

JAMES B. GRACE – USGS, 700 Cajundome Blvd., Lafayette, LA 70506,
gracej@usgs.gov (337)266-8632

Professional History –

2002 – present, Senior Research Ecologist, USGS
1993 – present, Adjunct Professor, Department of Biology, Univ. Louisiana
2002 – present, Affiliate Faculty, School of Renewable Natural Resources, LSU
1992 – 2002, Research Ecologist, USGS
1990 – 1993, Professor, Department of Botany, Louisiana State University
1985 – 1990, Associate Professor, Department of Botany, LSU
1989, Visiting Professor, Louisiana Universities Marine Consortium
1986, Visiting Scientist, Div. Wildlife and Rangelands, CSIRO, Darwin, Australia
1980-1985, Assistant Professor, Dept. Botany and Microbiology, Univ. Arkansas
1980 (summer), Assist. Prof., Kellogg Biological Station, Michigan State Univ.

Education

Ph.D., 1980. Botany and Plant Pathology, Michigan State University
M.S., 1977. Botany, Clemson University
B.S., 1973, Biology, Presbyterian College

Complete List of Publications¹

Published Reports (132 total) – 114 Articles, Books, & Book Chapters, + 18 Reports & Book Reviews

- Oberle, B., Grace, J.B., Chase, J. accepted pending minor revisions. Energy-species richness relationships in temperate forests: Effects of plant growth form. *Global Ecology and Biogeography* (114+18)
- Youngblood, A., Grace, J.B., and McIver, J.D. 2009. Delayed conifer mortality after fuel reduction treatments: Interactive effects of fuel, fire intensity, and bark beetles. *Ecological Applications* (special feature) 00:000-000. (112+18)
- Chaudhary, V.B., Bowker, M.A., O'Dell, T.E., Grace, J.B., Redman, A.E., Rillig, M.C., and Johnson, N.C. in press. Untangling the biological contributions to soil stability in semi-arid shrublands. *Ecological Applications*. (111+18)
- Grace, J.B., Youngblood, A., and Scheiner, S.M. 2008. Structural equation modeling and ecological experiments. Chapter 2, pp. 19-46. In: Miao, S., Carstenn, S., and Nungesser, M. (Eds.) *Real World Ecology: Large-Scale and Long-Term Case Studies and Methods*. Springer Verlag, New York. (110+18)

¹(last updated, December 17th, 2008)

- Grace, J.B., Carstenn, S., Miao, S., and Sinhoj, E., 2008. Ecology in the real world, how might we progress? Chapter 12, pp. 293-302. In: Miao, S., Carstenn, S., and Nungesser, M. (Eds.) *Real World Ecology: Large-Scale and Long-Term Case Studies and Methods*. Springer Verlag, New York. (109+18)
- Larson, D.L., Grace, J.B., and Larson, J.L. 2008. Long-term dynamics of leafy spurge (*Euphorbia esula*) and its biocontrol agent, the flea beetle *Aphthona lacertosa*. *Biological Control* DOI 10.1016/j.biocontrol.2008.07.016 (108+18)
- Collins, S.L., Suding, K.N., Cleland, E.E., Batty, M., Pennings, S.C., Gross, K.L., Grace, J.B. Gough, L., Fargione, J.E., Clark, C.M. 2008. Rank clocks and community dynamics. *Ecology* 89:3534-3541. (107+18)
- Ewing, R., Bartholomew, K., Winkelman, S., Walters, J., Chen, D., Anderson, G., Grace, J.B., McCann, B., and Goldberg, D. 2008. *Growing Cooler: The Evidence on Urban Development and Climate Change*. Urban Land Institute, Washington, DC. (106+18)
- Harrison, S., Viers, J.H., Thorne, J.H. and Grace, J.B. 2008. Favorable environments and the persistence of naturally rare species. *Conservation Letters* in press (105+18)
- Riginos, C. and Grace, J.B. 2008. Savanna tree density, herbivores, and the herbaceous community: bottom-up versus top-down effects. *Ecology* (in press) (104+18)
- Grace, J.B. and Zouhar, K. 2008. Fire and nonnative invasive plants in the central bioregion. In: Zouhar, K., Smith, J.K., Sutherland, S., and Brooks, M.L (eds.) *Wildland Fire in Ecosystems: Fire and Nonnative Invasive Plants*, Gen. Tech. Rep. RMRS-GTR-42-volume 6. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, in press (103+18)
- Grace, J.B. 2008. Structural equation modeling for observational studies. *Journal of Wildlife Management* 72:14-22. (102+18)
- Drake, J.M., Cleland, E.E., Horner-Devine, M.C., Fleishman, E., Bowles, C., Smith, M.D., Carney, K., Emery, S., Gramling, J., Vandermast, D.B., and Grace, J.B. 2008. Do non-native plant species affect the shape of productivity-diversity relationships? *American Midland Naturalist*. 159:55-66 (101+18).
- Grace, J.B. and Bollen, KA. 2008. Representing general theoretical concepts in structural equation models: the role of composite variables. *Environmental and Ecological Statistics* 15:191-213. (100+18)
- Siemann, E., Rogers, W.E. and Grace, J.B. 2007. Effects of nutrient loading and extreme rainfall events on coastal tallgrass prairies: invasion intensity, vegetation responses, and carbon and nitrogen distribution. *Global Change Biology* 13:2184-2192. (99+18)

- Nettle, D., Grace, J.B., Choisy, M., Cornell, H.V., Guegan, J.F., and Hochberg, M.E. 2007. Cultural diversity, economic development and societal instability. *PLoS ONE* 2(9): e929. doi:10.1371/journal.pone.0000929. (98+18).
- Clark, C, Cleland, E, Fargione, J.E., Gough, L., Gross, K.L., Pennings, S.C., Suding, K.N. and Grace, JB. 2007. Environmental and plant community determinants of species loss following nitrogen enrichment. *Ecology Letters*.10:596-607. (97+18)
- Owens, A, Proffitt, E, and Grace, JB. 2007. Prescribed fire and cutting as tools for managing woody plant succession in a created salt marsh. *Wetlands Ecology and Management*. 15:405-416. (96+18)
- Grace, J.B., Anderson, T.M., Smith, M., Seabloom, E., Andelman, S., Meche, G., Weiher, E., Allain, L.K., Jutila, H., Sankaran, M., Knops, J., Ritchie, M.E. and Willig, M.R. 2007. Does species diversity limit productivity in natural grassland communities. *Ecology Letters*. 10:680-689. (95+18)
- Anderson, T.M., Ritchie, M.E., Mayemba, E., Eby, S., Grace, J.B., and McNaughton, S.J. 2007. Forage nutritive quality in the Serengeti ecosystem: the roles of fire and herbivory. *American Naturalist*. 170:343-357. (94+18)
- Grace, J.B., Safford, H., and Harrison, S. 2007. Large-scale causes of variation in the serpentine vegetation of California. *Plant and Soil* 10.1007/s11104-007-9196-6. (93+18)
- Harrison, S. and Grace, JB. 2007. Biogeographic affinity contributes to our understanding of productivity-richness relationships at regional and local scales. *American Naturalist*. 170:S5-S15. (92+18)
- Laughlin, D.C., Abella, S.R., Covington, W.W., Fulé, P., and Grace, J.B. 2007. A structural equation modeling analysis of plant species richness and soil properties in a ponderosa pine forest ecosystem. *Journal of Vegetation Science* 18:231-242. (91+18)
- Larson, D.L., Grace, J.B., Rabie, P.A., and Andersen, P. 2007. Short-term disruption of a leafy spurge (*Euphorbia esula*) biocontrol program following herbicide application. *Biological Control* 40:1-8.(90+18)
- Baldwin, H.Q., Grace, J.B., Barrow, W., Rohwer, F.C. 2007. Association of overwintering grassland birds with time since burn and vegetation characteristics in coastal tallgrass prairie. *Wilson Journal of Ornithology* 119:189-197. (89+18)
- Drake, D.L., Altig, R., Grace, J.B. and Walls, S.C. 2007. Occurrence of oral defects in larval anurans from protected sites. *Copeia* 2007(2):449-458. (88+18)

- Grace, J.B. and Bollen, K.A. 2006. The Interface between Theory and Data in Structural Equation Models. USGS Open-File Report 2006-1363. 37 p. (87+18)
- Grace, J.B. 2006. *Structural Equation Modeling and Natural Systems*. Cambridge University Press. (87+17)
- Lichtenberg, J.S., King, S.L., Grace, J.B., and Walls, S. 2006. Habitat associations of chorusing anurans in the lower Mississippi river alluvial valley. *Wetlands* 26:736-744. (86+17)
- Laughlin, D.C. and Grace, J.B. 2006. A multivariate model of plant species richness in forested systems: old-growth montane forests with a long history of fire. *Oikos* 114:60-70. (85+17)
- Whitbeck, M. and Grace, J.B. 2006. Estimating biomass in marshes of the upper Texas coast. *Wetlands* 26:278-282. (84+17)
- Harrison, S., Grace, J.B. Davies, K.F., Safford, H.D., and Viers, J.H. 2006. Exotic invasion in a diversity hotspot: disentangling the direct and indirect relationships of exotic cover to native richness in the californian serpentine flora. *Ecology* 87:695-703. (83+17)
- Harrison, S., Safford, H.D. Grace, J.B. Viers, J.H. and Davies, K.F. 2006. Regional and local species richness in an insular environment: Serpentine plants in California. *Ecological Monographs* 76:41-56. (82+17)
- Grace, JB and Keeley, JE. 2006. A structural equation model analysis of postfire plant diversity in California shrublands. *Ecological Applications* 16:503-514. (81+17)
- Allain, L., Smith, L, Allen, C. Vidrine, M.F. and Grace, J.B. 2006. A floristic quality assessment system for the coastal prairie of Louisiana. *Proceedings of The 19th North American Prairie Conference*, pp. 1-18. (80+17)
- Grace, J.B., Allain, L.K., Baldwin, H.Q., Billock, A.G., Eddleman, W.R., Given, A.M., Jeske, C.W., and Moss, R. 2005. An Assessment of Prescribed Fire Effects at the USFWS Texas Mid-coast National Wildlife Refuge Complex. USGS Open-File Report 2005-1287. 40 p. (79+17)*
- Grace, J., Owens, A., and Allain, L., 2005, Fireloggers user's manual: U.S. Geological Survey Open-File Report 2005-1212, 24 p. (79+16)*
- Grace, J.B. and Bollen, K.A. 2005. Interpreting the results from multiple regression and structural equation models. *Bulletin of the Ecological Society of America*. 86:283-295. (79+15)
- Mancera, JE, Meche, GC, Cardona, PP, Castaneda-Moya, E, Chiasson, RL, Geddes, NA,

- Schile, LM, Wang, HG, Guntenspergen, GR, and Grace, JB. 2005. Fine scale variation in plant species richness in coastal marshlands. *Plant Ecology* 178:39-50. (78+15)
- Grace, J.B., Allain, L.K., Baldwin, H.Q., Billock, A.G., Eddleman, W.R., Given, A.M., Jeske, C.W., and Moss, R. 2005. An Assessment of Prescribed Fire Effects at the USFWS Texas Mid-coast National Wildlife Refuge Complex. USGS Open-File Report 2005-1287. 40 p. (79+17)*
- Grace, J., Owens, A., and Allain, L., 2005, Fireloggers user's manual: U.S. Geological Survey Open-File Report 2005-1212, 24 p. (79+16)*
- Grace, J.B. and Bollen, K.A. 2005. Interpreting the results from multiple regression and structural equation models. *Bulletin of the Ecological Society of America*. Vol. 86:283-295. (79+15)
- Mancera, JE, Meche, GC, Cardona, PP, Castaneda-Moya, E, Chiasson, RL, Geddes, NA, Schile, LM, Wang, HG, Guntenspergen, GR, and Grace, JB. 2005. Fine scale variation in plant species richness in coastal marshlands. *Plant Ecology* 178:39-50. (78+15)
- Middleton, B. Grace, J.B. 2004. Biodiversity and ecosystem function (book review). *Restoration Ecology* 12:610-611. (77+15)*
- Brooks, M., D'Antonio, CM, Richardson, DM, Grace, JB, Keeley, JE, DiTomaso, JM, Hobbs, RJ, Pellant, M., and Pyke, D. 2004. Effects of invasive alien plants on fire regimes. *Bioscience* 54:1-12. (77+14)
- Weihner, E., Forbes, S., Schauwecker, T., and Grace, JB. 2004. Multivariate control of plant species richness in a blackland prairie. *Oikos* 106:151-157. (76+14)
- Larson, DL and Grace JB. 2004. Temporal dynamics of leafy spurge (*Euphorbia esula*) and two species of flea beetles (*Aphthona* spp.) used as biological control agents. *Biological Control* 29:207-214. (75+14)
- Grace, J.B. 2003. Examining the relationships between environmental variables and ordination axes using latent variables and structural equation modeling. In: B. Pugesek, A. Tomer, and A. von Eye (eds.) Chapter 7, *Structural Equations Modeling: Applications in Ecological and Evolutionary Biology Research*. Cambridge University Press. (74+14)
- Grace, J.B. 2003. Comparing groups using structural equations. In: B. Pugesek, A. Tomer, and A. von Eye (eds.) Chapter 11, *Structural Equations Modeling: Applications in Ecological and Evolutionary Biology Research*. Cambridge University Press. (73+14)

- Grace, J.B., M.F. Acevedo, J.E. Cohen, A.K. Sakai, S.A. Woodin, and B.E. Young. 2002. Review of the National Center for Ecological Analysis and Synthesis. A report prepared for the National Science Foundation. (72+14)*
- Grace, J.B. 2002. Cause and correlation in biology. *Annals of Botany* 90:777-778 (book review). (72+13)*
- Grace, J.B. 2002. The production ecology of wetlands. *Aquatic Botany* 73:89-90. book review (72+12)*
- McCune, B. and J.B. Grace. 2002. *Analysis of Ecological Communities*. MJM Press, 302 pages. (72+11)
- Jutila, H and J.B. Grace. 2002. Effects of disturbance and competitive release on germination and seedling establishment in a coastal prairie grassland. *Journal of Ecology* 90:291-302. (71+11)
- Allain, L.K. and J.B. Grace. 2001. Changes in density and height of the shrub *Baccharis halimifolia* following burning in coastal tallgrass prairie. *Proceedings of The 17th North American Prairie Conference*, Pella Iowa, pp. 66-72. (70+11)
- Grace, J.B., M.D. Smith, S.L. Grace, S.L. Collins, and T.J. Stohlgren. 2001. Interactions between fire and invasive plants in temperate grasslands of North America. Pages 40-65 in K.E.M. Galley and T.P. Wilson (eds.). *Proceedings of the Invasive Species Workshop: the Role of Fire in the Control and Spread of Invasive Species. Fire Conference 2000: The First National Congress on Fire, Ecology, Prevention and Management*. Miscellaneous Publication No. 11. Tall Timbers Research Station, Tallahassee, FL. (downloadable from http://www.nifc.gov/joint_fire_sci/invasive%20publications/invasiveproceedings.htm) (69+11)
- Grace, J.B. 2001. Difficulties with estimating and interpreting species pools and the implications for understanding patterns of diversity. *Folia Geobotanica* 36:71-83. (68+11)
- La Peyre, M.K., M.A. Reams, P.H. Templet, J.B. Grace, and I.A. Mendelssohn. 2001. An exploratory analysis: identifying determinants of nation's wetland management programs using structural equation modeling. *Environmental Management* 27:859-868. (67+11)
- Grace, J.B. 2001. The roles of community biomass and species pools in the regulation of plant diversity. *Oikos* 92:191-207. (66+11)
- Greiner La Peyre, M.K., J.B. Grace, E. Hahn, and I.A. Mendelssohn. 2001. The importance of competition in regulating plant species abundance along a salinity gradient. *Ecology* 82:62-69. (65+11)

- Lovich, J, F.J. Dein, J.B. Grace, S.C. Guptill, K.H. Haag, D.L. Larson, D.J. Meyer, M Reheis, and T. Stohlgren. 2001. A Strategic Science Plan for U.S. Geological Survey Research on Invasive Species. *Department of Interior Internal Report*. (64+11)*
- Grace, J.B. 2001. On the relationship between species diversity and community productivity. *Contributions to the Knowledge Network for Biocomplexity Graduate Student Research Training Seminar*, E. Sandlin (ed.), National Center for Ecological Analysis and Synthesis. (64+10)*
- Wade, D.D., B.L. Brock, P.H. Brose, J.B. Grace, G.A. Hoch, and W.A. Patterson III. 2000. Chapter 4: Fire in eastern ecosystems. In: J.K. Brown and J.K. Smith (eds.) *Wildland Fire in Ecosystems: Effects of Fire on Flora*. Gen. Tech. Rep. RMRS-GTR-42- Vol. 2., Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, pp 53-96. (64+9)
- King, S. and J.B. Grace. 2000. The effects of soil flooding on the establishment of cogongrass (*Imperata cylindrica*), a nonindigenous invader of the southeastern United States. *Wetlands* 20:300-306. (63+9)
- King, S. and J.B. Grace. 2000. The effects of gap size and disturbance type on invasion of wet pine savanna by cogongrass, *Imperata cylindrica* (Poaceae). *American Journal of Botany* 87:1279-1286. (62+9)
- Barrilleaux, T.C. and J.B. Grace. 2000. Effects of soil type and moisture regime on the growth and invasive potential of Chinese tallow tree (*Sapium sebiferum*). *American Journal of Botany* 87:1099-1106. (61+9)
- Grace, J.B., L. Allain, and C. Allen. 2000. Factors associated with plant species richness in a coastal tall-grass prairie. *Journal of Vegetation Science* 11:443-452. (60+9)
- Grace, J.B., L. Allain, and C. Allen. 2000. Vegetation associations in a rare community type of coastal tallgrass prairie. *Plant Ecology* 147:105-115. (59+9)
- Burkett, V., J. Grace, D. Larson, L. Kallemeyn, and T. Stohlgren. 2000. *Invasive Species Science Strategy for DOI Lands, Central Region*. USGS Unnumbered Report. (58+9)*
- Grace, J.B. 1999. The factors controlling species density in herbaceous plant communities: an assessment. *Perspectives in Plant Ecology, Evolution and Systematics* 2:1-28. (58+8)
- Grace, J.B. and H. Jutila. 1999. The relationship between species density and community biomass in grazed and ungrazed coastal meadows. *Oikos* 85:398-408. (57+8)

- Grace, J.B. and G.R. Guntenspergen. 1999. The effects of landscape position on plant species density: evidence of past environmental effects in a coastal wetland. *Ecoscience* 6:381-391. (56+8)
- Gough, L. and J.B. Grace. 1999. Predicting effects of environmental change on plant species density: experimental evaluations in a coastal wetland. *Ecology* 80:882-890. (55+8)
- Gough, L. and J.B. Grace. 1998. Effects of flooding, salinity, and herbivory on coastal plant communities, Louisiana, United States. *Oecologia* 117:527-535. (54+8)
- Ford, M.F. and J.B. Grace. 1998. Effects of herbivores on vertical soil accretion, shallow subsidence and soil elevation changes in coastal Louisiana. *Journal of Ecology* 86:974-982. (53+8)
- Pugesek, B.H. and J.B. Grace. 1998. On the utility of path modeling for ecological and evolutionary studies. *Functional Ecology* 12:853-856. (52+8)
- Grace, J.B. 1998. Can prescribed fire save the endangered coastal prairie ecosystem from Chinese tallow invasion? *Endangered Species Update* 15:70-76. [reprinted in *Wildland Weeds*, Spring 1999] (51+8)
- Grace, J.B. and R.G. Wetzel. 1998. Long-term dynamics of *Typha* populations. *Aquatic Botany* 61:137-146. (50+8)
- Grace, J.B. and B.H. Pugesek. 1998. On the use of path analysis and related procedures for the investigation of ecological problems. *American Naturalist* 152:151-159. (49+8)
- Newman, S., J. Schutte, J.B. Grace, K. Rutchey, T. Fontaine, M. Campbell, M. Pietrucha, and K.R. Reddy. 1998. Factors influencing cattail abundance in the northern Everglades. *Aquatic Botany* 60:265-280. (48+8)
- Ford, M.F. and J.B. Grace. 1998. The interactive effects of vertebrate herbivory and fire on a coastal marsh in Louisiana, the Pearl River. *Wetlands* 18:1-8. (47+8)
- Gough, L. and J.B. Grace. 1998. Herbivore effects on plant species density at varying productivity levels. *Ecology* 79:1586-1594. (46+8)
- Gough, L. and J.B. Grace. 1997. The influence of vines on an oligohaline marsh community: results of a removal and fertilization study. *Oecologia* 112:403-411. (45+8)
- Nuttle, W.K., M.M. Brinson, D. Cahoon, J.C. Callaway, R.R. Christian, G.L. Chmura, W.H. Conner, R.H. Day, M. Ford, J. Grace, J. C. Lynch, R.A. Orson, R.W. Parkinson, D. Reed, J.M. Rybczyk, T.J. Smith III, R.P. Stumpf, and K. Williams.

1997. Forecasting the fate of coastal wetlands. *Eos* 78:257, 260-261. (44+8)
- Grace, J.B. 1997. Bioinformatics: Mathematical challenges and ecology. *Science* 275:1862-1863. (43+8)*
- Grace, J.B. and B. Pugsek. 1997. A structural equation model of plant species richness and its application to a coastal wetland. *American Naturalist*. 149:436-460. (43+7)
- Taylor, K.L., J.B. Grace, and B.D. Marx. 1997. The effects of herbivory on neighbor interactions along a coastal marsh gradient. *American Journal of Botany*. 84:709-715. (42+7)
- Grace, J.B. 1997. British Plant Communities. Volume 4: Aquatic Communities, Swamps and Tall-herb Fens. *Quarterly Review of Biology* 72:345-346. (book review) (41+7)*
- Grace, J.B. 1997. Adaptation Strategies in Wetland Plants: Links between Ecology and Physiology. *Aquatic Botany* 56:285-287. (book review) (41+6)*
- Newman, S., JB Grace, and JW Koebel. 1996. Nutrient and hydroperiod effects on *Typha*, *Cladium*, and *Eleocharis*: implications for Everglades restoration. *Ecological Applications* 6:774-783. (41+5)
- Marrs, R., J.B. Grace, and L. Gough. 1996. On the relationship between plant species diversity and biomass: a comment on a paper by Gough, Grace, and Taylor. *Oikos*. 75:323-326. (40+5)
- Grace, J.B. and M.A. Ford. 1996. The potential impact of herbivores on the susceptibility of *Sagittaria lancifolia* to saltwater intrusion in coastal wetlands. *Estuaries* 19:13-20. (39+5)
- Grace, J.B. 1995. In search of the holy grail: explanations for the coexistence of plant species. *Trends in Ecology and Evolution* 10:263-264. (38+5)
- Guntenspergen, GR, DR Cahoon, JB Grace, GD Steyer, S Fournet, MA Townsend, and AL Foote. 1995. Disturbance and recovery of the Louisiana coastal marsh landscape from the impacts of Hurricane Andrew. *Journal of Coastal Research* 21:324-339. (37+5)
- Taylor, K.L. and J.B. Grace. 1995. The effects of vertebrate herbivory on plant community structure in the coastal marshes of the Pearl River, Louisiana. *Wetlands* 15:68-73. (36+5)
- Grace, J.B. 1995. On the measurement of plant competition intensity. *Ecology* 76:305-308. (translated into Chinese and republished in the *Chinese Journal of Ecology*)

- by Dr. Liu Qing, Chengdu Institute of Biology). (35+5)
- Gough, L., J.B. Grace, and K.L. Taylor. 1994. The relationship between species richness and community biomass: the importance of environmental variables. *Oikos* 70:271-279. (34+5)
- Reader, R.J., S.D. Wilson, J.W. Belcher, I. Wisheu, P.A. Keddy, D. Tilman, E.C. Morris, J.B. Grace, J.B. McGraw, H. Olf, R. Turkington, E. Klein, Y. Leung, B. Shipley, R. van Hulst, M.E. Johansson, C. Nilsson, J. Gurevitch, K. Grigulis, and B.E. Beisner. 1994. Intensity of plant competition in relation to neighbor biomass: an intercontinental study with *Poa pratensis*. *Ecology* 75:1753-1760. (33+5)
- Taylor, K.L., J.B. Grace, G.R. Guntenspergen, and A.L. Foote. 1994. The interactive effects of herbivory and fire on an oligohaline marsh, Little Lake, Louisiana, USA. *Wetlands* 14:82-87. (32+5)
- Grace, J.B. 1993. The effects of habitat productivity on competition intensity. *Trends in Ecology and Evolution* 8:229-230. (31+5)
- Grace, J.B., G.R. Guntenspergen, and J.R. Keough. 1993. The examination of a competition matrix for transitivity and intransitive loops. *Oikos* 68:91-98. (30+5)
- Grace, J.B. 1993. The adaptive significance of clonal reproduction in angiosperms: an aquatic perspective. *Aquatic Botany* 44:159-180. (29+5)
- Grace, J.B., J.R. Keough, and G.R. Guntenspergen. 1992. Size bias in traditional analyses of substitutive competition experiments. *Oecologia* 90:429-434. (28+5)
- Constable, J.V.H., J.B. Grace and D.J. Longstreth. 1992. High carbon dioxide concentrations in aerenchyma of *Typha latifolia* (Typhaceae). *American Journal of Botany* 79:415-418. (27+5)
- Grace, J.B. 1992. Wetlands and Shallow Continental Water Bodies. Volume 1: Natural and Human Relationships. Patten, B.C (ed.) - book review. *Quarterly Review of Biology*, 67:383. (book review). (26+5)*
- Grace, J.B. 1991. A clarification of the debate between Grime and Tilman. *Functional Ecology* 5:503-507. (26+4)
- Grace, J.B. and D. Tilman. (eds.) 1990. *Perspectives on Plant Competition*, Academic Press, New York. (reprinted in soft cover- 1991). 484 pages. (25+4)
- Brewer, J.S. and J.B. Grace. 1990. Vegetation structure of an oligohaline tidal marsh. *Vegetatio* 90:93-107. (24+4)
- Bennett, B.D. and J.B. Grace. 1990. Shade tolerance and its effect on the segregation of

- two species of Louisiana Iris and their hybrids. *American Journal of Botany* 77:100-107. (23+4)
- Grace, J.B. 1990. On the relationship between plant traits and competitive ability. In J.B. Grace and D. Tilman (eds) *Perspectives on Plant Competition*, Academic Press, New York. (22+4)
- Grace, J.B. and D. Tilman. 1990. Perspectives on plant competition: some introductory remarks. In J.B. Grace and D. Tilman (eds) *Perspectives on Plant Competition*, Academic Press, New York. (21+4)
- Langevin, S.A., K. Clay, and J.B. Grace. 1990. The incidence and effects of hybridization between cultivated rice and red rice (*Oryza sativa* L.). *Evolution* 44:1000-1008. (20+4)
- Carter, M.F. and J.B. Grace. 1990. The relationships between flooding tolerance, life history, and competitive ability in three species of *Polygonum*. *American Journal of Botany* 77:381-387. (19+4)
- Grace, J.B. 1990. Vegetation of Inland Waters - Handbook of Vegetation Science. Symoens, J.J. (ed.) - book rev. *Quarterly Review of Biology* 65:101-102. (18+4)*
- Grace, J.B. 1990. Competition. Keddy, P. *Aquatic Botany* 37:387-389. book rev. (18+3)*
- Grace, J.B. 1989. Effects of water depth on *Typha latifolia* and *Typha domingensis*. *American Journal of Botany* 76:762-768. (18+2)
- Grace, J.B. 1988. The effects of plant age on the ability to predict mixture performance from monoculture growth. *Journal of Ecology*. 76:152-156. (17+2)
- Grace, J.B. 1988. The effects of nutrient additions on mixtures of *Typha latifolia* and *Typha domingensis* along a water-depth gradient. *Aquatic Botany*. 31:83-92. (16+2)
- Grace, J.B. 1987. The impact of preemption on competitive displacement between two *Typha* species along a water-depth gradient. *Ecological Monographs* 57:283-303. (15+2)
- Grace, J.B. and J.S. Harrison. 1986. The biology of Canadian weeds. *Typha angustifolia*, *Typha latifolia*, and *Typha xglauca*. *Canadian Journal of Plant Science*. 66:361-379. (14+2)
- Carter, M.F. and J.B. Grace. 1986. Relative effects of *Justicia americana* litter on germination, seedlings, and established plants of *Polygonum lapathifolium*. *Aquatic Botany* 23:341-349. (13+2)

- Grace, J.B. 1985. Juvenile versus adult competitive abilities in plants: Size-dependence in cattails (*Typha*). *Ecology* 66:1630-1638. (12+2)
- Carter, M.F., F.E. Lane, and J.B. Grace. 1985. Effects of litter on aquatic macrophyte germination and growth. *Arkansas Academy of Science Proceedings*, 39:29-33. (11+2)
- Grace, J.B. 1984. Effects of tubificid worms on the germination and establishment of *Typha*. *Ecology* 65:1689-1693. (10+2)
- Wetzel, R.G. and J.B. Grace. 1983. Freshwater aquatic plants. In: *CO₂ and Plants*. American Association for the Advancement of Science. (8+2)
- Grace, J.B. 1983. Autotoxic inhibition of seed germination by *Typha latifolia*: an evaluation. *Oecologia* 59:366-369. (18+2)
- Grace, J.B. and R.G. Wetzel. 1982. Niche differentiation between two rhizomatous plant species: *Typha latifolia* and *Typha angustifolia*. *Canadian Journal of Botany* 60:46-57. (7+2)
- Grace, J.B. and R.G. Wetzel. 1982. Variations in growth and reproduction within populations of two rhizomatous plant species: *Typha latifolia* and *Typha angustifolia*. *Oecologia* 53:258-263. (6+2)
- Grace, J.B. and R.G. Wetzel. 1981. Phenotypic and genotypic components of growth and reproduction in *Typha latifolia*: Experimental studies in marshes of contrasting successional maturity. *Ecology* 62:789-801. (5+2)
- Grace, J.B. and R.G. Wetzel. 1981. Habitat partitioning and competitive displacement in cattails (*Typha*): Experimental field studies of the intensity of competition. *American Naturalist* 118:463-474. (4+2)
- Grace, J.B. and R.G. Wetzel. 1981. Effects of size versus growth rate on vegetative reproduction in *Typha*. *Oecologia* 50:158-161. (3+2)
- Grace, J.B. 1980. *Phenotypic and genotypic components of growth and reproduction in Typha latifolia: Experimental studies in three contrasting marshes*. Ph.D. Dissertation, Michigan State University, East Lansing, Michigan. (2+2)*
- Grace, J.B. and R.G. Wetzel. 1978. The production biology of Eurasian water-milfoil (*Myriophyllum spicatum* L.): A review. *Journal of Aquatic Plant Management*. 16:1-11. (2+1)
- Grace, J.B. 1977. *The distribution and abundance of submerged aquatic macrophytes in a reactor-cooling reservoir*. MS Thesis, Clemson University, Clemson, South Carolina. (1+1)*

Grace, J.B. and L.J. Tilly. 1976. Distribution and abundance of submerged macrophytes, including *Myriophyllum spicatum* (Angiospermae), in a reactor-cooling reservoir. *Archives fur Hydrobiologie*. 77:475-487. (1)