

CURRICULUM VITAE

Beth A. Middleton, Ph.D.

National Wetlands Research Center, U.S. Geological Survey, Lafayette, LA 70506
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DEGREES AND INSTITUTIONS:

Iowa State University, Department of Botany, Ph.D., 1989

Dissertation: Succession and goose herbivory in monsoonal wetlands in Bharatpur, India.

University of Minnesota (Duluth), Department of Biology, M.S., 1983

Thesis: Sand movement and vegetation in the Apostle Islands, Lake Superior.

University of Wisconsin (Madison), Department of Botany, B.S., 1978

Thesis: Vegetational response to grazing in sedge meadow and mesic forest communities in southern Wisconsin.

PROFESSIONAL EXPERIENCE:

Research Ecologist, National Wetlands Research Center, U.S.G.S., Lafayette, LA (GS13). Adjunct, Department of Biology, University of Louisiana, Lafayette, LA. May 2002-present.

Professor (Full), Department of Plant Biology, Southern Illinois University, Carbondale, IL. August 1990-March 2002. Associate: 1994, Full: 2002. Adjunct: March 2002-present.

Visiting Lecturer/Researcher, G.B. Pant University, Pantnagar, Uttar Pradesh, India. December 1990-April 1991, Council for the International Exchange of Scholars (Fulbright).

Visiting Lecturer, Organization of Tropical Studies, Costa Rica. July 1993. Course: Tropical Biology.

Acting Chair, June 1996, Department of Plant Biology, Southern IL. University, Carbondale, IL.

Sabbatical, October 1997-January 1998. Wetland Biogeochemistry Lab, Baton Rouge, LA.

Postdoctoral Positions:

Postdoctoral Associate, Research Unit in Landscape Ecology, Leopold Center, Iowa State University, Ames Iowa and Ducks Unlimited Canada, Winnipeg, Manitoba. May 1989 - August 1990.
Geographic Information System analysis of vegetation changes in the Delta Experimental Marsh Complex, Canada and wetland restoration in agricultural landscapes.

Teaching Positions

Adjunct, Department of Biology, University of Louisiana. January 2004-May 2004. Course: Graduate seminar in wetland restoration.

Assistant Professor, Department of Botany, Iowa State University, Ames, Iowa. August 1989 - May 1990 (Fall 1988; Instructor). Courses: Wetland Ecology (grad), Plant Ecology (grad and majors), General Biology (majors).

Instructor, Departments of Biology and Chemistry, Northland College, Ashland, Wisconsin. August 1979 - May 1982. Courses: Ecology (majors), Biology and Chemistry Techniques (minority students).

HONORS

Society of Wetland Scientist Merit Award, 2004.

USGS Research Achievement Award, 2004.

STAR Award, USGS, 2003.

Woman of Distinction, Southern Illinois University, 2001.

Who's Who in Science and Technology, 1991-2000.

Who's Who in the Midwest, 1994-1999.

President's Service Award, Society of Wetland Scientists, 1996.

Outstanding Teaching Award Nominee, College of Science, Southern IL University, 1996.

Fulbright Award to India, G.B. Pant University, Pantnagar, India, Council for International Exchange of Scholars, 1991.

Teaching Excellence Award, Iowa State University, 1989.

Phi Beta Delta Honor Society for International Scholars, 1989-93.

MacMillan Fellowship. Delta Waterfowl and Wetland Research Station, Manitoba, Canada, 1984.

Pace Award for Academic Excellence, Iowa State University, 1983-4.

Related Experience

Instructor, Women in Science Model Program, 1991-2, Southern Illinois University, National Science Foundation.

Statistical and Computer Consultant, Iowa State University Computer Center, May 1987.

Botanist, National Park Service, Apostle Islands National Lakeshore (NPS), WI, Sum 1979-81.

Botanist, Nalco Chemical Company, Northbrook, IL, Fall 1977.

Undergraduate Field Assistant, University of WI (Madison), 1975-78.

PUBLICATION LIST

Books

Middleton, B.A. 1999. Wetland restoration, flood pulsing and disturbance dynamics. John Wiley and Sons, New York.

Middleton, B.A. (editor). 2002. Flood pulsing in wetlands: restoring the natural hydrological balance. John Wiley and Sons, New York.

Dissertation/Theses

Middleton, B.A. 1989. Succession and goose herbivory in monsoonal wetlands of the Keoladeo National Park, Bharatpur, India. Ph.D. Dissertation, Iowa State University, Ames, IA.

Middleton, B.A. 1983. Sand movement and vegetation in the Apostle Islands, Lake Superior. M.S. Thesis. University of Minnesota, Duluth, MN.

Middleton, B.A. 1978. Vegetational response to grazing in sedge meadow and mesic forest communities in southern Wisconsin. Senior Thesis, University of Wisconsin, Madison, WI.

Journal papers

Middleton, B.A. and D.J. Schimpf. 1986. Sand movement and vegetation in the Apostle Islands, Lake Superior. *Canadian Journal of Botany* 64:1671-1674.

Middleton, B.A. and A.G. van der Valk. 1987. The food habits of Greylag and Barheaded Geese at the Keoladeo National Park, India. *Wildfowl* 38:94-102.

Middleton, B.A. 1988. Food habits of geese in northern India. *Journal of the Ecological Society (India)* 1:37-45.

Middleton, B. A. 1990. Effect of water depth and clipping frequency on the growth and survival of four wetland plant species. *Aquatic Botany* 37: 189-196.

Middleton, B. A., A. G. van der Valk, R. L. Williams, D. J. Mason, and C. B. Davis. 1991. Vegetation dynamics and seed banks of a monsoonal wetland overgrown with *Paspalum distichum* in northern India. *Aquatic Botany* 40:239-259.

Middleton, B. A., A. G. van der Valk, C. B. Davis, D. H. Mason, and R. L. Williams. 1992. Litter decomposition in an Indian monsoonal wetland overgrown with *Paspalum distichum*. *Wetlands* 12:37-44.

- Middleton, B. A. 1993. Habitat and food preferences of geese overwintering in the Keoladeo National Park, Bharatpur, India. *Journal of Tropical Ecology* 8:181-193.
Journal papers (cont.)
- Middleton, B. A. and D. H. Mason. 1992. Seed herbivory by nilgai, feral cattle, and wild boar in the Keoladeo National Park, Bharatpur, India. *Biotropica* 24:538-543.
- van der Valk, A. G., B. A. Middleton, R. L. Williams, D. H. Mason and C. Davis. 1993. The biomass of an Indian monsoonal wetland before and after being overgrown with *Paspalum distichum* L. *Vegetatio* 109:81-90.
- Middleton, B. A. 1994. Decomposition and litter production in a northern bald cypress swamp. *Journal of Vegetation Science* 5:271-274.
- Middleton, B. A. and E. Sanchez. 1994. Microhistological analysis of food habits in the tropics. *La Vida Sylvestre* 3:41-47.
- Middleton, B. A. 1994. Management of monsoonal wetlands for Greylag and Barheaded Geese in the Keoladeo National Park, India. *International Journal of Ecology and Environmental Sciences* 20:1263-171.
- Middleton, B. A. 1995. Sampling devices for the measurement of seed rain and hydrochory in rivers. *Bulletin of the Torrey Botanical Club* 122: 152-155.
- Middleton, B. A. 1995. Ecology of greenways. Book review. *Restoration Ecology* 3: 319-322.
- Middleton, B. A. 1995. Seed banks and species richness potential of coal slurry ponds reclaimed as wetlands. *Restoration Ecology* 3:311-318.
- Middleton, B. A. and U. Melkania. 1995. Decomposition of wet grassland species in a stream of the Himalayan terai, Pantnagar, Uttar Pradesh, India. *International Journal of Ecology and Environmental Sciences* 21:163-168.
- Middleton, B.A., E. Sanchez-Rojas, B. Suedmeyer and A. Michels. 1997. Fire in a tropical dry forest of Central America: A natural part of the disturbance regime? *Biotropica* 29:515-517.
- Akanil, N. and B.A. Middleton. 1997. Leaf decomposition along the Porsuk River, Eskisehir, Turkey. *Canadian Journal of Botany* 75:1394-1397.
- Middleton, B.A., D. Gibson, and A. Lumpe. 1998. Trees in succession. Experiments to Teach Ecology, Volume II. Ecological Society of America. http://www.science.siu.edu/long-term/lessons/bmid_1.htm (peer-reviewed: update in 2003).

Middleton, B.A. 1998. The water buffalo controversy in the Keoladeo National Park, India. *Ecological Modelling* 106: 93-95.

Journal papers (cont.)

Middleton, B.A. 1998. Reply to: The water buffalo controversy in the Keoladeo National Park, India. *Ecological Modelling* 106: 95-98.

D.J. Gibson, B. A. Middleton and G.W. Saunders. 1999. Long-term succession studies for undergraduate research. *American Biology Teacher* 61: 217-222.

Rice, M., B.A. Middleton and D. Gibson. 1999. Fractal analysis of movement pathways in vegetated and unvegetated microlandscapes. *Bios* 1: 176-184.

Oyler, M., J. Rivera, M. Roffel, D. J. Gibson, B. A. Middleton and M. Mathis. 1999. The macaroni lab: a directed inquiry project on predator-prey relationships. *American Biology Teacher* 40: 39-41.

Middleton, B.A. 1999. Succession and herbivory in monsoonal wetlands. *Wetland Ecology and Management* 6: 189-202.

Middleton, B.A. 1999. Flood pulsing in restoration: a feasible alternative for India? *Journal of the Ecological Society* 12: 10-14.

Mathis, M. and B. A. Middleton. 1999. Simulated herbivory and vegetation dynamics in coal slurry ponds reclaimed as wetlands. *Restoration Ecology* 7: 392-398.

Middleton, B. A. 2000. Hydrochory, seed banks, and regeneration dynamics across landscape boundaries in a forested wetland. *Plant Ecology* 146:169-184.

Middleton, B.A. 2001. A case for wetland restoration (book review). *Restoration Ecology* 9: 247-248.

Middleton, B.A. and K.L. McKee. 2001. Degradation of mangrove tissues and implications for peat formation in Belizean island forests. *Journal of Ecology* 89:818-828. (Featured in *Science*, Editor's Choice)

Spyreas, G., D.J. Gibson, and B.A. Middleton. 2001. Effects of endophyte infection in tall fescue (*Festuca arundinacea*: Poaceae) on community diversity. *International Journal of Plant Science* 162:1237-1245.

Middleton, B. A. 2002. Nonequilibrium dynamics of sedge meadows grazed by cattle in southern Wisconsin. *Plant Ecology* 161: 89-110.

- Xiao, N., D.A. Bennett, D.A., B. Middleton, and K. Fessel. 2002. SISM: a multiscale model cypress swamp regeneration. *Geographical & Environmental Modelling* 6: 99-116.
- Middleton, B.A. 2002. Winter burning and the reduction of *Cornus sericea* in sedge meadows in southern Wisconsin. *Restoration Ecology* 10:1-8.
- Journal papers* (cont.)
- Middleton, B. A. 2003. Soil seed banks and the potential restoration of forested wetlands after farming. *Journal of Applied Ecology* 40: 1025-1034.
- Taylor, J. and B. A. Middleton. 2004. Functional comparison of litter decomposition in natural vs. coal slurry ponds reclaimed as wetlands. *Land Degradation and Development* 15:1-8.
- Middleton, B.A. and K.L. McKee. 2004. Use of a latitudinal gradient in bald cypress production to examine physiological controls on biotic boundaries and potential responses to environmental change. *Global Ecology and Biogeography* 13: 247-258.
- Middleton, B.A. and K.L. McKee. 2004. Primary production in an impounded baldcypress swamp at the northern limit of the range. *Wetlands Ecology and Management*: in press.
- Barko, V.A., Beth A. Burke, David J. Gibson, and Beth A. Middleton. 2004. Seedling growth of Wisconsin fast plants (*Brassica rapa*) in field environments. <http://tiee.ecoed.net/vol/v1/toc.html>. *Ecological Society of America: Experiments to Teach Ecology*.
- Middleton, B.A. 2004. Biodiversity conservation through the reengineering of flood pulse in natural and restored wetlands in India. India Water Works Society, Pune, India. (in press).
- Brandon, A.L., D.J. Gibson, and B.A. Middleton. 2004. Mechanisms for dominance in an early old field by the invasive exotic *Lespedeza cuneata* (Dum. Cours.) G. Don. *Biological Invasions* (in press).
- Sengupta, R., B. Middleton, C. Yan, M. Zuro and H. Hartman. 2004. Propagule deposition and landscape characteristics of source forests of *Rhizophora mangle* in coastal landscapes in Florida. *Landscape Ecology* (in press).
- Ture, C., N. Akanil Bingol, B. A. Middleton. 2004. Characterization of the gap environment of *Lythrum salicaria* L. and its relationship to seed production and stem height along arid rivers dominated by *Populus alba* L. in Turkey. *Wetlands* 24: 619-637.
- Middleton, B.A. and J. Grace. Biodiversity and ecosystem functioning: synthesis and perspectives (book review). *Restoration Ecology* (accepted).

Book Chapters

- Middleton, B.A. 2002. Flood pulsing in the regeneration and maintenance of species in riverine forested wetlands of the southeastern United States. Pages 223-294 in B. Middleton, editor. Flood pulsing in wetlands: restoring the natural hydrological balance. John Wiley and Sons, New York.
- Middleton, B.A. 2002. Introduction to the flood pulse concept and its general importance to wetland restoration. Pages 1-10 in B. Middleton, editor. Flood pulsing and wetland restoration: Case histories from North America. Flood pulsing in wetlands: restoring the natural hydrological balance. John Wiley and Sons, New York.
- Middleton, B.A. 2003. Ecology and objective based management: case study of the Keoladeo National Park, Bharatpur, Rajasthan. Pages 86-116 in Battles Over Nature: Science and the Politics of Conservation. V. Saberwal and M. Rangarajan, editors. Permanent Black Publishers, New Delhi, India.
- Brinson, M., B. Bedford, B. Middleton, and J. Verhoeven. 2004. Temperate freshwater wetlands. Book Chapter. Environmental future of freshwater and marine ecosystems, N. Polunin (editor). Cambridge University Press (in press).

Proceedings

- Middleton, B.A. 1980. Human traffic and response of beach vegetation at the Apostle Islands. *Proceedings of the 2nd Conference on Scientific Research in the National Parks* 9:118-140.
- Middleton, B. A. 1996. Characteristics of plants in forested wetlands. Pages 31-37 *In: S. D. Roberts and R. A. Rathfon, editors. Management of Forested Wetlands in the Central Hardwoods Region. Symposium Proceedings, Purdue University, West Lafayette, IN.*
- Xiao, N, Bennett, D., B. A. Middleton, and K. Fessel. 1999. A topographically-based model for seed dispersal and swamp dynamics. *Proceedings of GIS/LIS '98. Fort Worth, TX, 10-12, November 1998.*

Reports and Maps

Davis, C.B., A.G. van der Valk, D.H. Mason, B.A. Middleton, and R.L. Williams. 1988. Ecology of a semitropical monsoonal wetland in India. Final Report, Smithsonian #4013600, Ohio State Univ, Ohio.

Middleton, B. A. 1993. Restoration of cypress swamps along the Cache River, southern Illinois. Final Report to the Office of Research and Administration Development (#2-11770), Carbondale, IL.

Middleton, B. A. 1993. Improvement of plant diversity in coal slurry ponds reclaimed as wetlands through treatment of the seed bank during drawdown. Final Report to the National Mine Land Reclamation Center, Carbondale, IL.

Middleton, B. A. 1995. The role of flooding in seed dispersal: restoration of cypress swamps along the Cache River, Illinois. Final Report, U.S. Geological Survey and Water Resources Center, UILU-URC-94-220.

Starr, E. and B. A. Middleton. 1999. Vegetation overlay of the cypress quad. (Mapping project in ArcInfo as part of the larger project, "A natural resources survey of the Cache River Watershed). Natural Resources Conservation Service, Champaign/Carbondale, IL".

O'Neil, L.J., A.C. Webb, and B. Middleton. 2001. Habitat suitability index model: cypress/tupelo community in southern Illinois. February 2001. ERDC/EL TR-01-xx, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Bennett, D., B. Middleton, S. Kraft, C. Lant, R. Sengupta, J. Beaulieu, D. Sharpe, K. Cook, B. Burr, R. Beck, and K. Flanagan. 2001. Ecosystem function and restoration in the Cache River Bioserve. April 2001. Southern Illinois Field Office of the Nature Conservancy, Ullin, Illinois.

Fact Sheets

Middleton, B.A. and K. L. McKee. 2004. Latitudinal variation in carbon storage to predict future changes in baldcypress swamps with global warming. National Wetlands Research Center Fact Sheet. <http://www.nwrc.usgs.gov/factshts/2004-3019.pdf>

Middleton, B.A. 2004. Long-term changes in sedge meadows due to cattle grazing. National Wetlands Research Center Fact Sheet. <http://www.nwrc.usgs.gov/factshts/2004-3027.pdf>

Middleton, B.A. 2004. Natural restoration basics. National Wetlands Research Center Fact Sheet (in press).

Popular Press Publications

Middleton, B. A. and L. K. Mudgal. 1989. Geese of the Keoladeo. Sanctuary Magazine, Bombay, India.

Middleton, B. A. 1995. Wetlands in your neighborhood. Green Earth Newsletter, Carbondale, IL.

Middleton, B. A. 1997. OTS at SIU. Liana (Newsletter of the Organization of Tropical Studies).

Middleton, B.A. 2000. Ode to my father's farm truck. National Public Radio Commentary, Carbondale, Illinois (commentary read on October 26, 2000).

Middleton, B.A. 2001. Special ode to my father's farm truck. Lodi Enterprise. January 4, 2001.

Middleton, B.A. 2003. Ode to my father's farm truck. *Natural History* 3:88.

Middleton, B.A. Return to Východ. Submitted to Natural History.

b. ARTICLES SUBMITTED/IN PREPARATION FOR PUBLICATION

- Conrad, S., B.A. Middleton and B. Crandall-Stotler. Reproductive ecology and diaspore bank for the bryophytes along the elevational gradient of a bald cypress swamp and old field. *Wetlands* (under revision).
- Middleton, B.A. Flood pulsing and regeneration dynamics: relevance in Asian wetland restoration. *Landscape Ecology* (submitted).
- Bhattacharyya, S., A. Lumpe, D. Gibson and B. Middleton. The significance of proper research design: a critical evaluation of existing strategy used in inquiry-based long-term field experience for undergraduate science courses; validating inquiry methods: an evaluation of an inquiry-based long-term field experiment for undergraduate science course. *American Biology Teacher* (submitted).
- Middleton, B.A., D.J. Gibson, and A. Lumpe. Trees in succession: developing science observation skills and challenging misconceptions. <http://www.ecoed.net/tiee/exps/vol2/fastplants/fastplants.shtml>. *American Biology Teacher* (submitted).
- Thomas, J.R., D.J. Gibson, and B.A. Middleton. Water dispersal of vegetative bulbils of the invasive exotic *Dioscorea oppositifolia* in southern Illinois. *Journal of the Torrey Botanical Club* (submitted).
- Gibson, D.J., B.A. Middleton, K. Foster, Y.A. Honu, E. Hoyer, and M. Mathis. Core and satellite dynamics in response to disturbance and fertilization during early old-field succession (in preparation).
- Middleton, B.A. and X. Ben Wu. Regional spatial patterns of seed banks of baldcypress swamps at the northern extreme of the Mississippi River Alluvial Valley (in preparation).
- Ture, C., N. Bingol, and B.A. Middleton. Taxonomic and phenological characteristics of *Lythrum salicaria* in Turkey (in preparation).
- Thomas, J.R., B.A. Middleton and D.J. Gibson. Longevity, viability, and germination of vegetative bulbils of the invasive exotic *Dioscorea oppositifolia* in southern Illinois. (Biological Invasions: in preparation).
- Thomas, J.R., B.A. Middleton and D.J. Gibson. A landscape perspective of distribution and habitat of an invasive exotic *Dioscorea oppositifolia* in southern Illinois. (Diversity and Distributions: in preparation).

Honu, Y.A.K., D.J. Gibson, and B.A. Middleton. Performance of *Tridens flavus* (L.) A.S. Hitchc. (purpletop) in heterogenous soil nutrient and disturbance regimes in an early successional old field. (in preparation).

b. ARTICLES SUBMITTED/IN PREPARATION FOR PUBLICATION (cont.)

Fessel, K.E. and B.A. Middleton. Effects of sediment load, hydrology, and light intensity on seedling emergence from the seed banks of a *Taxodium distichum* swamp, Illinois, USA. (in preparation).

PROFESSIONAL ACTIVITIES

Secretary General-elect, (2004)-2008, Society of Wetland Scientists
 Society of Ecological Restoration India Advisory Board, 2003-
 Book Editor, Restoration Ecology, 2002-
 Chair and Review Panelist, Rivers and Streams, International Conference on Environmental Future, Swiss Federal Institute for Environmental Science and Technology, Zurich, Switzerland, 2003
 Upper Mississippi Commission (board member), Nature Conservancy, 2002-
 Symposium Organizer, Biodiversity and nutrient dynamics in northern peatlands, INTECOL, Utrecht, The Netherlands, 2004 (proposal accepted; with Ab Grootjens)
 Purple Loosestrife Research Volunteer Workshop, Spooner, Wisconsin, August 2003, (with Indiana Dunes National Park)
 Chair, SWS Symposium, New Orleans, Louisiana, 2003
 Emiquon Advisory Board for the Illinois River, Nature Conservancy, 2001-
 Palo Verde Advisory Committee, Organization of Tropical Studies, Liberia, Costa Rica, 1999-2003
 Assembly of Delegates, Organization of Tropical Studies, Costa Rica, 1993-
 Abstract Reviewer, Society of Wetlands Scientists for 2001 meetings, 2000-2001
 Symposium Organizer, Flood Pulsing and Restoration of Wetlands, INTECOL, Quebec, 2000
 Chair, International Awards, Society of Wetland Scientists, 1997-2000
 Restoration Definition Committee, Society of Wetland Scientists, 1999
 Chair, Wildlife Management, Society of Wetland Scientists Conference, 1999
 Chair, Merit and Life Time Achievement Awards, Society of Wetland Scientists, 1997-2000
 OTS Selection Committee for Tropical Biology Course, 1997
 Internet Discussion Group List Manager, ECOTEACH-L, 1997-2001
 Internet Discussion Group List Manager, WILDERNESS-L, 1997-2002
 Associate Editor, Wetlands, Society of Wetland Scientists, 1992-5
 Selection Committee for the SWS Student Paper Award, 1996, 2000
 Chair, Mangrove Wetlands, INTECOL International Wetlands Conference, 1996
 Regional Technical Planning Committee for Cache River Environmental Restoration, Nature Conservancy and Army Corps of Engineers. Ullin, Illinois, 1994-2002
 Selection for Tropical Biology Course, Organization of Tropical Studies, Costa Rica, 1995
 Life-Time Achievement Award Selection Committee, Society of Wetland Scientists, 1996-1998

Chair, Wetland Ecology Section, Ecological Society of America, Knoxville, Tennessee, 1994
Judge for Buell/Braun Awards, ESA, 1990-1993; Selection Committee, 1992

GRANTS AND RESEARCH SUPPORT RECEIVED

The role of beach vegetation in sandspit morphology in the Apostle Islands, Great Lakes.

1. Department of Biology Graduate Research Fund, Olga Lakela Fund (University of MN) and Sigma Xi, 1982 (\$300)

Wetland ecology of northern India (G. B. Pant University).

2. Council for International Exchange of Scholars (Fulbright), Washington, D. C., 1991 (\$12,000)

Restoration of southern bottomland hardwood forests along the Cache River, southern Illinois.

3. Office of Research Development and Administration, Southern Illinois University, 1991-3 (\$22,000)
4. Private Contributors (Robert Munroe, Gaylord and Dorothy Donnelley, 1991-3 (\$1,500)
5. Illinois Department of Conservation and Nature Conservancy Chicago Area Office, 1991-3 (\$3,000)

The role of flooding in seed dispersal: restoration of cypress swamps in southern Illinois.

6. U.S. Geological Survey/Water Resources Center. University of Illinois, Urbana, IL, 1993-5, (\$35,000)
7. Nature Conservancy Chicago Area Office and Illinois Department of Conservation, 1993-94, (\$2,500)

Improvement of plant diversity in coal slurry ponds reclaimed as wetlands through treatment of the seed bank during drawdown.

8. National Mine Land Reclamation Center, Midwest Region, Carbondale, IL, 1992-3 (\$30,000)

Leaf decomposition and mineral cycling in mangroves in Belize.

9. Smithsonian Institute Caribbean Coral Reef Ecosystems Program, Washington, D.C., 1992-4. (\$3,000)

Cattle grazing and tropical rainforests in Madagascar.

10. B. Middleton, SUNY, New York, 1996-01. (\$11,000)

Long-term field studies for undergraduate students: a snapshot in time.

11. D. Gibson, B. Middleton, G. Saunders, and F. Olson. 1996-2004. National Science Foundation and Southern Illinois University (DUE-9554807; \$242,000)

GRANTS AND RESEARCH SUPPORT RECEIVED (cont.)

Ecosystem Function and Restoration in the Cache River Bioreserve

12. D. Bennett, K. Flanagan, R. Gates, S. Kraft, B. Middleton, D. Sharpe, J. Beaulieu, R. Beck and C. Lant. Nature Conservancy, 1995-8 (\$560,000)

13. University Women's Professional Development, 1995 (\$750; Computer upgrade for the use of theodolite in the field)

14. Illinois Department of Natural Resources, 1995-8. (\$3000; Undergraduate Research Support)

Flood pulsing and the life history of the endangered species, *Boltonia decurrens* on the Illinois River.

15. Middleton, B. 2000-2004. Environmental Protection Agency/STAR. Fellowship for Paige Mettler. (\$102,000)

Dispersal of the exotic *Dioscorea oppositifolia* in wilderness watersheds.

16. D. Gibson and B. Middleton. 2000-2002. Illinois Department of Natural Resources. (\$15,000)

GIS habitat prediction and recovery of the endangered buffalo clovers (*Trifolium reflexum* and *T. stolonifera*) in the northern portion of their ranges.

17. B. Middleton and K. Foster. 2002, Illinois Department of Natural Resources and Mammoth Cave National Park (\$250; logistical support)

18. B. Middleton and K. Foster. 2002, Illinois Native Plant Society (\$1000)

GIS characterization of environment and life history constraints of *Lythrum salicaria* in western Turkey.

18. N. Akanil Bingol, C. Ture, B. Middleton. 2001-2002. Idea Wild (\$6000; equipment for Dumlupinar University, Turkey)

Function, restoration and management of swamps. Part A. Latitudinal variation in primary production and carbon stores in baldcypress swamps of the Mississippi River Alluvial Valley: a surrogate for global climate change prediction. Part B. Regeneration dynamics along the Mississippi River Alluvial Valley.

19. B. Middleton and K. McKee. 2002-present. USGS noncompetitive funding; Principal Investigator and Project Leader; \$50,161; 50% of current effort

Serves as the Project Leader for this study of the effects of climate change (temperature and CO₂ effects) on baldcypress swamps carbon stores and regeneration dynamics along the Mississippi River Alluvial Valley. The field project is located in baldcypress swamps in 6 regions in the North American Baldcypress Swamp Network including the Cache River (IL), Reelfoot Lake (TN), White River (AK),

Morgan Brake/Hillside (MS) and Cat Island (LA). This study will determine if carbon storage and regeneration patterns differ in baldcypress swamps across a latitudinal gradient along the Mississippi River Alluvial Valley from southern Illinois to

GRANTS AND RESEARCH SUPPORT RECEIVED (cont.)

Louisiana. The information will be of value in predicting potential functional changes in baldcypress swamps in the event of climate change, since future carbon storage and regeneration patterns can be inferred indirectly from those of baldcypress swamps already experiencing a variety of climatic environments along this latitudinal gradient. The incumbent oversees the project, which includes Dr. Karen McKee (NWRC), an MS-level biologist, and graduate students. In addition, site managers involved in the project include: Jim Waycuilis (Cache River State Natural Area, Illinois), Bill Reynolds (Fern Cliff State Park, Illinois), Randy Cook (Reelfoot Lake National Wildlife Refuge, TN), Richard Hines (White River National Wildlife Refuge, AK), Travis Carpenter (Morgan Brake/Hillside National Wildlife Refuges, MS) and Virginia Rettig (Cat Island National Wildlife Refuge, LA).

Invasive species and climate change.

20. B. Middleton. 2002-present. USGS noncompetitive funding; Principal Investigator and Project Leader; \$54,218; 40% of current effort

Serves as the Project Leader for a project examining the responses of invasive species to climate change, with a focus on predicting the ability of species to invade new environments based on their physiological responses to temperature and other climate factors (e.g., CO₂ levels). The purple loosestrife study is a geographical comparison of growth and regeneration dynamics in Eurasia vs. North America. Grant proposals have been submitted with the Eurasian team including Dr. Keith Edwards (University of South Bohemia, Czezy Budovice, Czech Republic), Dr. Nuket Akanil Bingol (Dulumpinar University, Kutahya, Turkey), and Dr. Yongxing Yang (Northeast Institute of Geography and Agricultural Ecology, P.R. China), as well as the North American team including Dr. Ken Systemsma (University of Wisconsin-Madison), Dr. Marilyn O'Leary (Louisiana State University), Dr. Joy Marburger (Great Lakes Research Coordinator, NPS, Porter, IN), Robin Maerklein (St. Croix National Scenic Riverway, WI), and Derek Strohl (Wisconsin Wetlands Association, Madison, Wisconsin).

Rivers as sources of biodiversity for the restoration of wetlands on the northwest shores of Lake Pontchartrain.

21. Paul Keddy and Beth Middleton. 2004. EPA. \$75,000: \$4000 subcontract

Landscape characteristics of mangrove forests and propagule deposition in Boca del Toro, Panama.

22. Beth Middleton and Greta Goranova. 2004. Boca del Toro, Smithsonian Field Station. \$3000

Patterns of plant community development in created salt marshes on the Gulf Coast of Louisiana.

23. Beth Middleton. 2004-2006. USGS noncompetitive funding; Principal Investigator and Project Leader; \$30,000; 5% of current effort. Research support for Devarti Bhattacharya (graduate student)

24. Research support for Tracy Elsey (graduate student). 2004. Garden Club of America. \$5000
GRANTS AND RESEARCH SUPPORT RECEIVED (cont.)

Proposals Pending

Middleton, B., K. McKee and D. Bennett. 2004. Latitudinal variation in primary production and carbon stores in baldcypress swamps of the Mississippi River Alluvial Plain: a surrogate for global climate change prediction (3 years: \$250,000 each year; National Science Foundation, July 2004, in preparation).

Web Sites Created

- Middleton, B.A., C. Ture, and N. Akanil Bingol. 2004. Invasive plant species of North America and Turkey. National Wetlands Research Center.
http://www.nwrc.usgs.gov/invasive_species/invasiveplants.htm
- Middleton, B.A. 2004. Purple loosestrife volunteer. National Wetlands Research Center.
www.nwrc.gov/special/purplel/index.htm
- Middleton, B. A. and K. L. McKee. 2004. Latitudinal variation in primary production, carbon stores and function in baldcypress swamps of the Mississippi River Alluvial Valley. Website under construction.
- Escher, T. and B.A. Middleton. 2002- present. Friends of the Scenic Lodi Valley. Lodi Marsh History. <http://www.sceniclodivalley.org/marsh.htm>.
- Middleton, B. and Graduate Landscape Ecology Class, 1997-2002.
Landscape Ecology Corridor Management Plan
<http://www.science.siu.edu/plant-biology/plb545/spring-96/landscap.htm>
- Gibson, D. and B. Middleton, 1997-2002.
National Science Foundation, Long Term Succession Studies for Undergraduate Education
<http://www.science.siu.edu/long-term/index.html>
- Middleton, B., 1997-2002.
National Science Foundation, Long Term Succession Studies for Undergraduate Education
Discussion Group Coordinator: ECOTEACH-L@siu.edu
- Middleton, B. and J. Phelps, 1997-2002.
Tropical Ecology Program at Southern Illinois University
<http://www.science.siu.edu/tropical-studies/index.html>
- Middleton, B. and K. McKee, 1998-2002
Wilderness Scientist Forum
Discussion Group Coordinator: WILDERNESS-L@siu.edu
- Middleton, B. 1999-2002. Environmental Issues in the Contemporary World - Core-curriculum web site for all course materials and student created web materials. <http://www.science.siu.edu/plant-biology/middleton/301iweb/spr99.html>
- Middleton, B. 1999-2002. Wetland plant ecology. Course web site with example student papers and delineation projects.
<http://www.science.siu.edu/plant-biology/middleton/wetweb/wetindex.html>

Middleton, B. 2000-2002. Landscape and Restoration Ecology. Course web site.
<http://www.science.siu.edu/plant-biology/middleton/landscape/landscape.html>

SOCIETY MEMBERSHIPS

Ecological Society of America
Society of Wetland Scientists
British Ecological Society (elected membership)
Association of Tropical Biologists
International Association of Ecologists
Sigma Xi
International Crane Foundation (Honorary Member)
Society for Ecological Restoration
Friends of the Scenic Lodi Valley

Community/Volunteer Service

Washington University Environmental Law Clinic, expert witness (volunteer), 2001-2002
Selection Committee, Natterstedt Simpson College Scholarship Award for Rural Students, Simpson Corporation, 2001-2003.
Lodi Wildlife Area Prairie/Savanna/Marsh Restoration Consultant for Wisconsin DNR, 1997-
Cache River Technical Advisory Committee, 1993-2002.
Emergency Plant Poisoning Consultant, 1996
League of Women Voters Recycling Survey, 1994

INVITED LECTURES, WORKSHOPS, TV/RADIO

1988. **The Indian pea war: Barheaded Geese vs. subsistence farmers.** International Agricultural Colloquium, Ames, Iowa.
1988. **Barheaded Goose conservation.** Canadian Wildlife Service and University of British Columbia, Vancouver, Canada.
1989. **The role of goose herbivory in monsoonal wetlands in India.** Delta Waterfowl & Wetlands Research Station, Portage La Prairie, Canada.
1990. **Succession and goose herbivory in monsoonal wetlands in India.** Arkansas State University, Jonesboro, Arkansas.
1990. **Wildlife in India.** Wildlife Society, Southern Illinois University, Carbondale, Illinois.
1991. **The role of goose herbivory in vegetation dynamics in the Keoladeo Natinal Park.** Bombay Natural History Society, and G. B. Pant, and Pune Universities, India.
1991. **American versus European models of succession dynamics.** G. B. Pant University, Pantnagar, India.
1991. **Living in the U.S.** G. B. Pant University, India.
1991. **Biomes of India.** G. B. Pant University, India.
1991. **Developing frontiers in botanical science.** Pune University, India.
1991. **Landscape ecology. What is it?** Pune University, India.
1991. **Seed dispersal by herbivores in the Keoladeo National Park.** Pune University and Bombay Natural History Society, India.
1992. **Restoration of cypress wetlands along the Cache River in southern IL.** Department of Civil Engineering, U of IL, Urbana, IL.
1992. **The use of seeds banks in the restoration of cypress swamps.** Southern Illinois University at Edwardsville, Edwardsville, IL.
1993. **Workshop on a microhistological technique to determine the food habits of waterfowl based on the plant fragments in droppings.** National University of Costa Rica, Heredia, Costa Rica.

INVITED LECTURES, WORKSHOPS, TV/RADIO (cont.)

1993. **Comparison of successional patterns of seasonal wetlands in western Costa Rica, northern India, and the midwestern U.S.** National University of Costa Rica, Heredia, Costa Rica.
1993. **Science in far away places.** Address to the Junior Academy Science Fair, Region 8 Competition, Carbondale, Illinois.
1993. **SIU Connections.** SIU Public Television. Cache River interview and environmental studies.
1994. **Characteristics of plants in wetland ecosystems.** Management of forested wetland ecosystems in the Central Hardwood Region. Purdue, Indiana.
1994. **World wetlands.** Puerto Umo, Costa Rica.
1994. **Restoration of cypress swamps along the Cache River.** Cache Consortium and Nature Conservancy, Shawnee College, Ullin, IL.
1994. **Wetlands in your neighborhood.** Green Earth, Carbondale, IL.
- 1995 & 96. **What's happening in the Cache?** Student Environmental Center, Carbondale, IL.
1995. **The role of flooding in seed dispersal in cypress swamps.** Invited speaker to the Annual Board Meeting of the Illinois Water Resource Center, Champaign, Illinois.
1996. **The effects of cattle grazing on rainforest in Ranomafana National Park, Ranomafana, Madagascar.** National Park Service, Antananarivo, Madagascar.
1996. **Wealth in wetlands.** Lake Management Workshop, Lake of Egypt Power District Commission, Lake of Egypt, Illinois.
1997. **Research approaches in India.** Wetland Biogeochemistry Lab, Baton Rouge, Louisiana.
1998. **Flood pulsing, natural disturbance and wetland restoration.** Rookery Bay National Estuarine Research Reserve, Naples, Florida.
1998. **Cypress swamp restoration at the northern extreme of the range.** National Biological Survey, National Wetlands Laboratory, Lafayette, Louisiana.

1998. **Natural restoration of cypress swamps.** Sierra Club, Carbondale, Illinois.

INVITED LECTURES, WORKSHOPS, TV/RADIO (cont.)

1999. **Wetland restoration, flood pulsing and disturbance dynamics.** Illinois Natural History Survey, Champaign, Illinois.

1999. **Wetland restoration, flood pulsing and disturbance dynamics.** University of Maryland, UMCES Frostburg Lab, Frostburg, Maryland.

2000. **Wetland restoration, flood pulsing and disturbance dynamics.** Saluki Naturalists, SIU, Carbondale, Illinois.

2000. **Identificación de plantas en sitios arqueológicos.** Department of Archeology, University of Costa Rica, San Jose, Costa Rica.

2000. **Uso antiguo vs. uso actual de los humedales.** Department of Archeology, University of Costa Rica, San Jose, Costa Rica.

2001. **Landscape ecology principles in restoration ecology.** Kentucky Fish and Wildlife, Greenville, Kentucky.

2001. **Wetland restoration, flood pulsing and disturbance dynamics.** Department of Landscape Architecture, Ames, Iowa.

2001. **Wetland restoration, flood pulsing and disturbance dynamics.** University of Wisconsin, Madison, Wisconsin.

2001. **Flood pulsing and cypress swamp restoration.** Universitet Dulumpinar, Kutahya, Turkey (translated by Nuket Bingol).

2001. **Flood pulsing and restoration of wetlands.** National Wetlands Research Center, Lafayette, Louisiana.

2002. **Flood pulsing and plant regeneration dynamics in baldcypress swamps.** Wisconsin Wetlands Association, Fond du Lac, Wisconsin.

2002. **Flood pulsing and restoration of wetlands.** Murray State University, Kentucky.

2002. **Winter burning and control of shrubs following grazing in the Lodi Wildlife Area.** Friends of the Scenic Lodi Valley.

2002. **Flood pulsing and restoration of wetlands**. Texas A & M, College Station, Texas.

2002. **Production and carbon storage trends across a latitudinal gradient in baldcypress swamps**. University of Louisiana, Lafayette, Louisiana.

INVITED LECTURES, WORKSHOPS, TV/RADIO (cont.)

2003. **Flood pulsing in the spatial dynamics of regeneration and production in baldcypress swamps**. University of New Orleans, New Orleans, LA.

2003. **Disturbance dynamics in coastal marsh restoration**. CREST, Thibeaudeau, Louisiana.

2003. **Interview with Czech TV reporter, Petra Flanderkova on carbon and other research at National Wetlands Research Center**.

2003. **Hydrologic and disturbance dynamics in wetlands: restoring the natural balance**. (plenary speaker: Botanical Society of America, Mobile, Alabama).

2003. **Latitudinal variation in primary production and carbon stores in baldcypress swamps of the Mississippi River Alluvial Plain: a surrogate for global climate change prediction**. (colloquium speaker: CCGCR, McGill University, Montreal, Canada).

2003. **Cattle grazing and long-term effects on sedge meadows in Wisconsin**. (colloquium speaker: Texas A & M, College Station, TX).

2004. **Hydrologic and disturbance dynamics in wetlands: restoring the natural balance**. (colloquium speaker: Louisiana State University, September 2004).

COMMITTEE AND OTHER UNIVERSITY SERVICE

Organization of Tropical Studies, Assembly of Delegates, 1993-
Faculty Senate, Southern Illinois University, 1999-2002.

College of Science Operating Paper, Southern Illinois University, 2000-

Sigma Xi Nomination Committee, Elected Position, Southern IL University, 1998-

Plant Science Ph.D. Committee, Southern IL University, 1998-, ch

Sigma Xi Membership Selection Committee, Southern IL University, 1998-, elected position

School of Agriculture Dean Search Committee, Southern Illinois University, 1999.

Program Assessment, Southern IL University, 1998-

Herbarium, Southern IL University, 1990-1

Evaluation and Awards, Southern IL University, 1991

Greenhouse, Southern IL University, 1990-2, ch

Ecology Search, Southern IL University, 1991-2

Cache River Planning, Southern IL University, 1991-3
Environmental Advisory, Southern IL University, 1991-5
Evaluation and Awards Committee, Southern IL University, 1992-3, ch
University Recycling Committee, Southern IL University, 1993-4
Outstanding Teacher in College of Science Committee, Southern IL University, 1994-
Environmental Studies Curriculum Committee, Southern IL University, 1994-5
Minority Recruitment (PROMPT) Advisory Board, Southern IL University, 1994-
International Programs Advisory Board, Southern IL University, 1994-

Abstracts

- Middleton, B.A. 1980. Human traffic and response of beach vegetation at the Apostle Islands. *Second Conference on Scientific Research in the National Parks*, San Francisco, CA. 307.
- Middleton, B.A. 1983. Sand movement and vegetation in the Apostle Islands, Lake Superior. MN Acad. of Science, MN, Duluth, MN.
- Middleton, B.A. 1988. Effect of water depth and clipping frequency on the growth and survival of four wetland plant species. *Bulletin of the Ecological Society of America* 69.
- Middleton, B.A. 1989. Succession and goose herbivory in monsoonal wetlands in northern India. *Bulletin of the Ecological Society of America* 70:204.
- Middleton, B.A. and D.H. Mason. 1990. Seed dispersal by herbivores in the Keoladeo National Park, Bharatpur, India. *Bulletin of the Ecological Society of America* 71.
- Middleton, B.A. 1990. Goose herbivory and management in the Keoladeo National Park, Bharatpur, India. Pages 103-105 in *Seminar on Wetland Ecology and Management*, 23-25 February 1990. Keoladeo National Park, Bharatpur, India.
- Davis, C.B., A.G. van der Valk, B.A. Middleton, D.H. Mason, and R.L. Williams. 1990. Management strategies for the wetlands of the Keoladeo Ghana National Park. Pages 143-145 in *Seminar on Wetland Ecology and Management*, 23-25 February 1990. Keoladeo National Park, Bharatpur, India.
- Middleton, B.A., A.G. van der Valk, C.B. Davis, D.H. Mason, and R.L. Williams. 1991. Litter studies in monsoonal wetlands of the Keoladeo National Park, Bharatpur, India. *Bulletin of the Ecological Society of America* 72.
- Middleton, B.A. 1992. Seed movement along riverine corridors from intact to farmed cypress-tupelo swamps along the Cache River in southern Illinois. *Bulletin of the Ecological Society of America* 73.
- Stotler, R., B. Crandall-Stotler, and B.A. Middleton. 1992. The ecology of liverworts along the Cache River in southern Illinois. *AIBS. Amer. J. Bot. Abstracts* 79(6, Supplement):17-18.
- Middleton, B.A. 1992. Management of monsoonal wetlands for Greylag and Barheaded Geese based on their food and habitat preferences in the Keoladeo National Park, India. *International Association of Ecology* 4:97.

Abstracts (cont.)

- Middleton, B.A. 1993. The role of flooding in seed dispersal in disturbed cypress swamps in southern Illinois. *Bulletin of the Ecological Society of America* 74(2 Suppl.):359-360.
- Middleton, B. A. 1994. Seed dispersal along elevational gradients in ice impacted cypress swamps in southern Illinois. *Society of Wetland Scientists* 88.
- Basinger, M. A. and B. A. Middleton. 1994. Plant species distribution and environment in baldcypress wetlands in the Cache River region in southern Illinois. *Bulletin of the Ecological Society of America* 75(2 Part2):11.
- Wilker, J. R. and B. A. Middleton. 1994. Seed density patterns within an alluvial cypress-tupelo swamp in southern Illinois. *Bulletin of the Ecological Society of America* 75(2 Part 2):249.
- Sanchez-Rojas, E., and B. A. Middleton. 1994. Herbivory and seed bank dynamics in a seasonal wet/dry wetland near Palo Verde National Park, Costa Rica. *Bulletin of the Ecological Society of America* 75(2 Part 2):203-204
- Middleton, B. A. and K. L. McKee. 1994. Above- and below-ground leaf decomposition in mangrove swamps, Twin Cays, Belize. *Bulletin of the Ecological Society of America* 75(2 Part 2):154.
- Middleton, B. A., K. L. McKee, I. Feller, and W. Heyman. 1995. Nutrient limitation of above- and below-ground decomposition in ecotones of mangrove swamps at Twin Cays and Punta Ycacas, Belize. *Ecological Society of America. Bulletin of the Ecological Society of America* 76(3 Suppl.):366.
- Taylor, J. and B. A. Middleton. 1995. Litter decomposition in coal slurry ponds. *Illinois Academy of Science*.
- Giedeman, C. and B. A. Middleton. 1995. The effects of agriculture on the seed banks of the American Bottoms floodplain of the Mississippi. *Illinois Academy of Science*.
- Nakashima, T., B. Middleton, H. Kaneko, and M. McKernan. 1995. The relationship of epiphyte load, tree species and distance from coast in Costa Rica. *Illinois Academy of Science*.
- Villeda, P., B. Middleton, and H. Harris. 1995. Cypress seed germination in relation to soil moisture and temperature along the Cache River, southern Illinois. *IL Academy of Science*.
- Kaneko, H., B. Middleton, T. Nakashima, and M. McKernan. 1995. Movement pathways of grasshoppers and hermit crabs in vegetated and non-vegetated areas in Costa Rica using fractal analysis. *Illinois Academy of Science*.

Abstracts (cont.)

- Middleton, B. A. 1995. Elevation and seed dispersal in disturbed cypress swamps in southern Illinois. Illinois Academy of Science.
- Middleton, B. A., K. Fessel, K. Flanagan, and R. Sengupta. 1996. Ecosystem function and restoration in the Cache River Bioreserve, Part 2: The role of flood pulsing and sedimentation in cypress swamp regeneration. American Water Resources Association.
- Gibson, D. J., Middleton, B. A., and G. W. Saunders. 1996. The establishment of a long-term field experiment to enhance undergraduate ecology education. Bulletin of the Ecological Society of America 77 (3 Suppl. Part 2):162.
- Middleton, B. A., D. J. Gibson and G. W. Saunders. 1996. Wetland succession studies for undergraduate education. INTECOL, Perth, Australia 5:143.
- Middleton, B. A., K. L. McKee, and W. D. Heyman. 1996. Vegetation and seed bank composition across a riverine mangrove landscape at Punta Ycacos, Belize. INTECOL, Perth, Australia 5:81.
- Middleton, B. A. 1996. Vegetation change in monsoonal wetlands and herbivory. INTECOL Symposium, Perth, Australia 5:60.
- Gibson, D.J., B.A. Middleton, and G. W. Saunders. 1997. Directed inquiry in ecology instruction: The transition. Bulletin of the Ecological Society of America 78(4 Suppl.):251.
- Mathis, M., Middleton, B. A., D. J. Gibson , G. W. Saunders, and W. Weaver. 1997. Wetland succession studies for undergraduate education. Society of Wetland Scientists.
- Fessell, K. and B. A. Middleton. 1997. Seedling establishment of bald cypress swamp species buried by varying depths of sediment. BSA, Montreal, Canada.
- Middleton, B.A. 1998. Sedge meadows and cattle grazing. ESA, Baltimore, Maryland 83:95.
- Mathis, M., B.A. Middleton, D. J. Gibson, A. Lumpe, K. Kantz, S. Bhattacharyya and G.W. Saunders. 1998. Improving ecological literacy through the use of inquiry teaching approaches in long-term succession plots. Ecological Society of America 83:192.
- Xiao, N, Bennett, D., B. A. Middleton, and K. Fessel. 1998. A topographically-based model for seed dispersal and swamp dynamics. 1999. Proceedings of GIS/LIS '98. Fort Worth, TX, 10-12, November 1998.

Lumpe, A.T., D. Gibson, and B. Middleton. 1999. Teaching ecology through field-based inquiry. NSTA National Convention, Boston, Massachusetts.

Abstracts (cont.)

Middleton, B.A. and K.L. McKee. 1999. Primary production and impoundment in cypress swamps. Illinois Academy of Science 91: 48.

Giedeman, C.P. and B.A. Middleton. 1999. Restoration potential of the American Bottom floodplain of the Mississippi River. Illinois Academy of Science 91: 45.

Mettler, P.A., M. Smith and B.A. Middleton. 1999. Effect of land use history on floodplain vegetation of the Illinois River Valley. Illinois Academy of Science 91: 45.

Mathis, M.J., B.A. Middleton and D.J. Gibson. 1999. Herbivory and old-field succession. I. The seed bank. Illinois Academy of Science 91: 47.

Sebby, H.A., J.S. Ely, D.J. Gibson and B.A. Middleton. 1999. Early competition between native and non-native grasses. Illinois Academy of Science 91: 87.

Johnson, S.W., J.S. Ely, B.A. Middleton and D.J. Gibson. 1999. Population dynamics of small mammals in relation to plant succession. Illinois Academy of Science 91: 78.

Ramage, C.A., J.S. Ely, B.A. Middleton and D.J. Gibson. 1999. Effects of old field succession on crayfish distribution patterns. Illinois Academy of Science 91: 78.

Middleton, B.A. and K.L. McKee. 1999. Flood pulse dynamics and production characteristics of a northern cypress swamp. Society of Wetland Scientists.

Middleton, B.A. 1999. Seed dispersal and flood pulsing dynamics in cypress swamps. Ecological Society of America 84.

Akanil, N., B. Middleton, and C. Ture. 2000. Leaf litter decomposition rate along the Porsuk River, Eskişehir, Turkey. Second Balkan Botanical Congress (poster).

Akanil, N., B. Middleton, and C. Ture. 2000. Leaf litter decomposition rate along the Porsuk River, Eskişehir, Turkey. INTECOL, Quebec City, Canada (Akanil awarded the International Travel Award).

Emmert, S.Y., B.A. Middleton and D.J. Gibson. 2000. Effects of soil nutrients and pH on species richness in a lowland old field in Carbondale, IL. IL Academy of Science, Quad Cities, IL.

Middleton, B.A. 2000. Flood pulsing in the regeneration and maintenance of cypress swamp species. INTECOL, Quebec City, Canada.

Hoyer, E., M. Minzner, T. Beyrl, E. Brennan, and B. Middleton. 2001. Functional assessment of cypress swamp restoration, Cache River, Illinois. Association of Southeastern Biologists.

Abstracts (cont.)

Mettler, P.A., B. Rizzo, B. Middleton and M. Smith. 2000. Assessment of habitat availability for *Boltonia decurrens*, a threatened floodplain species using a GIS. IL Academy of Science, Quad Cities, IL.

Middleton, B. 2001. Nonequilibrium dynamics in cattle grazed sedge meadows. Society of Wetland Scientists.

Middleton, B. and K. McKee. 2001. Primary production along a latitudinal gradient in cypress swamps. Ecological Society of America, Madison, Wisconsin.

Middleton, B. 2002. Flood pulsing and restoration of wetlands. Wisconsin Wetlands Association, Fond du Lac, Wisconsin (Feb. 2002).

Middleton, B. and K. McKee. 2002. Primary production, impoundment and restoration of baldcypress swamps along a latitudinal gradient in North America. SWS, China.

Middleton, B. 2002. Regional spatial patterns of seedbanks of baldcypress swamps at the northern extreme of the Mississippi Embayment. ESA.

Middleton, B. 2002. Wetland restoration, flood pulsing and regeneration dynamics. SWS, China.

Middleton, B. 2003. Temperate freshwater wetlands: hydrology, climate change, other threats. ICEF, Zurich, Switzerland.

Middleton, B. and K. McKee. 2003. Production and carbon storage trends across a latitudinal gradient in baldcypress swamps (SWS, New Orleans).

Middleton, B. 2003. Hydrologic and disturbance dynamics in wetlands: restoring the natural balance. (invited symposium: Botanical Society of America, Mobile, Alabama).

Middleton, B. and K. McKee. 2003. Latitudinal variation in primary production. (poster: Botanical Society of America, Mobile, Alabama).

Middleton, B. 2003. Incorporating disturbance dynamics in restoration projects. CREST, Thibodeaux, Louisiana.

Akanil Bingol, N., C. Ture, and B. Middleton. 2003. Growth and development of *Lythrum salicaria* L. in different biogeographical regions in Turkey. INTECOL, Utrecht, Netherlands (accepted).

Abstracts (cont.)

- Middleton, B.A. 2003. Vegetation change, flood pulsing and disturbance dynamics in monsoonal wetlands and implications for restoration. Indian Water Works Association, Mumbai, India (accepted).
- Foster, K.A., S. Sipes and B.A. Middleton. 2003. Effects of heating and scarification on germination of *Trifolium reflexum*. Association of Southeastern Biologists (accepted).
- Middleton, B.A. and Rudy van Diggelen. 2004. Global issues in fen/sedge meadow research, management and biodiversity maintenance: an overview and Wisconsin perspective. Intecol, Utrecht (accepted).
- Middleton, B.A., N. Akanil Bingol and C. Ture. 2004. Latitudinal variation in height of *Lythrum salicaria* in North America vs. Eurasia. Intecol, Utrecht, poster.
- Middleton, B.A. 2004. Latitudinal variation in height and seed set of purple loosestrife in Eurasia vs. North America: volunteer program for purple loosestrife research. SWS, Seattle, poster.
- Middleton, B.A. and M. Stevens. 2004. Capacity building in the Iraqi scientific community – Internet courses on the Mesopotamian marshes for Iraqi women. SWS, contributed paper.
- Middleton, B.A. and X. Ben Wu. 2004. Regional spatial patterns of seed banks of baldcypress swamps at the northern extreme of the Mississippi River Alluvial Valley, SWS, Seattle, poster.
- Ture, C., N. Akanil Bingol and B. A. Middleton. 2004. Growth and development of *Lythrum salicaria* L. in different biogeographical regions of Turkey, INTECOL, Utrecht, contributed paper.

Paper Presentations

- Middleton, B.A. 1978. Rare and endangered species of the Apostle Islands National Lakeshore, Apostle Islands Research Conference, Bayfield, WI.
- Middleton, B.A. 1979. Human traffic and response of beach vegetation at the Apostle Islands. Apostle Islands Research Conference, Bayfield, WI.
- Middleton, B.A. 1980. Human traffic and response of beach vegetation at the Apostle Islands. Second Conference on Scientific Research in the National Parks, San Francisco, CA.
- Middleton, B.A. 1983. Sand movement and vegetation in the Apostle Islands, Lake Superior. MN Acad. of Science, MN, Duluth, MN.
- Middleton, B.A. 1988. Effect of water depth and clipping frequency on the growth and survival of four wetland plant species. Ecological Society of America, Columbus, Ohio.
- Middleton, B.A. 1989. Succession and goose herbivory in monsoonal wetlands in northern India. Ecological Society of America, Toronto, Canada.
- Middleton, B.A. and D.H. Mason. 1990. Seed dispersal by herbivores in the Keoladeo National Park, Bharatpur, India. Ecological Society of America, Snowbird, Utah.
- Middleton, B.A., A.G. van der Valk, C.B. Davis, D.H. Mason, and R.L. Williams. 1991. Litter studies in monsoonal wetlands of the Keoladeo National Park, Bharatpur, India. Ecological Society of America, San Antonio, TX.
- Middleton, B.A. 1992. Seed movement along riverine corridors from intact to farmed cypress-tupelo swamps along the Cache River in southern Illinois. Ecological Society of America, Honolulu, Hawaii.
- Stotler, R., B. Crandall-Stotler, and B.A. Middleton. 1992. The ecology of liverworts along the Cache River in southern Illinois. AIBS, Honolulu, Hawaii.
- Middleton, B.A. 1992. Management of monsoonal wetlands for Greylag and Barheaded Geese based on their food and habitat preferences in the Keoladeo National Park, India. International Association of Ecology, Columbus, Ohio.
- Middleton, B.A. 1993. Flooding and seed dispersal in cypress swamps in southern Illinois. Ecological Society of America, Madison, Wisconsin.
- Middleton, B. A. 1994. Seed dispersal along elevational gradients in ice impacted cypress swamps in southern Illinois. Society of Wetland Scientists, Portland, Oregon.

Paper Presentations (cont.)

- Basinger, M. A. and B. A. Middleton. 1994. Plant species distribution and environment in baldcypress wetlands in the Cache River region in southern Illinois. Ecological Society of America, Knoxville, Tennessee.
- Wilker, J. R. and B. A. Middleton. 1994. Seed density patterns within an alluvial cypress-tupelo swamp in southern Illinois. Ecological Society of America, Knoxville, Tennessee.
- Sanchez-Rojas, E., and B. A. Middleton. 1994. Herbivory and seed bank dynamics in a seasonal wet/dry wetland near Palo Verde National Park, Costa Rica. Ecological Society of America, Knoxville, Tennessee.
- Middleton, B. A. and K. L. McKee. 1994. Above- and below-ground decomposition in mangrove swamps, Twin Cays, Belize. Ecological Society of America, Knoxville, Tennessee.
- Middleton, B. A. 1994. Characteristics of plants in forested wetlands. Management of Forested Wetland Ecosystems in the Central Hardwood Region. Purdue University, Evanston, Indiana (invited speaker).
- Middleton, B. A., K. L. McKee, I. Feller, and W. Heyman. 1995. Nutrient limitation of above- and below-ground decomposition in ecotones of mangrove swamps at Twin Cays and Punta Ycacas, Belize. Ecological Society of America, Snowbird, Utah.
- Taylor, J. and B. A. Middleton. 1995. Litter decomposition in coal slurry ponds. Illinois Academy of Science.
- Giedeman, C. and B. A. Middleton. 1995. The effects of agriculture on the seed banks of the American Bottoms floodplain of the Mississippi. Illinois Academy of Science.
- Nakashima, T., B. Middleton, H. Kaneko, and M. McKernan. 1995. The relationship of epiphyte load, tree species and distance from coast in Costa Rica. Illinois Academy of Science.
- Villeda, P., B. Middleton, and H. Harris. 1995. Cypress seed germination in relation to soil moisture and temperature along the Cache River, southern Illinois. Illinois Academy of Science.
- Kaneko, H., B. Middleton, T. Nakashima, and M. McKernan. 1995. Movement pathways of grasshoppers and hermit crabs in vegetated and non-vegetated areas in Costa Rica using fractal analysis. Illinois Academy of Science.

Middleton, B. A. 1995. Elevation and seed dispersal in disturbed cypress swamps in southern Illinois. Illinois Academy of Science.

Paper Presentations (cont.)

Middleton, B. A., K. Fessel, K. Flanagan, and R. Sengupta. 1996. Ecosystem function and restoration in the Cache River Bioreserve, Part 2: The role of flood pulsing and sedimentation in cypress swamp regeneration. American Water Resources Association, Syracuse, New York.

Mathis, M. and B. Middleton. 1996. Herbivory in coal ponds. Society of Wetland Scientists, Kansas City, Missouri.

Fessel, K. and B. Middleton. 1996. Seed germination and sedimentation. Society of Wetland Scientists, Kansas City, Missouri.

Middleton, B. 1996. Flood pulsing and plant regeneration in cypress swamps. Society of Wetland Scientists, Kansas City, Missouri.

Middleton, B. A., D. J. Gibson and G. W. Saunders. 1996. Wetland succession studies for undergraduate education. INTECOL, Perth, Australia.

Gibson, D. J., B. A. Middleton, and G. W. Saunders. 1996. The establishment of a long-term field experiment to enhance undergraduate ecology education. Ecological Society of America.

Middleton, B. A., K. L. McKee, and W. D. Heyman. 1996. Vegetation and seed bank composition across a riverine mangrove landscape at Punta Ycacos, Belize. INTECOL, Perth, Australia.

Middleton, B. A. 1996. Vegetation change in monsoonal wetlands and herbivory. INTECOL Symposium, Perth, Australia (invited speaker).

Mathis, M., Middleton, B. A., D. J. Gibson, G. W. Saunders, and W. Weaver. 1997. Wetland succession studies for undergraduate education. Society of Wetland Scientists.

Gibson, D.J., B.A. Middleton, and G. W. Saunders. 1997. Directed inquiry in ecology instruction: The transition. Ecological Society of America.

Fessel, K. and B.A. Middleton. 1997. Seedling establishment of bald cypress species buried by varying depths of sedimentation. BSA, Montreal, Canada.

Mathis, M., B.A. Middleton, D. J. Gibson, A. Lumpe, K. Kantz, S. Bhattacharyya and G.W. Saunders. 1998. Improving ecological literacy through the use of inquiry teaching approaches in long-term succession plots. ESA 83:192.

Middleton, B.A. 1998. Sedge meadows and cattle grazing. ESA, Baltimore, Maryland 83:95.

Paper Presentations (cont.)

Xiao, N, Bennett, D., B. A. Middleton, and K. Fessel. 1998. A topographically-based model for seed dispersal and swamp dynamics. Proceedings of GIS/LIS '98. Fort Worth, TX, 10-12, November 1998.

Middleton, B.A. and K.L. McKee. 1999. Primary production and impoundment in cypress swamps. Illinois Academy of Science, Carbondale, IL.

Giedeman, C.P. and B.A. Middleton. 1999. Restoration potential of the American Bottom floodplain of the Mississippi River. Illinois Academy of Science, Carbondale, IL.

Mettler, P.A., M. Smith and B.A. Middleton. 1999. Effect of land use history on floodplain vegetation of the Illinois River Valley. Illinois Academy of Science, Carbondale, IL.

Mathis, M.J., B.A. Middleton and D.J. Gibson. 1999. Herbivory and old-field succession. I. The seed bank. Illinois Academy of Science, Carbondale, IL.

Sebby, H.A., J.S. Ely, D.J. Gibson and B.A. Middleton. 1999. Early competition between native and non-native grasses. Illinois Academy of Science, Carbondale, IL.

Johnson, S.W., J.S. Ely, B.A. Middleton and D.J. Gibson. 1999. Population dynamics of small mammals in relation to plant succession. Illinois Academy of Science, Carbondale, IL.

Ramage, C.A., J.S. Ely, B.A. Middleton and D.J. Gibson. 1999. Effects of old field succession on crayfish distribution patterns. Illinois Academy of Science, Carbondale, IL.

Middleton, B.A. 1999. Funding opportunities in India. Society of Wetland Scientists, Norfolk, Virginia.

Middleton, B.A. and K. L. McKee. 1999. Primary production and impoundment across latitudinal gradients. Society of Wetland Scientists. Norfolk, VA.

Middleton, B.A. 1999. Flood pulsing, seed dispersal and regeneration in a cypress swamp at the northern extreme of the region. Spokane, Washington.

Akanil, N. B. Middleton and C. Ture. 2000. Leaf litter decomposition rate along the Porsuk River, Eskisehir, Turkey. Second Balkan Botanical Congress (poster).

Middleton, B.A. 2000. Flood pulsing in the regeneration and maintenance of cypress swamp species. INTECOL, Quebec City, Canada (invited speaker).

Mettler, P.A., B. Rizzo, B. Middleton and M. Smith. 2000. Assessment of habitat availability for *Boltonia decurrens*, a threatened floodplain species using a GIS. IL Academy of Science, Quad Cities, IL.

Paper Presentations (cont.)

Emmert, S.Y, B.A. Middleton and D.J. Gibson. 2000. Effects of soil nutrients and pH on species richness in a lowland old field in Carbondale, IL. IL Academy of Science, Quad Cities, IL.

Hoyer, E., M. Minzner, T. Beyrl, E. Brennan, and B. Middleton. 2001. Functional assessment of cypress swamp restoration, Cache River, Illinois. Association of Southeastern Biologists.

Middleton, B. 2001. Nonequilibrium dynamics in cattle grazed sedge meadows. Society of Wetland Scientists, Chicago, Illinois.

Middleton, B. and K. McKee. 2001. Primary production along a latitudinal gradient in cypress swamps. Ecological Society of America, Madison, Wisconsin.

Middleton, B. 2002. Flood pulsing and restoration of wetlands. Wisconsin Wetlands Association, Fond du Lac, Wisconsin (Feb. 2002).

Middleton, B. 2002. Regional spatial patterns of seedbanks of baldcypress swamps at the northern extreme of the Mississippi Embayment. ESA, Tucson, AZ.

Middleton, B. and K. McKee. 2002. Primary production, impoundment and restoration of baldcypress swamps along a latitudinal gradient in North America. Society of Wetland Scientist, Nanjing, China.

Middleton, B. 2002. Wetland restoration, flood pulsing and regeneration dynamics. Society of Wetland Scientists, Nanjing, China.

Middleton, B. and K. McKee. 2003. Production and carbon storage trends across a latitudinal gradient in baldcypress swamps (SWS, New Orleans).

Middleton, B. 2003. Temperate freshwater wetlands: hydrology, climate change, and other threats. International Conference on Environment Futures, Zurich, Switzerland (invited speaker).

Middleton, B. 2003. Hydrologic and disturbance dynamics in wetlands: restoring the natural balance. (plenary speaker: Botanical Society of America, Mobile, Alabama).

Middleton, B. and K. McKee. 2003. Latitudinal variation in primary production. (accepted poster: Botanical Society of America, Mobile, Alabama).

Middleton, B. 2003. Incorporating disturbance dynamics in restoration projects. CREST, Thibodeux, Louisiana.

Paper Presentations (cont.)

Akanil Bingol, N., C. Ture, and B. Middleton. 2003. Growth and development of *Lythrum salicaria* L. in different biogeographical regions in Turkey. INTECOL, Utrecht, Netherlands (2004).

Middleton, B.A. 2003. Vegetation change, flood pulsing and disturbance dynamics in monsoonal wetlands and implications for restoration. Indian Water Works Association, Mumbai, India (Delivered by Narayan Desai, Sept 2003).

Middleton, B.A. and Rudy van Diggelen. 2004. Global issues in fen/sedge meadow research, management and biodiversity maintenance: an overview and Wisconsin perspective. Intecol, Utrecht, symposium.

Middleton, B.A., N. Akanil Bingol and C. Ture. 2004. Latitudinal variation in height of *Lythrum salicaria* in North America vs. Eurasia. Intecol, Utrecht, poster.

Middleton, B.A. 2004. Latitudinal variation in height and seed set of purple loosestrife in Eurasia vs. North America: volunteer program for purple loosestrife research. SWS, Seattle, poster.

Middleton, B.A. and M. Stevens. 2004. Capacity building in the Iraqi scientific community – Internet courses on the Mesopotamian marshes for Iraqi women. SWS, Seattle, contributed paper.

Middleton, B.A. and X. Ben Wu. 2004. Regional spatial patterns of seed banks of baldcypress swamps at the northern extreme of the Mississippi River Alluvial Valley, SWS, Seattle, poster.

Ture, C., N. Akanil Bingol and B. A. Middleton. 2004. Growth and development of *Lythrum salicaria* L. in different biogeographical regions of Turkey, INTECOL, Utrecht, contributed paper.

Graduate Student Principal Research Advisor

Southern Illinois University (until March 2002)

1. Mark Basinger - M.S. 1994. "Plant diversity and environment along the Cache River in southern Illinois."
2. Jonathon Taylor - M.S. 1995. "Leaf decomposition in coal slurry ponds in southern Illinois".
3. Bob Weichman - M.S. 1996. Biological Sciences. "Natural history of the Cache River".
4. Nuket Akanil - M.S. 1996. "Leaf decomposition in montane streams in Turkey".
5. Shawn Conrad – M.S. 1997. "Ecology of liverworts along the Cache River" (joint student with Barbara Crandall-Stotler and Ray Stotler).
6. Janet Taylor – M.S., Biological Sciences, 1998. "Genetic markers in Flyer vs. Hartwig strains of soybeans for fungal resistance" (joint student with David Lightfoot)
7. Charlie Giedeman - Ph.D. 1999, "Restoration of bottomland hardwood forests in the American Bottoms of the Mississippi River near St. Louis."
8. John Wilker - M.S. 1999, "Flooding and seed dispersal along the Cache River".
9. Marilyn Mathis - Ph.D. 2000. "Deer herbivory and old field succession".
M.S. 1996. "Species diversity and herbivory in coal slurry ponds".
10. Keith Fessell - Ph.D., 2003, "Effects of sedimentation on seedbanks of the Cache River swamps".
11. Kari Foster - M.S., 2004. "Dispersal dynamics of the endangered running buffalo clover in Kentucky and Illinois".
12. Jennifer Thomas - M.S., 2004. "Dispersal of the exotic *Dioscorea oppositifolia*" (joint student with David Gibson).
13. Margaret Minzner – M.S. "Effects of cattle grazing on montane peatlands in Ranomafana National Park, Madagascar".
13. Erik Hoyer – Ph.D., "Functional assessment of restoration along the Cache River, Illinois".

University of Louisiana (after March 2002)

1. Tracy Elsey – M.S., "Dispersal of salt marsh species in restoration sites, Sabine National Wildlife Refuge (joint student with Ed Proffitt).
2. Devarti Bhattacharyya – Ph.D., "Comparisons of water level and salinity tolerance of coastal marsh genera of Louisiana and India".

Committee Participation

Southern Illinois University (until March 2002)

1. Gordon Weddle (Zoo-Burr)-Ph.D., 1991.
2. Monica Folk (Wildlife-Wolfe)-Ph.D., 1991.
3. John Bruggink (Zoo-Tacha)-Ph.D., 1992.
4. Ellen Cypher (PIBio-Robertson)-Ph.D., 1993.
5. Scott Franklin (PIBio/For-Robertson/Fralish)-Ph.D., 1996.
6. John Abolaji (PIBio/PISSci-Yopp)-Ph.D., 1995.
7. Tim Pettinelli (Bio Science-Englert)-M.S., 1994.
8. Donna Hartline (Wildlife-Gates)-M.S., 1994.
9. Yacouba Mai Kodomi (PIBio-Yopp & Myers)-Ph.D., 1996.
10. Blake Smietanski (Wildlife-Gates)-M.S., 1994.
11. Amy Horstman (Wildlife-Nawrot)-M.S., 1995.
12. Tim Loftus (Forestry-Auberton)-M.S., 1994.
13. Mark O'Leary (Wildlife-Gates)-M.S., 1995.
14. Rhonda Andrews (Zoology-Waring)-M.S.
15. Robert Rinella (Wildlife-Gates)-M.S., 1995.
16. Maria Moya (Plant Biology-Stotler)-M.S., 1996.
17. Harry Vaughan (Biology-Muhlach)-M.S., 1995.
18. Todd Bittner (Plant Biology-Gibson)-M.S., 1994.
19. Jonathon Campbell (Plant Biology-Gibson)-M.S., 1996.
20. Dave Phillips (Forestry-Roth)-M.S., 1996
21. Dan Gustafson (Plant Biology-Gibson)-Ph.D., 2000.
22. Alice Brandon (Plant Biology-Gibson)-M.S., 2000.
23. Denise Lankford-Pingel (Plant and Soil Science-Diesberg)-M.S.
24. Joy Ely (Plant Biology-Gibson) – Ph.D., 2000.
25. Yuki Kobiyama (Plant Biology-Crandall-Stotler)-Ph.D.

University of Pune, India

Narayan Desai (Botany)-Ph.D., 2002 (external evaluator)

University of Louisiana

Donna Devlin (Biology)-Ph.D., 2004