern latitude normalized difference vegetation index and growing season trends from 1982 to 1999.  
21 *International Journal of Biometeorology*, **45**, 184-190.
- 22 Turetsky, M. R., J. W. Harden, H. R. Friedli, M. Flannigan, N. Payne, J. Crock, and L. Radke. 2006.  
23 Wildfires threaten mercury stocks in northern soils. *Geophysical Research Letters* **33**.
- 24 Turner, D. P., S. V. Ollinger, and J. S. Kimball. 2004. Integrating remote sensing and ecosystem process  
25 models for landscape- to regional-scale analysis of the carbon cycle. *BioScience*, **54**, 573-584.
- 26 Turner, M. G., W. H. Romme, and R. H. Gardner. 1999. Prefire heterogeneity, fire severity, and early  
27 postfire plant reestablishment in subalpine forests of Yellowstone National Park, Wyoming. *International*  
28 *Journal of Wildland Fire*, **9**, 21-36.
- 29 Turner, R. M., J. E. Bowers, and T. L. Burgess. 1995. Sonoran Desert Plants: An Ecological Atlas.  
30 University of Arizona Press, Tucson.
- 31 Ungerer, M. J., M. P. Ayres, and M. a. J. Lombardero. 1999. Climate and the northern distribution limits of  
32 *Dendroctonus frontalis* Zimmermann (Coleoptera:Scolytidae). *Journal of Biogeography*, **26**, 1133-1145.
- 33 United-States-Department-of-Agriculture. 2003. National report on sustainable forests – 2003. Forest  
34 Service Report FS-766. USDA Forest Service, Washington, DC.
- 35 Unland, H. E., P. R. Houser, S. W.J., and Z. L. Yang. 1996. Surface flux measurement and modeling at a  
36 semi-arid Sonoran Desert site. *Agricultural and Forest Meteorology*, **82**,119-153.
- 37 USDA Forest Service. 2005. Forest Insect and Disease Conditions in the United States, 2004. Washington,  
38 D.C.



- 1 Valentin, C., J. Poesen, and Y. Li. 2005. Gully erosion: impacts, factors and control. *Catena*, **63**, 132-153.
- 2 Van Auken, O. W. 2000. Shrub invasions of North American semiarid grasslands. *Annual Review of*  
3 *Ecology & Systematics*, **31**, 197-215.
- 4 Van de Koppel, J., M. Reiterkerk, F. v. Langevelde, L. Kumar, C. A. Klausmier, J. M. Fryxell, J. W. Hearne,  
5 J. v. Andel, N. d. Ridder, A. Skidmore, L. Stroosnijder, and H. T. Prins. 2002. Spatial heterogeneity and  
6 irreversible vegetation change in semiarid grazing systems. *American Naturalist*, **159**, 209-218.
- 7 Venable, D. L., and C. E. Pake. 1999. Population ecology of Sonoran Desert annual plants. Pages 115-142  
8 in R. H. Robichaux, editor. *The ecology of Sonoran Desert plants and plant communities*. University of  
9 Arizona Press, Tucson.
- 10 Wainwright, J. A., A. J. Parsons, W. H. Schlesinger, and A. D. Abrahams. 2002. Hydrology-vegetation  
11 interactions in areas of discontinuous flow on a semi-arid bajada, southern New Mexico. *Journal of Arid*  
12 *Environments* 51:219-258.
- 13 Wainwright, J., A. J. Parsons, and A. D. Abrahams. 2000. Plot-scale studies of vegetation, overland flow  
14 and erosion interactions: case studies from Arizona and New Mexico. *Hydrological Processes* 14:2921-  
15 2943.
- 16 Walther, G. R. 2007. Tackling ecological complexity in climate impact research. *Science* 315:606-607.
- 17 Walther, G. R., E. Post, P. Convey, A. Menzel, C. Parmesan, T. J. C. Beebee, J. M. Fromentin, O. Hoegh-  
18 Guldberg, and F. Bairlein. 2002. Ecological responses to recent climate change. *Nature*, **416**, 389-395.
- 19 Ward, J. K., D. T. Tissue, R. B. Thomas, and B. R. Strain. 1999. Comparative responses of model C3 and  
20 C4 plants to drought in low and elevated CO<sub>2</sub>. *Global Change Biology*, **5**, 857-867.
- 21 Waring, R. H. 1987. Characteristics of trees predisposed to die. *BioScience*, **37**, 569-574.
- 22 Warren, M. S., J. K. Hill, J. A. Thomas, J. Asher, R. Fox, B. Huntley, D. B. Roy, M. G. Telfer, S. Jeffcoate,  
23 P. Harding, G. Jeffcoate, S. G. Willis, J. N. Greatorex-Davies, D. Moss, and C. D. Thomas. 2001. Rapid  
24 responses of British butterflies to opposing forces of climate and habitat change. *Nature*, **414**, 65-69.
- 25 Webb, R. H., and S. A. Leake. 2006. Ground-water surface-water interactions and long-term change in  
26 riverine riparian vegetation in the southwestern United States. *Journal of Hydrology*, **320**, 302-323.
- 27 Webb, R. H., S. A. Leake, and R. M. Turner. 2007. *The Ribbon of Green: Change in Riparian Vegetation*  
28 *in the Southwestern United States*. University of Arizona Press, Tucson.
- 29 Webb, W. L., W. K. Lauenroth, S. R. Szarek, and R. S. Kinerson. 1983. Primary production and abiotic  
30 controls in forests, grasslands, and desert ecosystems in the United States. *Ecology* **64**, 134-151.
- 31 Weiss, J., and J. T. Overpeck. 2005. Is the Sonoran Desert losing its cool? *Global Change Biology*, **11**,  
32 2065-2077.
- 33 Wells, O. O., and P. C. Wakeley. 1966. Geographic variation in survival, growth, and fusiform rust  
34 infection of planted loblolly pine. *Forest Science Monographs*, **11**, 1-40.
- 35 Wells, S. G., L. D. McFadden, J. Poths, and C. T. Olinger. 1995. Cosmogenic <sup>3</sup>He surface-exposure dating  
36 of stone pavements: implications for landscape evolution in deserts. *Geology*, **23**, 613-616.

- 1 Weltzin, J. F., and G. R. McPherson. 2000. Implications of precipitation redistribution for shifts in  
2 temperate savanna ecotones. *Ecology*, **81**,1902-1913.
- 3 Wessman, C., S. Archer, L. Johnson, and G. Asner. 2004. Woodland expansion in U.S. grasslands:  
4 assessing land-cover change and biogeochemical impacts. Pages 185-208 in G. Gutman, Janetos, A.C.,  
5 Justice, C.O., Moran, E.F., Mustard, J.F., Rindfuss, R.R., Skole, D., Turner II, B.L., Cochrane, M.A.,  
6 editor. *Land Change Science: Observing, Monitoring and Understanding Trajectories of Change on the*  
7 *Earth's Surface*. Kluwer Academic Publishers, Dordrecht.
- 8 West, N., editor. 1983. Temperate deserts and semi-deserts. *Ecosystems of the World 5*, Elsevier Scientific  
9 Publishing Co.
- 10 Westerling, A. L., D. R. Cayan, T. J. Brown, and B. L. Hall. 2004. Climate, Santa Ana winds, and wildfires  
11 in Southern California. *EOS, transactions* **85**, 289-300.
- 12 Westerling, A. L., H. G. Hidalgo, D. R. Cayan, and T. W. Swetnam. 2006. Warming and earlier spring  
13 increase western U.S. forest wildfire activity. *Science*, **313**, 940-943.
- 14 White, M., F. Hoffman, W. Hargrove, and R. Nemani. 2005. A global framework for monitoring  
15 phenological responses to climate change. *Geophysical Research Letters* **32**, Art. No. L04705 (Feb 04718).
- 16 Wilcox, B. P. 2002. Shrub control and streamflow on rangelands: a process-based viewpoint. *Journal of*  
17 *Range Management*, **55**, 318-326.
- 18 Williams, D. G., and J. R. Ehleringer. 2000. Carbon isotope discrimination and water relations of oak  
19 hybrid populations in southwestern Utah. *Western North American Naturalist*, **60**,121-129.
- 20 Williams, D. G., and Z. Baruch. 2000. African grass invasion in the Americas: ecosystem consequences  
21 and the role of ecophysiology. *Biological Invasions*, **2**, 123-140.
- 22 Wilmking, M., G. P. Juday, V. A. Barber, and H. S. J. Zald. 2004. Recent climate warming forces  
23 contrasting growth responses of white spruce at treeline in Alaska through temperature thresholds. *Global*  
24 *Change Biology*, **10**, 1724-1736.
- 25 Wittig, V. E., C. J. Bernacchi, X. G. Zhu, C. Calfapietra, R. Ceulemans, P. Deangelis, B. Gielen, F.  
26 Miglietta, P. B. Morgan, and S. P. Long. 2005. Gross primary production is stimulated for three *Populus*  
27 species grown under free-air CO<sub>2</sub> enrichment from planting through canopy closure. *Global Change*  
28 *Biology* **11**, 644-656.
- 29 Wondzell, S. M., G. L. Cunningham, and D. Bachelet. 1996. Relationships between landforms, geomorphic  
30 processes, and plant communities on a watershed in the northern Chihuahuan Desert. *Landscape Ecology*,  
31 **1**, 351-362.
- 32 Wood, Y. A., T. Meixner, P. J. Shouse, and E. B. Allen. 2006. Altered ecohydrologic response drives  
33 native shrub loss under conditions of elevated nitrogen deposition. *Journal of Environmental Quality*, **35**,  
34 76-92.
- 35 Woodward, F. I. 1987. *Climate and Plant Distribution*. Cambridge University Press, Cambridge.
- 36 Wullschleger, S. D., P. J. Hanson, and D. E. Todd. 2001. Transpiration from a multi-species deciduous  
37 forest as estimated by xylem sap flow techniques. *Forest Ecology and Management*, **143**, 205-213.

- 1 Wurzler, S., T. G. Reisin, and Z. Levin. 2000. Modification of mineral dust particles by cloud processing  
2 and subsequent effects on drop size distributions. *Journal of Geophysical Research*, **105**, 4501-4512.
- 3 Wythers, K. R., P. B. Reich, M. G. Tjoelker, and P. B. Bolstad. 2005. Foliar respiration acclimation to  
4 temperature and temperature variable  $Q_{10}$  alter ecosystem carbon balance. *Global Change Biology*, **11**, 435-  
5 449.
- 6 Yao, J., D. Peters, K. Havstad, R. Gibbens, and J. Herrick. 2006. Multi-scale factors and long-term  
7 responses of Chihuahuan Desert grasses to drought. *Landscape Ecology*, **21**:1217-1231.
- 8 Zender, C. S., and E. Y. Kwon. 2005. Regional contrasts in dust emission responses to climate. *Journal of*  
9 *Geophysical Research-Atmospheres*, **110**: D13201.
- 10 Zhu, Z. I., and D. L. Evans. 1994. United States forest types and predicted percent forest cover from  
11 AVHRR data. *Photogrammetric Engineering and Remote Sensing*, **60**:525-531.

## 12 Water

13

- 14 Alexander, R. B., and R.A. Smith, 2006. Trends in the nutrient enrichment of U.S. rivers during the late  
15 20th century and their relation to changes in probable stream trophic conditions, *Limnology and*  
16 *Oceanography*, **51**, 639-654.
- 17 Andreadis, K.M., and D.P. Lettenmaier, 2006. Trends in 20th century drought over the continental United  
18 States, *Geophys. Res. Lett.*, **33**, doi:10.1029/2006GL025711.
- 19 Arnell, N., and C. Liu, 2001. Hydrology and water resources, pp. 191-233 in *Climate change 2001:*  
20 *Impacts, adaptation, and vulnerability*, Cambridge University Press.
- 21 Arnell, N., 2002. *Hydrology and global environmental change*, Pearson Education Ltd, Edinburgh, 346 p.
- 22 Barber, V. A., G.P. Juday, and B.P. Finney, 2000. Reduced growth of Alaskan white spruce in the  
23 twentieth century from temperature-induced drought stress, *Nature*, **405**, 668-673.
- 24 Bartholow, J.M., 2005. Recent water temperature trends in the Lower Klamath River, California, *J.*  
25 *Fisheries Management*, **25**, 152-162.
- 26 Bowling, L.C., P. Storck, and D.P. Lettenmaier, 2000. Hydrologic effects of logging in Western  
27 Washington, United States, *Water Resour. Res.*, **36**, 3223-3240.
- 28 Bowling, L.C. and D.P. Lettenmaier, 2001. The effect of forest roads and harvest on catchment hydrology  
29 in a mountainous maritime environment, in *Land Use and Watersheds: Human Influence on Hydrology and*  
30 *Geomorphology in Urban and Forest Areas*, Water Science and Application, The American Geophysical  
31 Union, **2**, 145-164.
- 32 Brutsaert, W., and M.B. Parlange, 1998. Hydrologic cycle explains the evaporation paradox, *Nature* 396,  
33 30.
- 34 Brutsaert, W., 2006. Indications of increasing land surface evaporation during the second half of the 20<sup>th</sup>  
35 century, *Geophys. Res. Lett.*, **33**, doi:10.1029/2006GL027532.

- 1 Burns, D.A., J. Klaus, and M.R. McHale, 2007. Recent climate trends and implications for water resources  
2 in the Catskill Mountain region, New York, USA, in press, *J. Hydrology*.
- 3 Carroll, A.L., S.W. Taylor, J. Régnière, and L. Safranyik, 2003. Effects of climate change on range  
4 expansion by the mountain pine beetle in British Columbia, in Information Report BC-X-399, Mountain  
5 Pine Beetle Symposium: Challenges and Solutions (T.L. Shore, J.E. Brookes, and J.E. Stone, eds.), pp.  
6 223-232, Natural Resources Canada, Victoria, British Columbia.
- 7 Caspersen, J., S. Pacala, J. Jenkins, G. Hurtt, P. Moorcroft, and R. Birdsey, 2000. Contributions of land-use  
8 history to carbon accumulation in U.S. forests, *Science*, **290**, 1148-1151.
- 9 Cayan, D.R., S.A. Kammerdiener, M.D. Dettinger, J.M. Caprio, and D.L. Peterson, 2001. Changes in the  
10 onset of spring in the western United States, *Bull. Am. Met. Soc.*, **82**, 299-415.
- 11 Chang, H.J. 2004. Water quality impacts of climate and land use changes in southeastern Pennsylvania,  
12 *Professional Geographer*, **56**, 240-257.
- 13 Christensen, N.S., and D.P. Lettenmaier, 2007. A multimodel ensemble approach to assessment of climate  
14 change impacts on the hydrology and water resources of the Colorado River basin, *Hydrology and Earth  
15 System Science*, **11**, 1417-1434.
- 16 Cohn, T.A., and H.F. Lins, 2005. Nature's style: Naturally trendy, *Geophys. Res. Lett.* **32**,  
17 doi:10.1029/2005GL024476.
- 18 Crozier, L., and R.W. Zabel, 2006. Climate impacts at multiple scales: evidence for differential population  
19 responses in juvenile Chinook salmon, *J. Animal Ecology*, **75**, 1100-1109.
- 20 Curriero, F.C., J.A. Patz, J.B. Rose, and S. Lele, 2001. The association between extreme precipitation and  
21 waterborne disease outbreaks in the United States, 1948-1994, *Am. J. Public Health*, **91**, 1194-1199.
- 22 Czikowsky, M.J., and D.R. Fitzjarrald, 2004. Evidence of seasonal changes in evapotranspiration in  
23 eastern U.S. hydrological records, *J. Hydromet.*, **5**, 974-988.
- 24 Dressler, K.A., S.R. Fassnacht, and R.C. Bales, 2006. A Comparison of Snow Telemetry and Snow Course  
25 Measurements in the Colorado River Basin, *J Hydromet*, **7**, 705-712.
- 26 Easterling, D. R., and T. R. Karl. 2001. "Potential Consequences of Climate Variability and Change for the  
27 Midwestern United States, chapter 6 in National Assessment Team, U.S. Global Change Research  
28 Program, *Climate change impacts on the United States: The potential consequences of climate variability  
29 and change*.
- 30 Easterling, D.R., 2002. Recent changes in frost days and the frost-free season in the United States, *Bull.*  
31 *Am. Met. Soc.*, **83**, doi: 10.1175/1520-0477.
- 32 Eaton, J.G., and R.M. Scheller, 1996. Effects of climate warming on fish thermal habitat in streams of the  
33 United States, *Limnology and Oceanography*, **41**, 1109-1115.
- 34 Elliott, J.A., I.D. Jones, and S.J. Thackeray, 2006. Testing the sensitivity of phytoplankton communities to  
35 changes in water temperature and nutrient load in a temperate lake, *Hydrobiologica*, **559**, 401-411.
- 36 Feng, S. and Q. Hu, 2004. Changes in agro-meteorological indicators in the contiguous United States:  
37 1951-2000. *Theoretical and App. Climatology*, **78**, 247-264.

- 1 Garbrecht, J., M. van Liew, and G.O. Brown, 2004. Trends in precipitation, streamflow, and  
2 evapotranspiration in the Great Plains of the United States, *J. Hydrologic Engineering*, **9**, 360-367.
- 3 GAO. 2004. The General Accounting Office (GAO) Report: *Watershed Management: Better Coordination*  
4 *of Data Collection Efforts Needed to Support Key Decisions*, [<http://www.gao.gov/new.items/d04382.pdf>].
- 5 Gleick, P.H., 1999. Introduction: Studies for the water sector of the National Assessment, *J. Water*  
6 *Resour. Assoc.*, **35**, 1297-1300.
- 7 Gleick, P.H., and D.B. Adams (ed.), 2000. Water: The potential consequences of climate variability and  
8 change for the water resources of the United States, U.S. Geological Survey, 151 p. (available from  
9 [pistaff@pacinst.org](mailto:pistaff@pacinst.org)).
- 10 Gleick, P.H., 1996. Basic water requirements for human activities: meeting basic needs, *Water*  
11 *International*, **21**, 83-92.
- 12 Golubev, V. S., J.H. Lawrimore, P.Y. Groisman, N.A. Speranskaya, S.A. Zhuravin, M.J. Menne, T.C.  
13 Peterson, and R.W. Malone, 2001. Evaporation changes over the contiguous United States and the former  
14 USSR: a reassessment, *Geophys. Res. Lett.*, **28**, 2665-2668.
- 15 Graf, W.L., 1999. Dam nation: A geographic census of American dams and their large-scale hydrologic  
16 impacts, *Water Resour. Res.*, **35**, 1305-1311.
- 17 Groisman, P.Y., T. R. Karl, D. R. Easterling, R. W. Knight, P. F. Jamason, K. J. Hennessy, R. Suppiah, C.  
18 M. Page, J. Wibig, K. Fortuniak, V. N. Razuvaev, A. Douglas, E. Førland, and P.-M. Zhai, 1999. Changes  
19 in the probability of heavy precipitation: Important indicators of climatic change. *Climatic Change*, **42**,  
20 243–283.
- 21 Groisman, P.Y., R.W. Knight, and T.R. Karl, 2001. Heavy precipitation and high streamflow in the  
22 contiguous United States: Trends in the twentieth century, *Bull. Amer. Meteorol. Soc.*, **82**, 219–246.
- 23 Hamlet A.F., and D.P. Lettenmaier, 2007. Effects of 20th century warming and climate variability on flood  
24 risk in the western U.S., in press, *Water Resour. Res.*
- 25 Hamlet, A.F., P.W. Mote, M.P. Clark, and D.P. Lettenmaier, 2007. 20th century trends in runoff,  
26 evapotranspiration, and soil moisture in the western U.S., in press, *J. Clim.*
- 27 Hamlet, A.F., P.W. Mote, M.P. Clark, and D.P. Lettenmaier, 2005: Effects of temperature and precipitation  
28 variability on snowpack trends in the western U.S., *J. Clim.*, **18**, 4545-4561.
- 29 Hayhoe, K., C. Wake, T.G. Huntington, L. Luo, M.D. Schwartz, J. Sheffield, E.F. Wood, B. Anderson, J.  
30 Bradbury, T.T. DeGaetano, and D. Wolfe, 2006. Past and future changes in climate and hydrological  
31 indicators in the U.S. Northeast. *Climate Dynamics*, **10.1007/s00382-006-0187-8**.
- 32 Hinzman, L.D., N.D. Bettez, W.R. Bolton, F.S. Chapin, M.B. Dyurgerov, C.L. Fastie, B. Griffith, R.D.  
33 Hollister, A. Hope, H.P. Huntington, A.M. Jensen, G.J. Jia, T. Jorgenson, D.L. Kane, D.R. Klein, G.  
34 Kofinas, A.H. Lynch, A.H. Lloyd, A.D. McGuire, F.E. Nelson, W.C. Oechel, T.E. Osterkamp, C.H. Racine,  
35 V.E. Romanovsky, R.S. Stone, D.A. Stow, M. Sturm, C.E. Tweedie, G.L. Vourlitis, M.D. Walker, D.A.  
36 Walker, P.J. Webber, J.M. Welker, K.S. Winker, and K. Yoshikawa, 2005. Evidence and implications of  
37 recent climate change in northern Alaska and other Arctic regions, *Climatic Change*, **72**, 251–298

- 1 Hobbins, M.T., and J.A. Ramirez, 2004. Trends in pan evaporation and actual evapotranspiration across  
2 the conterminous U.S.: paradoxical or complementary? *Geophys. Res. Lett.*, **31**, doi:  
3 10.1029/2004GL019846.
- 4 Hodgkins, G.A., and R.W. Dudley. 2006a. Changes in late-winter snowpack depth, water equivalent, and  
5 density in Maine, 1926-2004, *Hydrological Processes*, **20**, 741-751.
- 6 Hodgkins, G.A., and R.W. Dudley. 2006b. Changes in the timing of winter–spring streamflows in eastern  
7 North America, 1913–2002, *Geophys. Res. Lett.* **33**, L06402, doi:10.1029/2005GL025593.
- 8 Hodgkins, G.A., R.W. Dudley, and T.G. Huntington, 2005. Changes in the number and timing of ice-  
9 affected flow days on New England rivers, 1930-2000, *Climatic Change*, **71**, 319-340.
- 10 Hodgkins, G.A., R.W. Dudley, and T.G. Huntington, 2003. Changes in the timing of high river flows in  
11 New England over the 20th century, *J. Hydrology*, **278**, 244-252.
- 12 Hodgkins, G.A., I.C. James, and T.G. Huntington, 2002. Historical changes in lake ice-out dates as  
13 indicators of climate change in New England, *Intl. J. Climatology*, **22**, 1819-1827.
- 14 Huntington, T. G., et al., 2004. Changes in the proportion of precipitation occurring as snow in New  
15 England (1949 to 2000), *J. Climate*, **17**, 2626-2636.
- 16 Hutson, S.S., N.L. Barber, J.F. Kenny, K.S. Linsey, D.S. Lumia, and M.A. Maupin, 2004. Estimated use of  
17 water in the United States in 2000, U.S. Geological Survey Circular 1268, 46 p. (available from  
18 www.usgs.gov).
- 19 IPCC, 2000. Special report on emission scenarios, Cambridge University Press, New York.
- 20 Jha, M., Z. Pan, E.S. Takle, and R. Gu, 2004. Impacts of climate change on streamflow in the upper  
21 Mississippi River basin: A regional climate model perspective, *J Geophys. Res.*, **109**,  
22 doi:10.1029/2003JD003686.
- 23 Jolly, W.M., R. Nemani, and S.W. Running, 2005. A generalized, bioclimatic index to predict foliar  
24 phenology in response to climate, *Global Change Biology*, **11**, 619-632.
- 25 Jones, J. A., and G. E. Grant, 1996. Peak flow responses to clear-cutting and roads in small and large  
26 basins, western Cascades, Oregon, *Water Resour. Res.*, **32**, 959–974.
- 27 Joos, F., I.C. Prentice, and J.I. House, 2002. Growth enhancement due to global atmospheric change as  
28 predicted by terrestrial ecosystem models: consistent with U.S. forest inventory data, *Global Change*  
29 *Biology*, **8**, 299-303.
- 30 Keleher, C.J., and F.J. Rahel, 1996. Thermal limits to salmonid distributions in the Rocky Mountain region  
31 and potential habitat loss due to global warming: a Geographic Information System (GIS) Approach, *Trans*  
32 *Am. Fisheries Soc.*, **125**, 1-13.
- 33 Langbein, W.B. and Slack, J.R., 1982, Yearly variations in runoff and frequency of dry years for the  
34 conterminous United States, 1911-79: U.S. Geological Survey Open-File Report 82-751, 85 p.
- 35 Lettenmaier, D.P., 2003. The role of climate in water resources planning and management, pp. 247-266 in  
36 *Water: Science, policy, and management*, R. Lawford, D. Fort, H. Hartmann, and S. Eden, eds., Water  
37 Resources Monograph 16, American Geophysical Union.

- 1 Lettenmaier, D.P., E.F. Wood, and J.R. Wallis, 1994. Hydro-climatological trends in the continental U.S.,  
2 1948-88, *J. Climate*, **7**, 586-607.
- 3 Liang, X., D.P. Lettenmaier, E.F. Wood, and S.J. Burges, 1994. A Simple Hydrologically Based Model of  
4 Land and Energy Fluxes for General Circulation Models, *J. Geophys. Res.*, **99**, 14,415-14,428.
- 5 Lins, H.F., and J.R. Slack, 2005. Seasonal and regional characteristics of U.S. streamflow trends in the  
6 United States from 1940 to 1999, *Physical Geography*, **26**, 489-501.
- 7 Lins, H.F., and J. R. Slack, 1999. Streamflow trends in the United States, *Geophys. Res. Lett.*, **26**, 227-230.
- 8 Liu, A.J., S.T.Y. Tong, and J.A. Goodrich, 2000. Land use as a mitigation strategy for the water-quality  
9 impacts of global warming: a scenario analysis on two watersheds in the Ohio River Basin, *Env. Eng. and*  
10 *Policy*, **2**, 65-76.
- 11 Logan, J.A., J. Regniere, and J.A. Powell, 2003. Assessing the impacts of global warming on forest pest  
12 dynamics, *Frontiers in Ecology and the Environment*, **1**, 130-137.
- 13 Lucht, W., I.C. Prentice, R.B. Myneni, S. Sitch, P. Friedlingstein, W. Cramer, P. Bousquet, W. Buermann,  
14 and B. Smith, 2002. Climate control of the high-latitude vegetation greening trend and Pinatubo effect,  
15 *Science*, **296**, 1687-1689.
- 16 Maass, A., M.A. Hufschmidt, R. Dorfman, H.A. Thomas, Jr., S.A. Marglin, and G.M. Fair, 1962. *Design of*  
17 *water-resource systems: New techniques for relating economic objectives, engineering analysis, and*  
18 *governmental planning*, Harvard University Press, Cambridge, Mass.
- 19 Matheussen B., R.L. Kirschbaum, I.A. Goodman, G.M. O'Donnell, and D.P. Lettenmaier, 2000. Effects of  
20 land cover change on streamflow in the interior Columbia basin, *Hydrological Processes*, **14**, 867-885.
- 21 Mauget, S.A., 2003. Multidecadal regime shifts in U.S. streamflow, precipitation, and temperature at the  
22 end of the Twentieth Century, *J Climate*, **16**, 3905-3916.
- 23 Mauget, S.A., 2004. Low frequency streamflow regimes of the central United States: 1939-1998, *Climatic*  
24 *Change*, **63**, 121-144.
- 25 Maurer, E.P., A.W. Wood, J.C. Adam, D.P. Lettenmaier, and B. Nijssen, 2002. A long-term  
26 hydrologically-based data set of land surface fluxes and states for the conterminous United States, *J.*  
27 *Climate*, **15**, 3237-3251.
- 28 McCabe, G.J., and D.M. Wolock, 2002a. A step increase in streamflow in the conterminous United States,  
29 *Geophys. Res. Lett.*, **29**, doi:10.1029/2002GL015999.
- 30 McCabe, G.J., and D.M. Wolock, 2002b. Trends and temperature sensitivity of moisture conditions in the  
31 conterminous United States, *Climate Res.*, **20**, 19-29.
- 32 McKenzie, D., A.E. Hessel, and D.L. Peterson, 2001. Recent growth of conifer species of western North  
33 American: Assessing spatial patterns of radial growth trends, *Canadian J. Forest Res.*, **31**, 526-538.
- 34 Milly, P.C.D., K.A. Dunne, and A.V. Vecchia, 2005. Global pattern of trends in streamflow and water  
35 availability in a changing climate, *Nature*, **438**, 347-350.

- 1 Milly, P.C.D., and K.A. Dunne, 2001. Trends in evaporation and surface cooling in the Mississippi River  
2 basin, *Geophys. Res. Lett.*, **28**, 1219-1222.
- 3 Moog, D.B., and P.J. Whiting, 2002. Climatic and agricultural contributions to changing loads in two  
4 watershed in Ohio, *J. Env. Quality*, **31**, 83-89.
- 5 Mote, P.W., A.F. Hamlet, M.P. Clark, and D.P. Lettenmaier, 2005. Declining mountain snowpack in  
6 western North America, *Bull. Am. Met. Soc.*, **86**, 39-49.
- 7 Mote, P.W., 2003. Trends in snow water equivalent in the Pacific Northwest and their climatic causes,  
8 *Geophys. Res. Lett.* 30, doi:10.1029/2003GL017258.
- 9 Murdoch, P.S., J.S. Baron, and T.L. Miller, 2000. Potential effects of climate change on surface-water  
10 quality in North America, *J. Am. Wat. Resour. Asssoc.*, **36**, 357-366.
- 11 Myneni, R.B., C.D. Keeling, C.J. Tucker, G. Asrar, and R.R. Nemani, 1997. Increased plant growth in the  
12 northern high latitudes from 1981-1991, *Nature*, **386**, 698-701, doi:10.1038/386698a0.
- 13 National Research Council, *Global Water and Energy Experiment (GEWEX) panel, 1998. Global Water  
14 and Energy Experiment (GEWEX) Continental-Scale International Project: A review of progress and  
15 opportunities*, National Academy Press, 93 pp.
- 16 Nemani, R.R., C.D. Keeling, H. Hashimoto, W.M. Jolly, S.C. Piper, C.J. Tucker, R.B. Myneni, and S.W.  
17 Running, 2003. Climate-driven increases in global terrestrial net primary production from 1982 to 1999,  
18 *Science*, **300**, 1560-1563.
- 19 NRC (National Research Council of the National Academies). 2004. *Confronting the nation's water  
20 problems: The role of research*. The National Academies Press, Washington, DC,  
21 <http://books.nap.edu/books/0309092582/html/index.html>.
- 22 Oki, D.S., 2004. Trends in streamflow characteristics at long-term gaging stations, Hawaii. U.S.  
23 Geological Survey Scientific Investigations Report 2004-5080, 116 p.
- 24 Pagano, T., and D. Garen, 2005. A recent increase in western U.S. streamflow variability and persistence,  
25 *J. Hydromet*, **6**, 173-179.
- 26 Pagano, T., D. Garen, and S. Sorooshian, 2004. Evaluation of official western U.S. seasonal water supply  
27 outlooks, 1922–2002, *J. Hydromet.*, **5**, 896-909.
- 28 Petersen, J.H., and J.F. Kitchell, 2001. Climate regimes and water temperature changes in the Columbia  
29 River: bioenergetic implications for predators of juvenile salmon. *Canadian J. Fish. Aq. Sci.*, **58**, 1831-  
30 1841.
- 31 Peterson, T.C., V.S. Golubev, and P.V. Groisman, 1995. Evaporation losing its strength, *Nature*, **377**, 687-  
32 688.
- 33 Poff, N.L., M. Brinson, and J.B. Day, 2002. Freshwater and coastal ecosystems and global climate change:  
34 A review of projected impacts for the United States. Pew Center on Global Climate Change, Arlington,  
35 VA. 44 pp. Available at [http://www.pewclimate.org/global-warming-in-  
36 depth/all\\_reports/aquatic\\_ecosystems/index.cfm](http://www.pewclimate.org/global-warming-in-depth/all_reports/aquatic_ecosystems/index.cfm)
- 37 Potter, K.W., 1991. Hydrologic impacts of changing land management practices in a moderate-sized  
38 agricultural catchment, *Water Resour. Res.*, **27**, 845-856.



- 1 Ramstack, J.M., S.C. Fritz, and D.R. Engstrom, 2004. Twentieth century water quality trends in Minnesota  
2 lakes compared with presettlement variability, *Canadian J. Fish. Aq. Sci.*, **61**, 561-576.
- 3 Roderick, M.L., and G.D. Farquhar, 2002. The cause of decreased pan evaporation over the past 50 years,  
4 *Science*, **298**, 1410–1411.
- 5 Rosenzweig, C., D.C. Major, K. Demong, C. Stanton, R. Horton, and M. Stults, 2007. Managing climate  
6 change risks in New York City’s water system: Assessment and adaptation planning, in press, *Mitigation  
7 and Adaptation*.
- 8 Schoennagel, T., T.T. Veblen, and W.H. Romme, 2004. The interaction of fire, fuels, and climate across  
9 Rocky Mountain forests, *BioScience*, **54**, 661-676.
- 10 Senhorst, H.A.J., and J.J.G. Zwolsman, 2005. Climate change and effects on water quality: a first  
11 impression, *Water Sci. Tech.*, **51**, 53-59.
- 12 Schindler, D.W., S.E. Bayley, B.R. Parker, K.G. Beaty, D.R. Cruikshank, E.J. Fee, E.U. Schindler, and  
13 M.P. Stainton, 1996. The effects of climatic warming on the properties of boreal lakes and streams at the  
14 experimental lakes area, northwestern Ontario, *Limnology & Oceanography*, **41**, 1004-1017.
- 15 Schwartz, R.C., P.J. Deadman, D.J. Scott, and L.D. Mortsch, 2004. Modeling the impacts of water level  
16 changes on a Great Lakes community, *J. Am. Water Resour. Assoc.*, **40**, 647-662.
- 17 Seager, R., M. Ting, I. Held, Y. Kushnir, J. Lu, G. Vecchi, H.-P. Huang, N. Harnik, A. Leetmaa, N.-C. Lau,  
18 C. Li, J. Velez, and N. Naik, 2007. Model projections of an imminent transition to a more arid climate in  
19 southwestern North America, *Science*, **316**, 1181-1184.
- 20 Shuttleworth, W.J., 1993. Evaporation, Chapter 4 in *Handbook of Hydrology*, D.R. Maidment, ed.,  
21 McGraw Hill, New York.
- 22 Slack, J.R., A.M. Lumb, and J.M. Landwehr, 1993. Hydroclimatic data network (HCDN): A U.S.  
23 Geological Survey streamflow data set for the United States for the study of climate variation, 1874-1988.  
24 *Water Resour. Invest. Rep.*, **93**-4076.
- 25 Stefan, H.G., X. Fang, and J.G. Eaton, 2001. Simulated fish habitat changes in North American lakes in  
26 response to projected climate warming, *Trans. Am. Fish. Soc.*, **130**, 459-477.
- 27 Stewart, I.T., D.R. Cayan, and M.D. Dettinger, 2005. Changes toward earlier streamflow timing across  
28 western North America, *J. Clim.*, **18**, 1136-1155.
- 29 Sudler, C. E., 1927. Storage required for the regulation of streamflow, *Trans. Am. Soc. Civ. Eng.* **91**, 622–  
30 660.
- 31 Szilagyi, J., G.G. Katul, and M.B. Parlange, 2001. Evapotranspiration intensifies over the conterminous  
32 United States, *J. Wat. Resour. Planning and Management*, **127**, 354-362.
- 33 Takle, E.S., C. Anderson, M. Jha, and P.W. Gassman, 2006. Upper Mississippi River basin modeling  
34 system Part 4: Climate change impacts on flow and water quality, *Coastal Hydrology and Processes* (V.P.  
35 Singh and Y.J. Xu, eds.), 135-142, Water Resources Publications.
- 36 U.S. Geological Survey, 1998. A new evaluation of the USGS stream gauging network, Report to  
37 Congress, Nov. 30, 1998, 20 p.

- 1 Vogel, R.M., T. Yushiou, and J.F. Limbrunner, 1998. The regional persistence and variability of annual  
2 streamflow in the United States, *Water Resour. Res.*, **34**, 3445–3459.
- 3 Volney, W.J.A. and R.A. Flemming, 2000. Climate change impacts of boreal forest insects, *Agriculture,*  
4 *Ecosystems and Environment*, **82**, 283-294.
- 5 Walter, M.T., D.S. Wilks, J.Y. Parlange, and B.L. Schneider, 2004. Increasing evapotranspiration from the  
6 conterminous United States. *J. Hydromet.*, **5**, 405-408.
- 7 Westerling, A.L., A. Gershunov, T.J. Brown, D.R. Cayan, and M.D. Dettinger, 2003. Climate and wildfire  
8 in the western United States. *Bull. Am. Met. Soc.*, **48**, doi:10.1175/BAMS-84-5-595.
- 9 Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam, 2006. Warming and earlier Spring  
10 increases western U.S. forest wildfire activity, *Science*, **313**, 940-943.
- 11 Williams, D.W. and A.M. Liebhold, 2002. Climate change and the outbreak ranges of two North American  
12 bark beetles, *Ag. and Forest Entomology*, **4**, 87-99.
- 13 Woodhouse, C.A., and J.T. Overpeack, 1998. 2000 years of drought variability in the central United States,  
14 *Bull. Am. Met. Soc.*, **79**, 2693-2714.
- 15 Wolfe, D.W., M.D. Schwartz, A.N. Lakso, Y. Otsuke, R.M. Pool, and N.J. Shaulis, 2004. Climate change  
16 and shifts in spring phenology of three horticultural woody perennials in northeastern USA, *Int. J.*  
17 *Biometeorology* **10**.1007/s00484-004-0248-9.

## 18 Biodiversity

- 19
- 20 Agrawala, S., Ota, T., Risbey, J., Hagenstad, M., Smith, J., Van Aalst, M., Koshy, K., Prasad, B. (2003).  
21 Development and climate change in Fiji: focus on coastal mangroves. Organisation for Economic  
22 Cooperation and Development, Paris.
- 23
- 24 Alongi, D. M. (2002). Present state and future of the world's mangrove forests. *Environmental*  
25 *Conservation*, **29**, 331-349.
- 26
- 27 Amstrup, S. C. and D. P. DeMaster. 1988. Polar bear – *Ursus maritimus*. Pages 39-56 in J. W. Lentfer (ed.)  
28 Selected Marine Mammals of Alaska: species accounts with research and management recommendations.  
29 Marine Mammal Commission, Washington, D.C.
- 30
- 31 Amstrup, S. C., and C. Gardner. 1994. Polar bear maternity denning in the Beaufort Sea. *Journal of*  
32 *Wildlife Management*, **58**, 1-10.
- 33
- 34 Amstrup, S. C., G. Durner, I. Stirling, N. J. Lunn, and F. Messier. 2000. Movements and distribution of  
35 polar bears in the Beaufort Sea. *Canadian Journal of Zoology*, **78**, 948-966.
- 36
- 37 Atkinson, S. N. and M. A. Ramsay. 1995. The effects of prolonged fasting on the body composition and  
38 reproductive success of female polar bears. *Functional Ecology*, **9**, 559-567.
- 39
- 40 Baker, J.D., C.L. Littnan, and D.W. Johnston. 2006. Potential effects of sea level rise on the terrestrial  
41 habitats of endangered and endemic megafauna in the Northwestern Hawaiian Islands. *Endangered Species*  
42 *Research*, **4**, 1-10.
- 43
- 44 Bakun, A. 1990 Global climate change and intensification of global ocean upwelling. *Science*, **247**, 198-  
45 201.
- 46

- 1 Ball, M. C., Cochrane, M. J., and Rawson, H. M. (1997). Growth and water use of the mangroves  
2 *Rhizophora apiculata* and *R. stylosa* in response to salinity and humidity under ambient and elevated  
3 concentrations of atmospheric CO<sub>2</sub>. *Plant Cell And Environment*, **20**, 1158-1166.  
4
- 5 Ball, M. C., and Munns, R. (1992). Plant responses to salinity under elevated atmospheric concentrations of  
6 CO<sub>2</sub>. *Australian Journal Of Botany*, **40**, 515-525.  
7
- 8 Barnett, T. P., J. C. Adam, and D. P. Lettenmaier. 2005. Potential impacts of a warming climate on water  
9 availability in snow-dominated regions. **438**, 303-309.  
10
- 11 Beaugrand, G., P.C. Reid, F. Ibanez, J.A. Lindley and M. Edwards. 2002. Reorganization of North Atlantic  
12 marine copepod biodiversity and climate. *Science*, **296**, 1692-1694.  
13
- 14 Beaugrand, G. 2004. The North Sea regime shift: evidence, causes, mechanisms and consequences. *Progr.*  
15 *Oceanog*, **60**, 245-262.  
16
- 17 Behling, H. (2002). Impact of the Holocene sea-level changes in coastal, eastern and Central Amazonia.  
18 *Amazoniana-Limnologia Et Oecologia Regionalis Systemae Fluminis Amazonas*, **17**, 41-52.  
19
- 20 Beniston, M., and D. G. Fox. 1996. Impacts of climate change on mountain regions. Pages 191-213 in R. T.  
21 Watson, M. C. Zinyowera, and R. H. Moss, editors. Climate change 1995 - Impacts, adaptations and  
22 mitigation of climate change. Contribution of Working Group II to the Second Assessment Report of the  
23 IPCC. Cambridge University Press, New York, NY.  
24
- 25 Blasco, F., Saenger, P., and Janodet, E. (1996). Mangroves as indicators of coastal change. *Catena*, **27**,  
26 167-178.  
27
- 28 Blix, A. S. and J. W. Lentfer. 1979. Modes of thermal protection in polar bear cubs: at birth and on  
29 emergence from the den. *American Journal of Physiology*, **236**, 67-74.  
30
- 31 Brandt, M. In Prep. Coral disease and bleaching relationships in South Florida.  
32
- 33 Brooks M.L. 2003. Effects of increased soil nitrogen on the dominance of alien annual plants in the Mojave  
34 Desert. *Journal of Applied Ecology*, **40**, 344-353.  
35
- 36 Brown, B.E. 1997. Coral bleaching: causes and consequences. *Coral Reefs* 16(Supplement 1): S129-138.  
37
- 38 Cahoon, D. R., Hensel, P., Rybczyk, J., McKee, K. L., Proffitt, C. E., and Perez, B. C. (2003). Mass tree  
39 mortality leads to mangrove peat collapse at Bay Islands, Honduras after Hurricane Mitch. *Journal of*  
40 *Ecolog*, **91**, 1093-1105.  
41
- 42 Caldeira, K. and M.E. Wickett. 2003. Anthropogenic carbon and ocean pH. *Nature*, 425:365.  
43
- 44 Calvert, W. and I. Stirling. 1990. Interactions between polar bears and overwintering walrus in the central  
45 Canadian high arctic. *International Conference on Bear Research and Management*, **8**, 351-356.  
46
- 47 Carlton, J.T. 2000. Global Change and Biological Invasions in the Oceans. In Mooney, H.A. and R.J.  
48 Hobbs. *Invasive Species in a Changing World*. Island Press. pp 31-54  
49
- 50 Cesar, H., L. Burke and L. Pet-Soede. 2003. The Economics of Worldwide Coral Reef Degradation. Cesar  
51 Environmental Economic Consulting, Arnhem, The Netherlands.  
52
- 53 Chase, Jen. 2006. Report on the health of Colorado's forests. Special issue: Lodgepole Pine. Colorado  
54 Division of Forestry (Colorado State Forest Service) in conjunction with  
55 Colorado State University (<http://csfs.colostate.edu/library/pdfs/fhr/06fhr.pdf> accessed March 24, 2007)  
56

- 1 Chavez, F., L. Ryan, S.E.Lluch-Cota and M. Ñiguen. 2003. From anchovies to sardines and back:  
2 multidecadal change in the Pacific Ocean. *Science*, 10 January 2003, 271-221.  
3
- 4 Chen, X., and Lin, P. (1999). Responses and roles of mangroves in China to global climate changes.  
5 *Transactions of oceanology and limnology/Haiyang Huzhao Tongbao. Qingdao*, 11-17.  
6
- 7 Clarkson, P. L. and D. Irish. 1991. Den collapse kills female polar bears and two newborn cubs. *Arctic*, **44**,  
8 83-84.  
9
- 10 Cohen, M. C. L., Behling, H., and Lara, R. J. (2005). Amazonian mangrove dynamics during the last  
11 millennium: The relative sea-level and the Little Ice Age. *Review Of Palaeobotany And Palynology*, **136**,  
12 93-108.  
13
- 14 Coley, P.D., and Aide, T.M. 1991. Comparison of plant defenses in temperate and tropical broad-leaved  
15 forests. Pages 25-49 in P.W. Price, T.M. Lewinsohn, G.W. Fernandes and W.W. Benson, editors. Plant-  
16 Animal Interactions: Evolutionary Ecology in Tropical and Temperate Regions. John Wiley & Sons, Inc.,  
17 New York.  
18
- 19 Coley, P.D., and J.A. Barone. 1996. Herbivory and plant defenses in tropical forests. *Annual Review of*  
20 *Ecology and Systematics*, **27**, 305-335.  
21
- 22 Corn, P. S. 2003. Amphibian breeding and climate change: Importance of snow in the mountains.  
23 *Conservation Biology*, **17**, 622-625.  
24
- 25 Cronin, M. A., S. C. Amstrup, G. W. Garner, and E. R. Vyse. 1991. Interspecific and intraspecific  
26 mitochondrial DNA variation in North American bears (*Ursus*). *Canadian Journal of Zoology*, **69**, 2985-  
27 2992.  
28
- 29 Crowley, G. M. (1996). Late quaternary mangrove distribution in northern Australia. *Australian Systematic*  
30 *Botany*, **9**, 219-225.  
31
- 32 Crowley, G. M., and Gagan, M. K. (1995). Holocene evolution of coastal wetlands in wet-tropical  
33 northeastern Australia. *Holocene*, **5**, 385-399.  
34
- 35 Dahdouh-Guebas, F., Verheyden, A., De Genst, W., Hettiarachchi, S., and Koedam, N. (2000). Four decade  
36 vegetation dynamics in Sri Lankan mangroves as detected from sequential aerial photography: A case study  
37 in Galle. *Bulletin Of Marine Science*, **67**, 741-759.  
38
- 39 D'Antonio C.M. and Meyerson L.A. 2002. Exotic plant species as problems and solutions in ecological  
40 restoration: a synthesis. *Restoration Ecology*, **10**, 703-13  
41
- 42 Daszak, P. A. A. Cunningham, A.D. Hyatt. 2000. Emerging Infectious Diseases of Wildlife: Threats to  
43 Biodiversity and Human Health. *Science*, **287**, 443- 448.  
44
- 45 Davis, S. E., Cable, J. E., Childers, D. L., Coronado-Molina, C., Day, J. W., Hittle, C. D., Madden, C. J.,  
46 Reyes, E., Rudnick, D., and Sklar, F. (2004). Importance of storm events in controlling ecosystem structure  
47 and function in a Florida gulf coast estuary. *Journal Of Coastal Research*, **20**, 1198-1208.  
48
- 49 Davis, W. P., Thornton, K. W., and Levinson, B. (1994). Framework for assessing effects of global  
50 climate-change on mangrove ecosystems. *Bulletin Of Marine Scienc*, **54**, 1045-1058.  
51
- 52 Day, J. W., Barras, J., Clairain, E., Johnston, J., Justic, D., Kemp, G. P., Ko, J. Y., Lane, R., Mitsch, W. J.,  
53 Steyer, G., Templett, P., and Yanez-Arancibia, A. (2005). Implications of global climatic change and energy  
54 cost and availability for the restoration of the Mississippi delta. *Ecological Engineering*, **24**, 253-265.  
55

- 1 Delange, W. P., and Delange, P. J. (1994). An appraisal of factors controlling the latitudinal distribution of  
2 mangrove (*Avicannia marina* var *resinifera*) in New Zealand. *Journal Of Coastal Research*, **10**, 539-548.  
3
- 4 D'Elia, C.F., R.W. Buddemeier and S.V. Smith. 1991. Workshop on coral bleaching. Coral Reef  
5 Ecosystem and Global Change: Report of Proceedings. College Park, University of Maryland, Maryland  
6 Sea Grant UM-SG-TS-91-03.  
7
- 8 Deméré, T. A., Berta, A. & Adam, P. J. 2003. Pinnipedimorph evolutionary biogeography. *Bulletin of the*  
9 *American Museum of Natural History*, **279**, 32-76.  
10
- 11 Derocher, A. E., D. Andriashek, and I. Stirling. 1993. Terrestrial foraging by polar bears during the icefree  
12 period in western Hudson Bay. *Arctic*, **4**, 251-254.  
13
- 14 Derocher, A. E., R. A. Nelson, I. Stirling, M. A. Ramsay. 1990. Effects of fasting and feeding on serum  
15 urea creatinine levels in polar bears. *Marine Mammal Science*, **6**, 196-203.  
16
- 17 Derocher, A. E., Ø. Wiig, and g. Bangjord. 2000. Predation of Svalbard reindeer by polar bears. *Polar*  
18 *Biology*, **23**, 675-678.  
19
- 20 Derocher, A.E., N.J. Lunn and I. Stirling. 2004. Polar bears in a warming climate. *Integrative and*  
21 *Comparative Biology*, **44**, 163-176.  
22
- 23 Detres, Y., Armstrong, R. A., and Connelly, X. M. (2001). Ultraviolet-induced responses in two species of  
24 climax tropical marine macrophytes. *Journal Of Photochemistry And Photobiology B-Biology*, **62**, 55-66.  
25
- 26 Diaz, H. F., J. K. Eischeid, C. Duncan, and R. S. Bradley. 2003. Variability of freezing levels, melting  
27 season indicators, and snow cover for selected high-elevation and continental regions in the last 50 years.  
28 *Climatic Change*, **59**, 33-52.  
29
- 30 Drexler, J. Z., and Ewel, K. C. (2001). Effect of the 1997-1998 ENSO-related drought on hydrology and  
31 salinity in a Micronesian wetland complex. *Estuaries* **24**, 347-356.  
32 Duke, N. C., Ball, M. C., and Ellison, J. C. (1998). Factors influencing biodiversity and distributional  
33 gradients in mangroves. *Global Ecology And Biogeography Letters*, **7**, 27-47.  
34
- 35 Dukes, J.S. and H.A. Mooney. 1999. Does global change increase the success of biological invaders?  
36 *Trends in Ecology and Evolution*, **14**(4), 135-139.  
37
- 38 Durner, G. M. and S. C. Amstrup. 1995. Movements of a polar bear from northern Alaska to northern  
39 Greenland. *Arctic*, **48**, 338-341.  
40
- 41 Durner, G. M., S. C. Amstrup, and A. S. Fischbach. 2003. Habitat characteristics of polar bear terrestrial  
42 maternal den sites in northern Alaska. *Arctic*, **56**, 55-62.  
43
- 44 Eakin et al. In Prep. Caribbean Corals in Hot Water: Record-Setting Thermal Stress and Coral Bleaching in  
45 2005.  
46
- 47 Edwards, A. (1995). Impact of climate change on coral reefs, mangroves, and tropical seagrass ecosystems.  
48 In "Climate Change Impact on Coastal Habitation" (D. Eisma, Ed.). Lewis Publishers.  
49
- 50 Ellison, A. M., and Farnsworth, E. J. (1996a). Anthropogenic disturbance of Caribbean mangrove  
51 ecosystems: Past impacts, present trends, and future predictions. *Biotropica*, **28**, 549-565.  
52
- 53 Ellison, A. M., and Farnsworth, E. J. (1996b). Spatial and temporal variability in growth of *Rhizophora*  
54 *mangle* saplings on coral cays: Links with variation in insolation, herbivory, and local sedimentation rate.  
55 *Journal Of Ecology*, **84**, 717-731.  
56

- 1 Ellison, A. M., and Farnsworth, E. J. (1997). Simulated sea level change alters anatomy, physiology,  
2 growth, and reproduction of red mangrove (*Rhizophora mangle* L.). *Oecologia*, **112**, 435-446.  
3
- 4 Ellison, A. M., Mukherjee, B. B., and Karim, A. (2000). Testing patterns of zonation in mangroves: scale  
5 dependence and environmental correlates in the Sundarbans of Bangladesh. *Journal Of Ecology*, **88**, 813-  
6 824.  
7
- 8 Ellison, J. (2005a). Holocene palynology and sea-level change in two estuaries in Southern Irian Jaya.  
9 *Palaeogeography Palaeoclimatology Palaeoecology*, **220**, 291-309.  
10
- 11 Ellison, J. C. (1989). Pollen analysis of mangrove sediments as a sea-level indicator - assessment from  
12 Tongatapu, Tonga. *Palaeogeography Palaeoclimatology Palaeoecology*, **74**, 327-341.  
13
- 14 Ellison, J. C. (1991). The Pacific paleogeography of *Rhizophora mangle*-L (Rhizophoraceae). *Botanical  
15 Journal Of The Linnean Societ*, **105**, 271-284.  
16
- 17 Ellison, J. C. (1993). Mangrove Retreat With Rising Sea-Level, Bermuda. *Estuarine Coastal And Shelf  
18 Science*, **37**, 75-87.  
19
- 20 Ellison, J. C. (1994). Climate change and sea level rise impacts on mangrove ecosystems. IUCN, GLAND  
21 (SWITZERLAND).  
22
- 23 Ellison, J. C. (1996a). Pollen evidence of Late Holocene mangrove development in Bermuda. *Global  
24 Ecology And Biogeography Letters*, **5**, 315-326.  
25
- 26 Ellison, J. C. (1996b). Potential impacts of predicted climate change on mangroves: implications for marine  
27 parks. *Parks*, **6**, 14-24.  
28
- 29 Ellison, J. C. (2000b). How South Pacific mangroves may respond to predicted climate change and sea-  
30 level rise. In "Climate Change in the South Pacific: Impacts and Responses in Australia, New Zealand, and  
31 Small Islands States" (A. Gillespie and W. Burns, Eds.), pp. 289-301. Kluwer Academic Publishers,  
32 Dordrecht.  
33
- 34 Ellison, J. C. (2005b). Impacts on mangrove ecosystems. In "The Great Greenhouse Gamble: A conference  
35 on the Impacts of Climate Change on Biodiversity and Natural Resource Management", Sydney.  
36
- 37 Ellison, J. C., and Stoddart, D. R. (1991). Mangrove Ecosystem Collapse During Predicted Sea-Level Rise  
38 - Holocene Analogs And Implications. *Journal Of Coastal Research*, **7**, 151-165.  
39
- 40 Elsner, J.B. 2006. Evidence in support of the climate change–Atlantic hurricane hypothesis. *Geophysical  
41 Research Letters*, **33**(16), L16705.  
42
- 43 Emanuel, K. 2005. Increasing destructiveness of tropical cyclones over the past 30 years. *Nature*, **436**, 686-  
44 688.  
45
- 46 Erfemeijer, P. L. A., and Hamerlynck, O. (2005). Die-back of the mangrove *Heritiera littoralis* dryand, in  
47 the Rufiji Delta (Tanzania) following El Niño floods. *Journal Of Coastal Research*, 228-235.  
48
- 49 Evans, M. J., and Williams, R. J. (2001). Historical distribution of estuarine wetlands at  
50 Kurnell Peninsula, Botany Bay. *Wetlands (Australia)*, **19**, 61-71.  
51
- 52 Farnsworth, E. J., and Ellison, A. M. (1997a). The global conservation status of mangroves. *Ambio*, **26**,  
53 328-334.  
54
- 55 Farnsworth, E. J., Ellison, A. M., and Gong, W. K. (1996). Elevated CO<sub>2</sub> alters anatomy, physiology,  
56 growth, and reproduction of red mangrove (*Rhizophora mangle* L.). *Oecologia*, **108**, 599-609.

- 1  
2 Federal Register. 2006. Rules and Regulations. Endangered and Threatened Species: Final Listing  
3 Determination for Elkhorn Coral and Staghorn Coral, 71 Fed. Reg. 26852  
4
- 5 Ferguson, S. H., M. K. Taylor, E. W. Born, A. Rosing-Asvid, and F. Messier. 1999. Determinants of home  
6 range size for polar bears (*Ursus maritimus*). *Ecology Letters*, 2, 311-318.  
7
- 8 Ferguson, S.H., I. Stirling and P. McLoughlin. 2005. Climate change and ringed seal (*Phoca hispida*)  
9 recruitment in western Hudson Bay. *Marine Mammal Science*, 21, 121-135.  
10
- 11 Ferretti, A. R., and de Britez, R. M. (2006). Ecological restoration, carbon sequestration and biodiversity  
12 conservation: The experience of the society for wildlife research and environmental education (SPVS) in  
13 the Atlantic Rain Forest of southern Brazil. *Journal for Nature Conservation (Jena)*, 14, 249-259.  
14
- 15 Field, C. D. (1980). The future of the mangroves of Asia and Oceania. *Search*, 11, 354-354.  
16
- 17 Field, C. D. (1995). Impact of expected climate change on mangroves. *Hydrobiologia*, 295, 75-81.  
18
- 19 Field, JC, Boesch, DF, Scavia, D, Buddemeier, R, Burkett, VR, Cayan, D, Fogerty, M, Harwell, M,  
20 Howarth, R, Mason, C, Pietrafesa, LJ, Reed, D, Royer, T, Sallenger, A, Spranger, M, and Titus, JG. 2001.  
21 Potential consequences of climate variability and change on coastal and marine resources. In *Climate  
22 Change Impacts in the United States: Potential Consequences of Climate Change and Variability and  
23 Change*. Foundation Document. U.S. Global Change Research Program: Cambridge, UK, Cambridge  
24 University Press  
25
- 26 Fischer, A.G. 1960. Latitudinal variation in organic diversity. *Evolution*, 14, 64-81.  
27
- 28 Fitt, W.K. and M.E. Warner. 1995. Bleaching patterns of four species of Caribbean reef corals. *Biological  
29 Bulletin*, 189, 298-307.  
30
- 31 Fromard, F., Vega, C., and Proisy, C. (2004). Half a century of dynamic coastal change affecting mangrove  
32 shorelines of French Guiana. A case study based on remote sensing data analyses and field surveys. *Marine  
33 Geology* 208, 265-280.  
34
- 35 Fujimoto, K. (1998). Mangrove habitat evolution related to Holocene sea-level changes on Pacific islands.  
36 *Oceanographic Literature Review* 45, 1532.  
37
- 38 Fujimoto, K., Miyagi, T., Kikuchi, T., and Kawana, T. (1996). Mangrove habitat formation and response to  
39 Holocene Sea-level changes on Kosrae Island, Micronesia. *Mangroves and Salt Marshes*, 1, 47-57.  
40
- 41 Furnell, D. J., and D. Ooloooyuk. 1980. Polar bear predation on ringed seals in ice-free water. *Canadian  
42 Field-Naturalist*, 94, 88-89.  
43
- 44 Garner, G. W., S. C. Amstrup, I. Stirling, and S. E. Belikov. 1994. Habitat considerations for polar bears in  
45 the North Pacific Rim. *Transactions of the North American Wildlife and Natural Resources Conference*  
46 29:111-120.  
47
- 48 Gilman, E., Ellison, J., and Coleman, R. (2007). Assessment of mangrove response to projected relative  
49 sea-level rise and recent historical reconstruction of shoreline position. *Environmental Monitoring And  
50 Assessment* 124, 105-130.  
51
- 52 Gilman, E. L., Ellison, J., Jungblut, V., Van Lavieren, H., Wilson, L., Areki, F., Brighthouse, G., Bungitak,  
53 J., Dus, E., Henry, M., Kilman, M., Matthews, E., Sauni, L., Teariki-Ruatu, N., Tukia, S., and Yuknavage,  
54 K. (2006a). Adapting to Pacific Island mangrove responses to sea level rise and climate change. *Climate  
55 Research* 32, 161-176.  
56

- 1 Gilman, E. L., Van Lavieren, H., Ellison, J., Jungblut, V., Wilson, L., Areki, F., Brighthouse, G., Bungitak,  
2 J., Dus, E., Henry, M., Sauni, L., Kilman, M., Matthews, E., Teariki-Ruatu, N., Tukia, S., and Yuknavage,  
3 K. (2006b). Pacific island mangroves in a changing climate and rising sea. In "UNEP Regional Seas  
4 Reports and Studies". United Nations Environment Programme, Regional Seas Programme, Nairobi.  
5
- 6 Glynn, P.W. 1984. Widespread coral mortality and the 1982-83 El Niño warming event. *Environmental*  
7 *Conservation*, **11**, 133-146.  
8
- 9 Glynn, P.W. 1993. Coral reef bleaching: ecological perspectives. *Coral Reefs*, **12**, 1-17.  
10
- 11 Gobbi, M., D. Fontaneto, and F. De Bernardi. 2006. Influence of climate changes on animal communities  
12 in space and time: the case of spider assemblages along an alpine glacier foreland. *Global Change Biology*,  
13 **12**, 1985-1992.  
14
- 15 Goreau, T.J. and R.M. Hayes. 1994. Coral bleaching and ocean "Hot spots." *Ambio*, **23**, 176-180  
16
- 17 Grabherr, G., M. Gottfried, and H. Pauli. 1994. Climate effects on mountain plants. *Nature* **369**:448.  
18
- 19 Grebmeier, J. M., J. E. Overland, S. E. Moore, E. V. Farley, E. C. Carmack, L. W. Cooper, K. E. Frey, J. H.  
20 Helle, F. A. McLaughlin, and S. L. McNutt. 2006. A major ecosystem shift in the Northern Bering Sea.  
21 *Science*, **311**, 1461-1464.  
22
- 23 Greene, C.H. and A.J. Pershing. 2007. Climate drives sea change. *Science*, 23 February 2007, **315**, 1084-  
24 1085  
25
- 26 Harington, C. R. 1968. Denning habits of the polar bear (*Ursus maritimus* Phipps). *Canadian Wildlife*  
27 *Service Report Series*, Number 5. Ottawa.  
28
- 29 Harty, C. (2004). Planning strategies for mangrove and saltmarsh changes in Southeast Australia. *Coastal*  
30 *Management* **32**, 405-415.  
31
- 32 Harvell, C.D., C. E. Mitchell, J.R. Ward, S. Altizer, A.P. Dobson, R.S. Ostfeld,  
33 M. D. Samue 2002. Climate Warming and Disease Risks for Terrestrial and Marine Biota  
34 *Science*, **296**, 2158-2162.  
35
- 36 Hay, M.E., and W. Fenical. 1988. Marine plant-herbivore interactions: the ecology of chemical defense.  
37 *Annual Review of Ecology and Systematics*, **19**, 111-145.  
38
- 39 Hays, G.C., A.J. Richardson and C. Robinson. 2005. Climate change and marine plankton. *Trends in*  
40 *Ecology and Evolution*, **20**, 337-344.  
41
- 42 Hendry, M., and Digerfeldt, G. (1989). Palaeogeography and palaeoenvironments of a tropical coastal  
43 wetland and adjacent shelf during Holocene submergence, Jamaica. *Palaeogeography, Palaeoclimatology.*  
44 *Palaeoecology* **73**, 1-10.  
45
- 46 Hierro JL, Villarreal D, Eren O, *et al.* 2006. Disturbance facilitates invasion: the effects are stronger abroad  
47 than at home. *American Naturalist*, **168**, 144-56.  
48
- 49 Hoegh-Guldberg, O. 1999. Climate change, coral bleaching and the future of the world's coral reefs.  
50 *Marine Freshwater Research*, **50**, 839-866.  
51
- 52 Hoegh-Guldberg, O. 2005. Low coral cover in a high-CO<sub>2</sub> world. *Journal of Geophysical Research*, **110**,  
53 C09S06.  
54
- 55 Holland, M. M., C. M. Bitz, and B. Tremblay. 2006. Future abrupt reductions in the summer Arctic sea ice.  
56 *Geophysical Research Letters*, **33**, L23503, doi:10.1029/2006GL028024.



- 1  
2 Hooff R. C. and W.T. Peterson. 2006. Copepod biodiversity as an indicator of changes in ocean and  
3 climate conditions of the northern California Current. *Limnol. Oceanogr*, **51**, 2607-2620.  
4
- 5 Hoyos, C.D., P.A. Agudelo, P.J. Webster, and J.A. Curry. 2006. Deconvolution of the factors contributing  
6 to the increase in global hurricane intensity. *Science*, **312**, 94-97.  
7
- 8 Huenneke L.F., Hamburg S.P., Koide R., Mooney H.A., Vitousek P.M. 1990. Effects of soil resources on  
9 plant invasion and community structure in California serpentine grassland. *Ecology*, **71**, 478-491.  
10
- 11 Inouye, D. W. 2007. Consequences of climate change for phenology, frost damage, and floral abundance of  
12 sub-alpine wildflowers. *Ecology*, *In press*.  
13
- 14 Inouye, D. W., B. Barr, K. B. Armitage, and B. D. Inouye. 2000. Climate change is affecting altitudinal  
15 migrants and hibernating species. *Proceedings of the National Academy of Sciences*, **97**, 1630-  
16 1633.  
17
- 18 Inouye, D. W., W. A. Calder, and N. M. Waser. 1991. The effect of floral abundance on feeder censuses of  
19 hummingbird abundance. *Condor*, **93**, 279-285.  
20
- 21 Inouye, D. W., M. Morales, and G. Dodge. 2002. Variation in timing and abundance of flowering by  
22 *Delphinium barbeyi* Huth (Ranunculaceae): the roles of snowpack, frost, and La Niña, in the  
23 context of climate change. *Oecologia* **139**, 543-550.  
24
- 25 Inouye, D. W., F. Saavedra, and W. Lee. 2003. Environmental influences on the phenology and abundance  
26 of flowering by *Androsace septentrionalis* L. (Primulaceae). *American Journal of Botany*, **90**,  
27 905-910.  
28
- 29 Inouye, D. W., and F. E. Wielgolaski. 2003. High altitude climates. Pages 195-214 in M. D. Schwartz,  
30 editor. *Phenology: an Integrative Environmental Science*. Kluwer Academic Publ, PO Box  
31 17/3300 AA Dordrecht/Netherlands.  
32
- 33 IPCC. 2007. *Climate Change 2007: The Physical Science Basis*. IPCC Secretariate. Geneva, Switzerland.  
34
- 35 Jablonski, D. 1993. The tropics as a source of evolutionary novelty through geological time. *Nature*, **364**,  
36 142-144.  
37
- 38 Jimenez, J. G. A. (2004). Mangrove forests under dry seasonal climates in Costa Rica. In "Biodiversity  
39 Conservation In Costa Rica", pp. 136.  
40
- 41 Johnson, T. R. 1998. Climate change and Sierra Nevada snowpack. M. S. Thesis. University of California,  
42 Santa Barbara, Santa Barbara.  
43
- 44 Jokiel, P.L. and S.L. Coles. 1990. Response of Hawaiian and other Indo-Pacific reef corals to elevated  
45 temperature. *Coral Reefs*, **8**, 155-162.  
46
- 47 Jones, M. (2002). Climate change - follow the mangroves and sea the rise. *National Parks Journal* **46**.  
48
- 49 Kao, W. Y., Shih, C. N., and Tsai, T. T. (2004). Sensitivity to chilling temperatures and distribution differ  
50 in the mangrove species *Kandelia candel* and *Avicennia marina*. *Tree Physiology*, **24**, 859-864.  
51
- 52 Karamouz, M., and B. Zahraie. 2004. Seasonal streamflow forecasting using snow budget and El Niño-  
53 Southern Oscillation climate signals: Application to the salt river basin in Arizona. *Journal of*  
54 *Hydrologic Engineering*, **9**, 523-533.  
55

- 1 Keane, R. E., Austin, M., Field, C., Huth, A., Lexer, M. J., Peters, D., Solomon, A., and Wyckoff, P.  
2 (2001). Tree mortality in gap models: Application to climate change. *Climatic Change*, **51**, 509-540.  
3
- 4 Kelly, B. P. 1988. Ringed seal, *Phoca hispida*. Pages 59-75 in J. W. Lentfer, ed. Selected marine  
5 mammals of Alaska: species accounts with research and management recommendations. Marine Mammal  
6 Commission, Washington, D.C.  
7
- 8 Kelly, B. P. 2001. Climate change and ice breeding pinnipeds. Pages 43-55 in G.-R. Walther, C. A. Burga  
9 and P. J. Edwards, editors. "Fingerprints" of climate change: adapted behaviour and shifting species'  
10 ranges. Kluwer Academic/Plenum Publishers, New York and London.  
11
- 12 Kelly, B. P., O. H. Badajos, M. Kunasranta, and J. R. Moran. 2006. Timing and re-interpretation of ringed  
13 seal surveys. Final Report OCS Study MMS 2006-013. Coastal Marine Institute, University of Alaska  
14 Fairbanks.  
15
- 16 Kenny, A. and C. Mollmann. 2006. Towards intergrated ecosystem assessments for the North and Baltic  
17 Seas: synthesizing GLOBEC research. GLOBEC International Newsletter 12(2):64-65.  
18 <http://www.globec.org>  
19
- 20 Kim, J. H., Dupont, L., Behling, H., and Versteegh, G. J. M. (2005). Impacts of rapid sea-level rise on  
21 mangrove deposit erosion: application of taraxerol and Rhizophora records. *Journal Of Quaternary*  
22 *Science*, **20**, 221-225.  
23
- 24 King, J. E. 1983. Seals of the world, 2nd Edition. Comstock Publishing Associates, Ithaca, NY.  
25
- 26 J.A. Kleypas, R.W. Buddemeier, D. Archer, J.-P. Gattuso, C. Langdon, and B.N. Opdyke. 1999.  
27 Geochemical Consequences of Increased Atmospheric Carbon Dioxide on Coral Reefs. *Science*, 284  
28 (5411):118.  
29
- 30 Krauss, K. W., Keeland, B. D., Allen, J. A., Ewel, K. C., and Johnson, D. J. (2007). Effects of season,  
31 rainfall, and hydrogeomorphic setting on mangrove tree growth in Micronesia. *Biotropica*, **39**, 161-170.  
32
- 33 Lesica, P., and B. McCune. 2004. Decline of arctic-alpine plants at the southern margin of their range  
34 following a decade of climatic warming. *Journal of Vegetation Science*, **15**, 679-690.  
35
- 36 Lesser, M.P., W.R. Stochaj, D.W. Tapley and J.M. Shick. 1990. Bleaching in coral reef anthozoans: effects  
37 of irradiance, ultraviolet radiation and temperature on the activities of protective enzymes against active  
38 oxygen. *Coral Reefs*, **8**, 225-232  
39
- 40 Lezine, A. M., Saliege, J. F., Mathieu, R., Tagliatela, T. L., Mery, S., Charpentier, V., and Cleuziou, S.  
41 (2002). Mangroves of Oman during the late Holocene: climatic implications and impact on human  
42 settlements. *Vegetation History And Archaeobotany* **11**, 221-232.  
43
- 44 Lister, A. M. 2004. The impact of Quaternary ice ages on mammalian evolution. *Phil. Trans. R. Soc. Lond.*  
45 *B* 359:221-241.  
46
- 47 Lopez-Hoffman, L., DeNoyer, J. L., Monroe, I. E., Shaftel, R., Anten, N. P. R., Martinez-Ramos, M., and  
48 Ackerly, D. D. (2006). Mangrove seedling net photosynthesis, growth, and survivorship are interactively  
49 affected by salinity and light. *Biotropica*, **38**, 606-616.  
50
- 51 Lucas, R. M., Ellison, J. C., Mitchell, A., Donnelly, B., Finlayson, M., and Milne, A. K. (2002). Use of  
52 stereo aerial photography for quantifying changes in the extent and height of mangroves in tropical  
53 Australia. *Wetlands Ecology and Management*, **10**, 161-175.  
54
- 55 Lugo, A. E., and Patterson-Zucca, C. P. (1977). The impact of low temperature stress on mangrove  
56 structure and growth. *Tropical Ecology*, **18**, 149-160.

- 1  
2 Lunn, N. J. and I. Stirling. 1985. The significance of supplemental food to polar bears during the ice-free  
3 period of Hudson Bay. *Canadian Journal of Zoology*, **63**, 2291-2297.  
4
- 5 Lunn, N. J. and I. Stirling. 2001. Climate change and polar bears: long-term ecological trends observed in  
6 Wapusk National Park. *Research Links* **9**, 5-6.  
7
- 8 Lydersen, C., and T. G. Smith. 1989. Avian predation on ringed seal *Phoca hispida* pups. *Polar Biology*, **9**,  
9 489-490.  
10
- 11 MacArthur, R.H. 1972. Geographical ecology: patterns in the distribution of species. Harper and Row, New  
12 York, New York, USA.  
13
- 14 MacCracken, M., E. Barron, D. Easterling, B. Fetzer, and T. Karl. 2001. Scenarios for climate variability  
15 and change. Pages 13-71 in N. A. S. Team, editor. *Climate change impacts on the United States: the*  
16 *potential consequences of climate variability and change*. Cambridge University Press, Cambridge.  
17
- 18 Mann, M.E., and K. A. Emanuel, 2006. Atlantic hurricane trends linked to climate change. *Eos:*  
19 *Transactions of the American Geophysical Union*, **87**, 233-244.  
20
- 21 Markley, J. L., McMillian, C., and Thompson, G. A., Jr. (1982). Latitudinal differentiation in response to  
22 chilling temperatures among populations of three mangroves, *Avicennia germinans*, *Laguncularia*  
23 *racemosa*, and *Rhizophora mangle* from the western tropical Atlantic and Pacific Panama. *Canadian*  
24 *Journal of Botany*, **60**, 22704-2715.  
25
- 26 Maul, G. A. (1993). "Ecosystem and socioeconomic response to future climatic conditions in the marine  
27 and coastal regions of the Caribbean Sea, Gulf of Mexico, Bahamas, and the northeast coast of South  
28 America." UNEP, KINGSTON (JAMAICA).  
29
- 30 McGowan, J.E., D.R.Cayan and L.M.Dorman. 1998. Climate-ocean variability and ecosystem response in  
31 the northeast Pacific. *Science*, **281**, 210-217.  
32
- 33 McKee, K. L., Mendelssohn, I. A., and Materne, M. D. (2004). Acute salt marsh dieback in the Mississippi  
34 River deltaic plain: a drought-induced phenomenon? *Global Ecology And Biogeography* **13**, 65-73.  
35
- 36 Messier, F., M. K. Taylor, and M. A. Ramsay. 1994. Denning ecology of polar bears in the Canadian Arctic  
37 archipelago. *Journal of Mammalogy*, **75**, 420-430.  
38
- 39 Milbrandt, E. C., Greenawalt-Boswell, J. M., Sokoloff, P. D., and Bortone, S. A. (2006). Impact and  
40 response of southwest Florida mangroves to the 2004 hurricane season. *Estuaries And Coasts*, **29**, 979-984.  
41
- 42 Mooney HA and Hobbs RJ. (2000). *Invasive species in a changing world*. Washington, DC: Island Press.  
43
- 44 Moore, P. 2004. Favoured aliens for the future. *Nature*, 427:594.  
45
- 46 Moorthy, P., and Kathiresan, K. (1997). Influence of ultraviolet-B radiation on photosynthetic and  
47 biochemical characteristics of a mangrove *Rhizophora apiculata*. *Photosynthetica*, **34**, 465-471.  
48
- 49 Moorthy, P., and Kathiresan, K. (1998a). Effects of UV-B irradiance on biomass and uptake of nutrients in  
50 mangrove seedlings of *Rhizophora apiculata* (Rhizophorales: Rhizophoraceae). *Indian Journal Of Marine*  
51 *Sciences*, **27**, 239-242.  
52
- 53 Moorthy, P., and Kathiresan, K. (1998b). UV-B induced alterations in composition of thylakoid membrane  
54 and amino acids in leaves of *Rhizophora apiculata* Blume. *Photosynthetica*, **35**, 321-328.  
55

- 1 Moorthy, P., and Kathiresan, K. (1999). Effects of UV-B radiation on photosynthetic reactions in  
2 *Rhizophora apiculata*. *Plant Growth Regulation* **28**, 49-54.  
3
- 4 NRC (National Research Council). 2007. Colorado River Basin Water Management: Evaluating and  
5 Adjusting to Hydroclimatic Variability. The National Academies Press, Washington, DC.  
6
- 7 Nunn, P. D. (2005). Reconstructing tropical paleoshorelines using archaeological data: Examples from the  
8 Fiji Archipelago, Southwest Pacific. *Journal Of Coastal Research*, 15-25.  
9
- 10 Orr, J.C. and 26 others. 2005. Anthropogenic ocean acidification over the twenty-first century and its  
11 impact on calcifying organisms. *Nature*, 437:681-686.  
12
- 13 Overpeck, J., K. Hughen, D. Hardy, R. Bradley, R. Case, M. Douglas, B. Finney, K. Gajewsky, G. Jacoby,  
14 A. Jennings, S. Lamoureux, A. Lasca, G. MacDonald, J. Moore, M. Retelle, S. Smith, A. Wolfe, and G.  
15 Zielinski. 1997. Arctic environmental change of the last four centuries. *Science*, 278 (5341): 1251-1256.  
16
- 17 Overpeck, J. T., M. Sturm, J. A. Francis, D. K. Perovich, M. C. Serreze, R. Benner, E. C. Carmack, S.  
18 Chapin III, S. C. Gerlach, L. C. Hamilton, L. D. Hinzman, M. Holland, H. P. Huntington, J. R. Key, A. H.  
19 Lloyd, G. M. MacDonald, J. McFadden, D. Noone, T. D. Prowse, P. Schlosser, C. Vörösmarty. 2005.  
20 Arctic System on Trajectory to New, Seasonally Ice-Free State. *Eos Trans. AGU* 86(34): 309, 312-313.  
21
- 22 Park, R.A., M.S. Trehan, P.W. Mauseel and R.C. Howe. 1989. The Effects of Sea Level Rise on U.S.  
23 Coastal Wetlands. USEPA, Offices of Policy, Planning and Evaluations.  
24
- 25 Parkinson, R. W., Delaune, R. D., and White, J. R. (1994). Holocene Sea-Level Rise And The Fate Of  
26 Mangrove Forests Within The Wider Caribbean Region. *Journal Of Coastal Research*, **10**, 1077-1086.  
27
- 28 Parmesan, C. 2006. Ecological and Evolutionary Responses to Recent Climate Change. *Annual Review of*  
29 *Ecology, Evolution and Systematics*, **37**, 637-669.  
30
- 31 Percy, W.G. 1991. Ocean ecology of north Pacific salmonids. Washington State Sea Grant Program, The  
32 University of Washington Press, Seattle. 179 pp  
33
- 34 Pernetta, J. (1993). Mangrove forests, climate change and sea-level rise: hydrological influences on  
35 community structure and survival, with examples from the Indo-West Pacific. In "Marine Conservation and  
36 Development Report", pp. 46. IUCN, Gland.  
37
- 38 Peros, M. C., Reinhardt, E. G., and Davis, A. M. (2007). A 6000-year record of ecological and hydrological  
39 changes from Laguna de la Leche, north coastal Cuba. *Quaternary Research*, **67**, 69-82.  
40
- 41 Peterson, W.T. and F.B. Schwing. 2003. A new climate regime in northeast Pacific ecosystems. *Geophys.*  
42 *Res. Lett.* **38** (17), 1896, doi 10.1029/2003GL017528.  
43
- 44 Petit, J. R., J. Jouzel, D. Raynaud, N. I. Barkov, J.-M. Barnola, I. Basile, M. Bender, J. Chappellaz, M.  
45 Davisk, G. Delaygue, M. Delmotte, V. M. Kotlyakov, M. Legrand, V. Y. Lipenkov, C. Lorius, L. Pe' pin,  
46 C. Ritz, E. Saltzmank, and M. Stievenard. 1999. Climate and atmospheric history of the past 420,000 years  
47 from the Vostok ice core, Antarctica. *Nature*, **399**, 429-436.  
48
- 49 Piou, C., Feller, I. C., Berger, U., and Chi, F. (2006). Zonation patterns of Belizean offshore mangrove  
50 forests 41 years after a catastrophic hurricane. *Biotropica*, **38**, 365-374.  
51
- 52 Powell, J.A. and J.A. Logan. 2001. Ghost Forests, Global Warming, and the Mountain Pine Beetle  
53 (Coleoptera: Scolytidae). *American Entomologist*, **3**, 160-172.  
54
- 55 Rahmstorf, S. 2007. A Semi-Empirical Approach to Projecting Future Sea-Level Rise. *Science*, 315 (5810):  
56 368

- 1  
2 Ramsay, M. A. and K. A. Hobson. 1991. Polar bears make little use of terrestrial food webs: evidence from  
3 stable isotope analysis. *Oecologia*, **86**, 598-600.  
4
- 5 Ramsay, M. A. and I. Stirling. 1988. Reproductive biology and ecology of female polar bears (*Ursus*  
6 *maritimus*). *Journal of Zoology* (London), **214**:601-634.  
7
- 8 Ramsay, M. A. and I. Stirling. 1990. Fidelity of female polar bears to winter-den sites. *Journal of*  
9 *Mammalogy* **71**:233-236.  
10
- 11 Ravens, J., K. Caldeira, H. Elderfield, O. Hoegh-Guldberg, P. Liss, U. Riebesell, J. Shepard, C. Turley and  
12 A. Watson. 2005. Ocean Acidification due to Increasing Carbon Dioxide. The Royal Society, London,  
13 England.  
14
- 15 Ravindranath, N. H., Joshi, N. V., Sukumar, R., and Saxena, A. (2006). Impact of climate change on forests  
16 in India. *Current Science*, **90**, 354-361.  
17
- 18 Rhymer, J. M. and D. Simberloff. 1996. Extinction by hybridization and introgression. *Annu. Rev. Ecol.*  
19 *Syst.* **27**, 83-109.  
20
- 21 Richardson, A.J. and D.S. Shoeman. 2004. Climate impact on plankton ecosystems in the Northeast  
22 Atlantic. *Science*, **305**, 1609-1612.  
23
- 24 Roessig, J.M., C.M. Woodley, J.J. Cech and L.J. Hansen. 2004. Effects of global climate change on marine  
25 and estuarine fishes. *Reviews in Fish Biology and Fisheries*, **14**, 215-275.  
26
- 27 Rogers, K., Saintilan, N., and Heijnis, H. (2005). Mangrove encroachment of salt marsh in Western Port  
28 Bay, Victoria: The role of sedimentation, subsidence, and sea level rise. *Estuaries*, **28**, 551-559.  
29
- 30 Rogers, K., Wilton, K. M., and Saintilan, N. (2006). Vegetation change and surface elevation dynamics in  
31 estuarine wetlands of southeast Australia. *Estuarine Coastal And Shelf Science*, **66**, 559-569.  
32
- 33 Roman, J. 2006. Diluting the founder effect: cryptic invasions expand a marine invader's range  
34 *Proceedings of the Royal Society B*: **273**, 2453-2459  
35
- 36 Romme, W.H., J. Clement, J. Hicke, D. Kulakowski, L.H. MacDonald, T.L. Schoennagel, and T.T. Veblen.  
37 2006. Recent Forest Insect Outbreaks and Fire Risk in Colorado Forests: A Brief Synthesis of Relevant  
38 Research  
39
- 40 Roots, E. F. 1989. Climate change: high latitude regions. *Climate Change*, **15**, 223-253.  
41
- 42 Rothrock, D.A., J. Zhang and Y. Yu. 2003. The arctic ice thickness anomaly of the 1990s: A consistent  
43 view from observations and models. *Journal of Geophysical Research*, **108**(C3):3083,  
44 doi:10.1029/2001JC001208.  
45
- 46 Saavedra, F., D. W. Inouye, M. V. Price, and J. Harte. 2003. Changes in flowering and abundance of  
47 *Delphinium nuttallianum* (Ranunculaceae) in response to a subalpine climate warming experiment. *Global*  
48 *Change Biology*, **9**, 885-894.  
49
- 50 Saintilan, N., and Hashimoto, T. R. (1999). Mangrove-saltmarsh dynamics on a bay-head delta in the  
51 Hawkesbury River estuary, New South Wales, Australia. *Hydrobiologia*, **413**, 95-102.  
52
- 53 Saintilan, N., and Williams, R. J. (1999). Mangrove transgression into saltmarsh environments in south-east  
54 Australia. *Global Ecology And Biogeography*, **8**, 117-124.  
55

- 1 Sakamoto, T.T., H. Hasumi, M. Ishii, S. Emori, T. Suzuki, T. Nishimura, A. Sumi. 2005. Responses of the  
2 Kuroshio and the Kuroshio Extension to global warming in a high-resolution climate model. **Geophysical  
3 Research Letters**, **32** (14): Art. No. L14617  
4
- 5 Scavia, D., Field, J. C., Boesch, D. F., Buddemeier, R. W., Burkett, V., Cayan, D. R., Fogarty, M., Harwell,  
6 M. A., Howarth, R. W., Mason, C., Reed, D. J., Royer, T. C., Sallenger, A. H., and Titus, J. G. (2002).  
7 Climate change impacts on US coastal and marine ecosystems. *Estuaries*, **25**, 149-164.  
8
- 9 Scheffer, V. B. 1958. Seals, sea lions and walruses. A review of the pinnipedia. Stanford  
10 University Press, Stanford, Calif.  
11
- 12 Schongart, J., Orthmann, B., Hennenberg, K. J., Porembski, S., and Worbes, M. (2006). Climate-growth  
13 relationships of tropical tree species in West Africa and their potential for climate reconstruction. *Global  
14 Change Biology*, **12**, 1139-1150.  
15
- 16 Semeniuk, V. (1994). Predicting the effect of sea-level rise on mangroves in northwestern Australia.  
17 *Journal Of Coastal Research*, **10**, 1050-1076.  
18
- 19 Serreze, M. C., J. E. Walsh, F. S. Chapin III, T. Osterkamp, M. Dyergerov, V. Romanovsky, W. C. Oechel,  
20 J. Morison, T. Zhang, and R. G. Barry. 2000. Observational evidence of recent change in the northern high  
21 latitude environment. *Climate Change*, **46**, 159-207.  
22
- 23 Sher AA and Hyatt LA. 1999. The disturbed resource-flux invasion matrix: a new framework for patterns  
24 of plant invasion. *Biological Invasions*, **1**, 107-14.  
25
- 26 Sherrod, C. L., and McMillan, C. (1981). Black mangrove, *Avicennia germinans*, in Texas - Past and  
27 present distribution. *Contributions In Marine Science*, **24**, 115-131.  
28
- 29 Sherrod, C. L., and McMillan, C. (1985). The distributional history and ecology of mangrove vegetation  
30 along the northern Gulf Of Mexico Coastal Region. *Contributions In Marine Science*, **28**, 129-140.  
31
- 32 Short, F.T. and H. Neckles. 1999. The effects of global climate change on seagrasses. *Aquatic Botany*, **63**,  
33 169-196.  
34
- 35 Singh, H. S. (2003). Vulnerability and adaptability of tidal forests in response to climate change in India.  
36 *Indian Forester*, **129**, 749-756.  
37
- 38 Smith, T. G. 1980. Polar bear predation of ringed and bearded seals in the land-fast sea ice habitat.  
39 *Canadian Journal of Zoology*, **58**, 2201-2209.  
40
- 41 Smith, T. G. 1985. Polar bears, *Ursus maritimus*, as predators of belugas, *Delphinapterus leucas*.  
42 *Canadian Field-Naturalist*, **99**, 71-75.  
43
- 44 Stanley, S. M. 1979. Macroevolution, pattern and process. W. H. Freeman, San Francisco.  
45
- 46 Snedaker, S. C. (1995). Mangroves and climate change in the florida and caribbean region - scenarios and  
47 hypotheses. *Hydrobiologia*, **295**, 43-49.  
48
- 49 Snedaker, S. C., and Araujo, R. J. (1998). Stomatal conductance and gas exchange in four species of  
50 Caribbean mangroves exposed to ambient and increased CO<sub>2</sub>. *Marine And Freshwater Research*, **49**, 325-  
51 327.  
52
- 53 Soto, CG. 2002. The potential impacts of global climate change on marine protected areas. *Reviews in Fish  
54 Biology and Fisheries*, **11**, 181-195.  
55

- 1     Striver, R. and M. Huber. 2006. Low frequency variability in globally integrated tropical cyclone power  
2     dissipation. *Geophysical Research Letters*, **33**, L11705, doi:10.1029/2006GL026167.  
3
- 4     Stenseth, N. C. and A. Mysterud. 2002. Climate, changing phenology, and other life history traits:  
5     nonlinearity and match-mismatch to the environment. *PNAS*, **99**, 13379-13381.  
6
- 7     Stenseth, N. C., A. Mysterud, G. Ottersen, J. W. Hurrell, K.-S. Chan, and M. Lima. 2002. Ecological  
8     effects of climate fluctuations. *Science*, **297**, 1292-1296.  
9
- 10    Stirling, I. 1974. Midsummer observations on the behavior of wild polar bears (*Ursus maritimus*).  
11    *Canadian Journal of Zoology*, **52**, 1191-1198.  
12
- 13    Stirling, I. and E. H. McEwan. 1975. The caloric value of whole ringed seals (*Phoca hispida*) in relation to  
14    polar bear (*Ursus maritimus*) ecology and hunting behavior. *Canadian Journal of Zoology*, **53**, 102-127.  
15
- 16    Stirling, I. and T. G. Smith. 1975. Interrelationships of Arctic Ocean mammals in the sea ice habitat.  
17    *Circumpolar Conference on Northern Ecology*, **2**, 129-136.  
18
- 19    Stirling, I. 1977. Adaptations of Weddell and ringed seals to exploit the polar fast ice habitat in the absence  
20    or presence of surface predators. Pages 741-748.  
21
- 22    Stirling, I. and D. Andriashek. 1992. Terrestrial maternity denning of polar bears in the eastern Beaufort  
23    Sea area. *Arctic*, **45**, 363-366.  
24
- 25    Stirling, I. and W. R. Archibald. 1977. Aspects of predation of seals by polar bears. *Journal of Fisheries*  
26    *Research Board of Canada*, **34**, 1126-1129.  
27
- 28    Stirling, I., and A. E. Derocher. 1993. Possible impacts of climate warming on polar bears. *Arctic*, **46**, 240-  
29    245.  
30
- 31    Stirling, I. N.J. Lunn and J. Iacozza. 1999. Long-term trends in the population ecology of polar bears in  
32    western Hudson Bay in relation to climate change. *Arctic*, **52**, 294-306.  
33
- 34    Stirling, I., and T. G. Smith. 2004. Implications of warm temperatures and an unusual rain event for the  
35    survival of ringed seals on the coast of Southeastern Baffin Island. *Arctic*, **57**, 59-67.  
36
- 37    Stirling, I. and N. A. Ørjstland. 1995. Relationships between estimates of ringed seal and polar bear  
38    populations in the Canadian Arctic. *Canadian Journal of Fisheries and Aquatic Sciences*, **52**, 2595-2612.  
39
- 40    Stroeve, J.C., M.C. Serreze, F. Fetterer, T. Aretter, W. Meier, J. Maslanik and K. Knowles. 2005. Tracking  
41    the Arctic's shrinking ice cover: Another extreme September minimum in 2004. *Geophysical Research*  
42    *Letters* **32**, L04501, doi:10.1029/2400GL021810.  
43
- 44    Stroeve, J., M. M. Holland, W. Meier, T. Scambos, and M. Serreze. 2007. Arctic sea ice  
45    decline: Faster than forecast, *Geophys. Res. Lett.*, **34**.  
46
- 47    Talbot, S. L. and G. F. Shields. 1996. Phylogeography of brown bears (*Ursus arctos*) of Alaska and  
48    paraphyly within the Ursidae. *Molecular Phylogenetics and Evolution*, **5**, 477-494.  
49
- 50    Taylor, D., and Sanderson, P. G. (2002). Global changes, mangrove forests and implications for hazards  
51    along continental shorelines. In "Environmental changes and geomorphic hazards in forests: Report No. 4  
52    of the IUFRO task force on environmental change", pp. 203-226.  
53
- 54    Thampanya, U., Vermaat, J. E., Sinsakul, S., and Panapitukkul, N. (2006). Coastal erosion and mangrove  
55    progradation of Southern Thailand. *Estuarine Coastal And Shelf Science*, **68**, 75-85.  
56

- 1 Torrescano, N., and Islebe, G. A. (2006). Tropical forest and mangrove history from southeastern Mexico:  
2 a 5000 yr pollen record and implications for sea level rise. *Vegetation History And Archaeobotany*, **15**, 191-  
3 195.  
4
- 5 Tyagi, A. P. (2004). Precipitation effect on flowering and propagule setting in mangroves of the family  
6 Rhizophoraceae. *Australian Journal Of Botany*, **52**, 789-798.  
7
- 8 Tynan, C. T. and D. P. DeMaster. 1997. Observations and predictions of arctic climatic change: potential  
9 effects on marine mammals. *Arctic*, **50**, 308-322.  
10
- 11 UNEP-UNESCO Task Team (1992). Impact of expected climate change on mangroves. In "UNESCO  
12 Reports in Marine Science", pp. 23. UNEP, Nairobi.  
13
- 14 Vermeij, G.J. 1978. Biogeography and adaptation. Harvard University Press, Cambridge, Massachusetts,  
15 USA.  
16
- 17 Vicente, V. P. (1989). Ecological effects of sea-level rise and sea surface temperatures on mangroves, coral  
18 reefs, seagrass beds and sandy beaches of Puerto Rico: A preliminary evaluation. *Science-Ciencia*, **16**, 27-  
19 39.  
20
- 21 Vila, M., Corbin, J.D., Dukes, J.S., Pino, J., Smith, S.D. In press. Linking plant invasions to global  
22 environmental change. In: Terrestrial Ecosystems in a Changing World, J. Canadell, D. Pataki, L. Pitelka,  
23 eds. Springer, New York.  
24
- 25 Von Holle B and Motzkin G. 2007. Historical land use and environmental determinants of nonnative plant  
26 distribution in coastal southern New England. *Biological Conservation*, **136**, 33–43.  
27
- 28 Waits, L. P.; S. L. Talbot, R. H. Ward, and G. F. Shields. 1998. Mitochondrial DNA phylogeography of the  
29 North American brown bear and implications for conservation. *Conservation Biology*, **12**, 408-417.  
30
- 31 Walther, G.-R., E. Post, P. Convey, A. Menzel, C. Parmesan, T. J. C. Beebee, J.-M. Fromentin, O. Hoegh-  
32 Guldberg, and F. Bairlein. 2002. Ecological responses to recent climate change. *Nature*, **416**, 389-395.  
33
- 34 Ward, J. and K. Lafferty. PLoS Biology The Elusive Baseline of Marine Disease: Are Diseases in Ocean  
35 Ecosystems Increasing? *Plos Biology*, **2**, 0542- 0547.  
36
- 37 Wielgolaski, F. E., and D. W. Inouye. 2003. High latitude climates. Pages 175-194 in M. D. Schwartz,  
38 editor. Phenology: an Integrative Environmental Science. Kluwer Academic Publ, PO Box 17/3300 AA  
39 Dordrecht/Netherlands.  
40
- 41 Wolanski, E., and Chappell, J. (1996). The response of tropical Australian estuaries to a sea level rise.  
42 *Journal Of Marine Systems* **7**, 267-279.  
43
- 44 Woodroffe, C. D. (1990). The Impact Of Sea-Level Rise On Mangrove Shorelines. *Progress In Physical*  
45 *Geography* **14**, 483-520.  
46
- 47 Woodroffe, C. D. (1995). Response of tide-dominated mangrove shorelines in northern Australia to  
48 anticipated sea-level rise. *Earth Surface Processes And Landforms* **20**, 65-85.  
49
- 50 Woodroffe, C. D., and Grindrod, J. (1991). Mangrove biogeography - the role of quaternary environmental  
51 and sea-level change. *Journal Of Biogeography* **18**, 479-492.  
52
- 53 Yulianto, E., Sukapti, W. S., Rahardjo, A., Noeradi, D., Siregar, D. A., Suparan, P., and Hirakawa, K.  
54 (2004). Mangrove shoreline responses to holocene environmental change, Makassar strait, Indonesia.  
55 *Review Of Palaeobotany And Palynology* **131**, 251-268.



DRAFT