

CURRICULUM VITAE
Nancy Ellen Mathews
Professor, Nelson Institute for Environmental Studies
Director, University of Wisconsin Institutional Reaccreditation Project
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University of Wisconsin-Madison
Madison, WI 53706

Education

B.S. Biology, 1980, The Pennsylvania State University, University Park, PA

M.S. Forest Biology (Wildlife Management), 1982, State University of New York-College of Environmental Science and Forestry, Syracuse, NY

Ph.D. Forest Biology (Ecology), 1989, State University of New York-College of Environmental Science and Forestry (SUNY-CESF), Syracuse, NY

Postdoctoral Training

University of Georgia, Savannah River Ecology Laboratory, 1989-1990, Aiken, SC

Positions

Project Scientist, 1982 - 1985, (Endangered Species Ecologist), EG&G, Energy Measurements, Inc., Goleta, California and Las Vegas, Nevada.

Assistant Research Ecologist, 1989-1990, University of Georgia, Savannah River Ecology Laboratory, Aiken, SC.

Assistant Unit Leader - Wildlife, 1990 -1995, U.S. Fish and Wildlife Service/National Biological Service, Texas Cooperative Fish and Wildlife Research Unit, Texas Tech University, Lubbock, Texas.

Research Assistant Professor, 1990 -1995, Department of Range and Wildlife Management, Texas Tech University, Lubbock, Texas.

Adjunct Assistant Professor 1995-1998, Department of Biological Sciences, Texas Tech University, Lubbock, Texas.

Assistant Professor, 1995 - 2000, Associate Professor, 2000-2003, Department of Wildlife Ecology, University of Wisconsin-Madison, Madison, Wisconsin.

Associate Professor, 2004-2007, Professor, 2007-present, Nelson Institute for Environmental Studies, University of Wisconsin-Madison, Madison, Wisconsin.

Director, University of Wisconsin 2009 Institutional Reaccreditation, 2007-present. Office of the Provost, University of Wisconsin, Madison, Madison, Wisconsin.

Graduate Students Completed and Thesis Topics:

David Miko. 1992. Evaluation of trout management characteristics of anglers, and economic evaluation of a community fishery. M.S. Thesis. Texas Tech University. 97 p.

Chris B. Goguen. 1994. The effects of domestic livestock grazing on non-game birds in northeastern New Mexico. M.S. Thesis. Texas Tech University. 130 p.

Jerrad Van't Hul. 1995. Impacts of prescribed burning on migratory and breeding birds on a coastal barrier island. M.S. Thesis. Texas Tech University. 64 p.

Jeffery Kozma. 1995. Neotropical migrant and Chihuahuan Desert bird community use of arroyo-riparian habitat adjacent upland in south-central New Mexico. M. S. Texas Tech University 130 p.

Mike L. Jones. 1996. Influence of social organization on the dispersal and survival of translocated female white-tailed deer. M.S. University of Wisconsin - Madison. 65 p.

David Curson. 1996. Nest predation and brood parasitism of passerine birds in pinyon-juniper woodland in Northeast New Mexico. M.S. University of Wisconsin - Madison. 85 p.

Leslie Baker Hansen. 1997. Spatial organization and genetic structure of striped skunk populations on the southern high plains, Texas. Ph.D. dissertation Texas Tech University, Lubbock. 89 p.

Laura M. Myers. 1998. The influence of habitat and predation on nestling assemblages of breeding birds in the northern Chihuahuan Desert. M.S. University of Wisconsin Madison. 87 p.

Christopher B. Goguen. 1998. Behavior and movements, habitat use, and impacts of hosts in a grazed and ungrazed landscape.. Ph.D. dissertation University of Wisconsin Madison. 124 p.

Penelope J. Rodrick. 1999. Morphological, genetic, and den site characteristics of the kit fox (Vulpes macrotis) on McGregor Range in south central New Mexico. M.S. University of Wisconsin Madison. 76p.

Anna M. Pidgeon. 2000. Avian abundance and productivity, at the landscape scale in the northern Chihuahuan Desert. Ph.D. dissertation University of Wisconsin Madison. 115 p.

Sonya Jenson Knetter. 2000. Beyond composition: Incorporating landscape pattern into GAP analysis vertebrate distribution models. M.S. University of Wisconsin-Madison. 76p.

Terrell J. Hyde. 2000. Avian community response to two structurally similar ecotones in the northern Chihuahuan Desert. M.S. University of Wisconsin-Madison. 79 p.

Anna Estes. 2000. Avian diversity in Serengeti National Park: How do communities differ between interior savanna and grassland and exterior agricultural landscapes? Landscape patterns of avian communities in the Serengeti. M.S. University of Wisconsin-Madison. 89 p.

Mark A. Smith. 2002. Habitat conservation and military planning on Fort McCoy, WI. Ph.D. dissertation. Co-Advised with Dr. Monica Turner, Departments of Zoology and Wildlife Ecology.

David Curson. 2003. Host community dynamics and reproductive biology of a generalist avian brood parasite, the Brown-headed Cowbird. Ph.D. dissertation. University of Wisconsin-Madison. 161 p.

Elisabeth Webster. 2005. Behavior of brown-headed cowbirds foraging with American Bison and Insect communities of a New Mexico shortgrass prairie. M.S. University of Wisconsin-Madison. 43 p.

Lesa Skuldt. 2005. Influence of landscape pattern, deer density, and deer harvest on white-tailed deer behavior in south-central Wisconsin. M.S. University of Wisconsin-Madison. 137 p.

Kristin Lucas-Hall. 2005. The ecological needs and economic benefits of Bald Eagles wintering in south central Wisconsin. M. S. University of Wisconsin-Madison. 111 p.

Scott Bernstein. 2005. Defining and building community capacity for co-management of protected areas in Belize. M.S. University of Wisconsin-Madison. 141 p.

Deahn Donner-Wright. 2007. Landscape population characteristics of Kirtland's Warbler. Ph.D. dissertation, University of Wisconsin-Madison.

Blaire Golland Skinner. 2007. Behavior and movements of neutered female white-tailed deer in an urban ecosystem. M. S. University of Wisconsin-Madison.

Margaret Knight. 2008. Landscape patterns of bird diversity among Healthy - Grown Potato fields in central Wisconsin. M.S. University of Wisconsin-Madison. XX p.

Peter Boger. 2008. Crane Conservation in Russia: K-12 understanding of conservation issues. M.S. University of Wisconsin-Madison. XX p.

Graduate Students in Progress:

Caldwell, Julia S. (M.S.) 2006-present. Biodiversity Conservation and Invasive Species in the Camargue Delta.

Theses:

Mathews, N. E. 1982. The capability of U.S. Forest Service Resources Evaluation in assessing small mammal habitat in central New York. M.S. Thesis. State University of New York, College of Environmental Science and Forestry. Syracuse, New York. 138 p.

Mathews, N. E. 1989. Social structure, genetic structure and anti-predator behavior of white-tailed deer in the central Adirondacks. Ph.D. Dissertation. State University of New York, College of Environmental Science and Forestry. Syracuse, New York. 181 p.

Refereed Publications:

Mathews, N. E., and W. F. Porter. 1988. Black bear predation on white-tailed deer neonates in the central Adirondacks. *Canadian Journal of Zoology* 66(2):1241-1242.

Mathews, N. E., and W. F. Porter. 1989. Acute arsenic toxication of a free-ranging white-tailed deer in New York. *Journal of Wildlife Diseases* 25(1):136-139.

Mathews, N. E., and K. W. Dyer. 1990. Floodplain vegetation phenology in the Southeast: Optimizing the timing of aerial imagery acquisition. *Journal of Wetlands Ecology and Management* 1(2):65-72.

Masters, R. D., and N. E. Mathews. 1991. Some reproductive records of long-lived, free-ranging white-tailed deer in the central Adirondacks. *Canadian Field Naturalist* 105:286-287.

Porter, W. F., N. E. Mathews, H. B. Underwood, W. R. Sage, and D. F. Behrend. 1991. Gas molecule theory and management of white-tailed deer. *Environmental Management* 15:809-814.

Mathews, N. E., and W. F. Porter. 1992. Maternal defense behavior in white-tailed deer. IN Boer, A. H. (ed.), *Ecology and Management of the Eastern Coyote. Symposium Proceedings*. Wildlife Research Unit, University of New Brunswick, Fredericton, New Brunswick. 194 p.

Mathews, N. E., and W. F. Porter. 1993. Effects of social structure on genetic structure of white-tailed deer. *Journal of Mammalogy* 73:4-7.

Chesser, R. K., K. L. Willis and N. E. Mathews. 1993. Impacts of toxicants on population dynamics and gene diversity in avian species. Pp. 171-188. IN Kendall, R. and Lacher, T. Jr. (eds.), *Wildlife toxicology and population modeling: integrated studies of agroecosystems*. Lewis Publishers. Boca Raton.

Miko, D.A., H. A. Schramm, Jr., S. Arey, J. Dennis, N.E. Mathews. 1995. An analysis of measurable benefits of a put-and-take rainbow trout fishery in Lubbock, Texas. *North American Journal of Fisheries Management* 15:823 - 829.

- Kozma, J. N., and N. E. Mathews. 1995. Cooperative nesting between Barn Swallow and Say's Phoebes in south-central New Mexico. *The Auk* 112(2):515-517.
- Curson, D., C. B. Goguen, and N. E. Mathews. 1996. Nest site re-use in Western Wood Pewees. *The Wilson Bulletin* 108(2): 378-379.
- Goguen, C., and N. E. Mathews. 1996. Nest moving behavior of the Blue-gray Gnatcatcher as a response to Brown-headed Cowbird parasitism. *Animal Behavior* 52(3):613-619.
- Mathews, N. E., J. A. DeWoody, W.F. Porter, L.C. Skow, and R. C. Honeycutt. 1997. Genetic variation as a predictor of social structure: Genetic approaches for studying white-tailed deer. Pp. 99-119. In McShea, W. and H.B. Underwood (eds.), *The science of overabundance: The ecology of unmanaged deer populations*. Smithsonian Press.
- Kozma, J. M. and N. E. Mathews. 1997. Breeding bird communities and nest plant selection in Chihuahuan Desert Habitats in South-central NM. *Wilson Bulletin* 109(3):424-436.
- Van't Hul, Jerrad T., R. Scott Lutz, Nancy E. Mathews. 1997. Impact of prescribed burning on vegetation and bird abundance at Matagorda Island, Texas. *Journal of Range Management* 50:346-350.
- McNulty, S. A., W.F. Porter, N. E. Mathews, J. A. Hill. 1997. Localized management for reducing white-tailed deer populations. *Wildlife Society Bulletin* 25:265-271..
- Jones, M.L., N. E. Mathews, and W. F. Porter. 1997. Influence of social organization on the dispersal and survival of translocated female white-tailed deer. *Wildlife Society Bulletin* 25:272-277.
- Leffler, M. and N. Mathews. 1998. Women in Wildlife. *Women in Natural Resources* 20:9-14.
- Curson, D., C.B. Goguen, and N. E. Mathews. 1998. Western wood-peewees accept cowbird eggs. *Great Basin Naturalist* 58:90-91.
- Goguen, C.B., and N. E. Mathews. 1998. Songbird community composition and nesting success in grazed and ungrazed pinyon-juniper woodlands. *Journal of Wildlife Management* 62:474-484.
- Goguen, C .B., D. R. Curson, and N. E. Mathews. 1998. Breeding birds of the NRA Whittington Center, Raton, New Mexico. *New Mexico Ornithological Society Bulletin* 26:53-64.
- Hochachka, W.M., T. E. Martin, J. A. Collazo, E. E. Klass, D. Curson, P.B. Wood, T. Donovan, D. M. Evans, M. Knutson, J. Manolis, G. Geupel, K. P. McFarland, V. Artman, L. Garner, N.E. Mathews, J. Tewksbury, C. Goguen, L. Petit, S. Garner, D. Anderson, K. L. Purcell, J. Faaborg, R. Dettmers, C.R. Smith, D. Whitehead, S. J. Heijl. 1999.

Scale dependence in the effects of forest coverage on parasitism by brown-headed cowbirds. IN *Research and management of the brown-headed cowbird in western and eastern landscapes* 18:80-88.

Goguen, C. B. and N. E. Mathews. 1999. Causes and implications of the association between cowbirds and livestock: a review. IN *Research and management of the brown-headed cowbird in western and eastern landscapes. Studies in Avian Biology* 18:10-17.

Roderick, P. J. and N. E. Mathews. 1999. Characteristics of natal and non-natal kit fox dens in the northern Chihuahuan Desert. *Great Basin Naturalist* 59:253-258.

Vanderlee, B. L., R. S. Lutz, L. A. Hansen, N. E. Mathews. 1999. Influence of supplemental prey, vegetative cover, and season on artificial nest success. *Journal of Wildlife Management* 63:1299-1305.

Curson, D. R. C. B. Goguen, and N. E. Mathews. 2000. Long-distance commuting cowbirds in New Mexico. *Auk* 117:795-799.

DeMarco, T. E., C. B. Goguen, D. R. Curson, N. E. Mathews. 2000. Breeding behavior of the Plumbeous Vireo in New Mexico. *Western North American Naturalist* 60:394-402.

Goguen, C. B. and N. E. Mathews. 2000. Local gradients of cowbird abundance and parasitism relative to livestock grazing in a western landscape. *Conservation Biology* 14(6):1862-1869.

Goguen, C. B. and N. E. Mathews. 2001. Brown-headed cowbird behavior and movements in relation to livestock grazing. *Ecological Applications* 11:103-114.

Pidgeon, A. M., V. Radeloff, and N. E. Mathews. 2001. Response of avian communities to historic habitat change in the northern Chihuahuan Desert. *Conservation Biology* 15:1772-1788.

MacLean, R. A. Jr, E. S. Frank, J. Paul-Murphy, and N. E. Mathews. 2002. Tubal ligation as a means of controlling a population of urban white-tailed deer: Preliminary results. *American Association of Zoo Veterinarians. Conference Proceedings*.

Conner, C. and N. E. Mathews. 2002. An evaluation of the Endangered Species Act and Private Landowner Assurances. Special Series Part I-Education in Action. *Endangered Species Update* 19:11-14.

Cummings, B. and N. E. Mathews. 2002. An evaluation of the Endangered Species Act and Private Landowner Assurances. Special Series Part II-Education in Action. *Endangered Species Update* 19:32-34.

Heyward, B. and N. E. Mathews. 2002. An evaluation of the Endangered Species Act and Private Landowner Assurances. Special Series Part III-Education in Action. *Endangered Species Update* 19:46-52.

Hansen, L. B., N. E. Mathews, R. S. Lutz, B. W. Vanderlee. 2003. Genetic structure in striped skunks (*Mephitis mephitis*) on the southern high plains of Texas. *Western North American Naturalist* 63:80-87.

Pidgeon, A. M., V. Radeloff, and N. E. Mathews. 2003. Landscape scale nest success patterns of the Black-throated Sparrow. *Ecological Applications* 13:530-542.

Curson, D. R. and N. E. Mathews. 2003. Reproductive costs of commuting flights in brown-headed cowbirds. *Journal of Wildlife Management* 67:520-529.

Arrowwood, H. C., Adrian Treves, and Nancy E. Mathews 2003. Determinants of day-range length in the black howler monkey at Lamanai, Belize. 2003. *Journal of Tropical Ecology* 19:1-4.

Curson, D. R. and N. E. Mathews. 2005. Reproductive costs of commuting flights in brown-headed cowbirds. *Journal of Wildlife Management* 67(3): 520-529.

Goguen, C. B., D. R. Curson, and N. E. Mathews. 2005. Behavioral ecology of the brown-headed cowbird in a bison-grazed landscape in New Mexico. *Ornithological Monographs* 57:1-13.

Goguen, C.B., D.R. Curson, and N.E. Mathews. 2005. Breeding ecology of the Gray Flycatcher in pinyon-juniper woodlands in New Mexico. *Western Birds* 36(4):286-295..

Pidgeon, A. M., V. C. Radeloff, and N. E. Mathews. 2006. Contrasting measures of fitness to classify habitat quality for the black-throated sparrow (*Amphispiza bilineata*). *Biological Conservation* (132:199-210).

MacLean, R. R., N. E. Mathews, D. M. Grove, E. S. Frank and J. Paul-Murphy. Surgical technique for tubal ligation in white-tailed deer (*Odocoileus virginianus*). 2006. *Journal of Zoo and Wildlife Medicine* 37(3): 354–360, 2006

Schramm, P. T., C. J. Johnson, N. E. Mathews, D. McKenzie, J. M. Aiken and J. A. Pedersen. 2006. Potential Role of Soil in the Transmission of Prion Disease. *Medical Mineral Geochemistry*.

Oyer, A. M., N. E. Mathews, L. H. Skuldt. 2007. Long-range movement of a female white-tailed deer from a Chronic Wasting Disease-infected area. *Journal of Wildlife Management* 71:1635-1638.

Mathews, N.E., E. Inoway – Ronnie, D.J. Harris, D. A. Schutt, K. A. Parris. 2008. Developing a Self-Study Theme Through Large Scale Engagement at the University of Wisconsin-Madison. Higher Learning Commission Annual Conference Proceedings.

Skuldt, L. H., N. E. Mathews, and A. M. Oyer. Influence of habitat, harvest and deer density on movements and dispersal of white-tailed deer in South-Central Wisconsin. *Journal of Wildlife Management* (In Press, April 2008).

Walter, W. D. et al. The influence of landscape composition and connectivity on home-range sized of white-tailed deer: A regional comparison. *Journal of Wildlife Management* (Submitted February 2008).

Kozma, J., L. M. Burkett, and N. E. Mathews. Habitat associations of migrating and resident birds during late winter and spring in the northern Chihuahuan Desert, New Mexico. *Journal of Field Ornithology* (Re-submitted April 2008).

VanDeelen, T. R., N. E. Mathews, J. Chamberlin, S. B. Magle. Survival of White-tailed Deer in Wisconsin's CWD Outbreak Area. *Journal of Wildlife Management* (Submitted June 2008).

O'Farrell, T. P., N. E. Mathews, P. McCue, M. S. Kelly, and T. T. Kato. Distribution, density and characteristics of endangered giant kangaroo rat, *Dipodomys ingens*, burrows on the Naval Petroleum Reserves, Kern County, California. *Journal of Mammalogy* (submitted June 2008).

Skinner, Blaire. G., Nancy E. Mathews, Vicki Blank-Julis, Elizabeth F. Frank, R. Tucker Gilman, Joanne Paul-Murphy. Behavioral Impacts of Sterilization on Suburban Female White-tailed Deer. *Journal of Wildlife Management* (submitted December 2007).

National Academy of Sciences: National Research Council Publications

Klein, D.R., D. R. McCullough, B. Allen-Diaz, N. Cheville, R. W. Graham, J. E. Gross, J. McMahon, N. E. Mathews, D. T. Patten, K. Ralls, M. G. Turner, E. W. Williams. 2002. Ecological dynamics on Yellowstone's Northern Range. National Research Council. Committee on Ungulate Management in Yellowstone National Park. Board on Environmental Studies and Toxicology, Division on Earth and Life Studies, National Academies of Sciences.

Instruction: Courses taught at UW-Madison

University of Wisconsin - Madison, 1995 - present

WE 375 Conservation planning for endangered species

WE 375/875/527 Ecosystem Management

WE 897 Graduate Student Seminar, "Winning the games that scientists play"

WE 897 Graduate Student Seminar, "Betrayal of Science and Reason - How anti-environmental rhetoric threatens our future (With C. Ribic)

WE 375 Department of Wildlife Ecology Summer Field Camp - Kemp Station, mapping skills and map creation using GIS; Career preparation in wildlife ecology

IES 600:Senior Capstone – Endangered Species management on private lands

IES 900: Graduate Student Seminar, Community based conservation of endangered sea turtles.

IES 900: Graduate Student Seminar, Community-based conservation of endangered sea turtles field trip to Cabo San Lucas

L&S 101: Freshman Biology Interest Group core course: Science and Values: Conserving biodiversity.

IES 600: Green Living (Taught by Doris Duke Fellows and supervised by NEM);

IES 400, 900 Ecosystem management

IES 699: Undergraduates in internships set up with Department of Natural Resources, Bureau of Endangered Resources