



Superfund Records Center
SITE: GE-Housatonic
BREAK: 2.2
OTHER: 42016

Corporate Environmental Programs
General Electric Company
100 Woodlawn Avenue, Pittsfield, MA 01201

February 3, 2003

Susan Svirsky
U.S. Environmental Protection Agency
c/o Weston Solutions, Inc.
10 Lyman Street
Pittsfield, Massachusetts 01201

Richard Beach
Project Manager
Weston Solutions, Inc.
1400 Weston Way
P.O. Box 2653
West Chester, PA 19380

**Re: GE-Pittsfield/Housatonic River Site – Rest of River
Addendum and Errata Page to Report on Mink Field Study**

Dear Ms. Svirsky and Mr. Beach:

Enclosed please find the following items for your consideration:

- *Addendum to the Evaluation of Mink – Presence/Absence, Distribution, and Abundance in the Housatonic River Floodplain*, prepared by BBL, Inc. (February 2003).
- *Errata to the Evaluation of Mink – Presence/Absence, Distribution, and Abundance in the Housatonic River Floodplain*, prepared by BBL, Inc. (February 2003).

The Addendum presents documentation for the mink tracks discussed in GE's September 2002 Mink Report, including photographs for many of the tracks. The Errata Page corrects the locations for two sets of tracks that were mislabeled in the September 2002 report.

Two extra copies of each document are provided for Ms. Svirsky. If you have any questions on either the Addendum or the Errata page, please do hesitate to call.

Very truly yours,

Andrew T. Silfer, P.E.
GE Project Coordinator

cc: Bryan Olson, EPA*
Tim Conway, EPA*
Holly Inglis, EPA*
Rose Howell, EPA
Susan Steenstrup, MDEP*
Thomas Angus, MDEP*
Roderic McLaren, GE
Michael T. Carroll, GE
Kevin Mooney, GE*
James Bieke, Shea & Gardner*
Sam Gutter, Sidley Austin Brown & Wood*
Ken Jenkins, Ph.D., BBL Sciences*
Margaret Branton, Branton Environmental*
Miranda Henning, ARCADIS*
Lawrence Barnthouse, Ph.D., LWB*

* One copy enclosed.

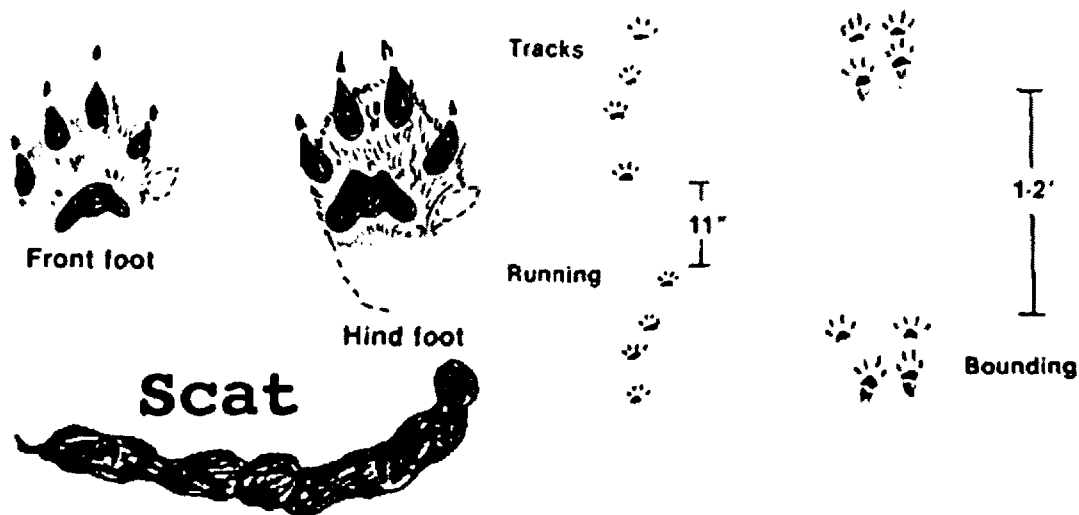
Addendum

Documentation of Mink Tracks

The positive identification of mink tracks in this study relied upon the professional expertise and judgment of the primary field staff Paul Bernstein (former New York State Game Warden) and Thom McClenahan (ARCADIS). Dr. Michael Chamberlain (Louisiana State University) also provided support in some instances by confirming the identification of mink tracks through photographs or, in one instance, through direct observation. As described in his curriculum vitae, Paul Bernstein worked for the New York State Department of Environmental Conservation for 40 years and is a highly experienced tracker in the Northeast. With only three exceptions (Tr-5, Tr-6 and Tr-9¹), Paul Bernstein was present in the field to make positive track identifications. Thom McClenahan, who has an extensive wildlife biology background and has been trained by Paul Bernstein, was present for these three identifications and Dr. Chamberlain was present for one of these (Tr-5).

In searching for mink tracks, field staff focused their efforts in areas with habitat likely to support mink including islands of trees and brush in fields; marshes; dense brush and cover surrounding the floodplain or shoreline; weed clumps; and muskrat houses and beaver lodges. Several key parameters were used to make positive identifications (see Figure 1). Paired or indexed footprints were evaluated for signature (pattern), size (however, in the snow an accurate foot measurement sometimes was not possible), and, straddle size, which is an indicator of the body size or width of the animal. In addition, where possible, the stride of the tracks was considered. The process of elimination based on these parameters was used to distinguish mink tracks from other similar sized animals.

Figure 1. Mink tracks and sign



Source: <http://www.inhs.uiuc.edu/dnr/fur/tracks/tracks.html>

When mink tracks were identified, a GPS reading was taken to document their location and, with three exceptions, they were photographed. The photos associated with 18 of the 35 tracks listed in the revised Table 1 are provided in this addendum. For a number of tracks, photos have not been provided for one of two reasons. First, if tracks were observed incidentally to other work being conducted on the river and field staff did not have

¹ Track 9 was documented with a high quality photograph that includes both tracks and mink scat.

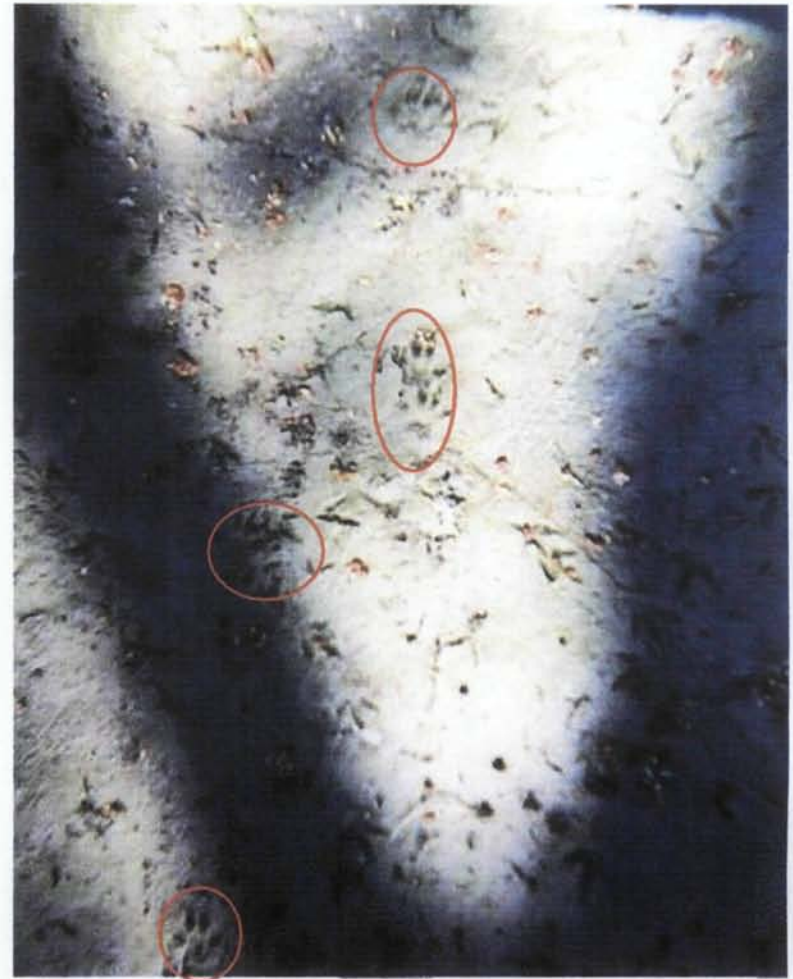
a camera available, no photos were taken (n=3). Secondly, in a number of instances the quality of the photographs was low, due to poor lighting conditions (e.g., glare) or low definition of the tracks in the snow (n=14). These photos are not included herein.

This addendum includes the following materials: 1) color copies of photographs documenting 18 tracks; 2) the resumes of the three primary personnel describing their relevant experience are provided.

Track 5



Male tracks running on
mud shore



Track 9



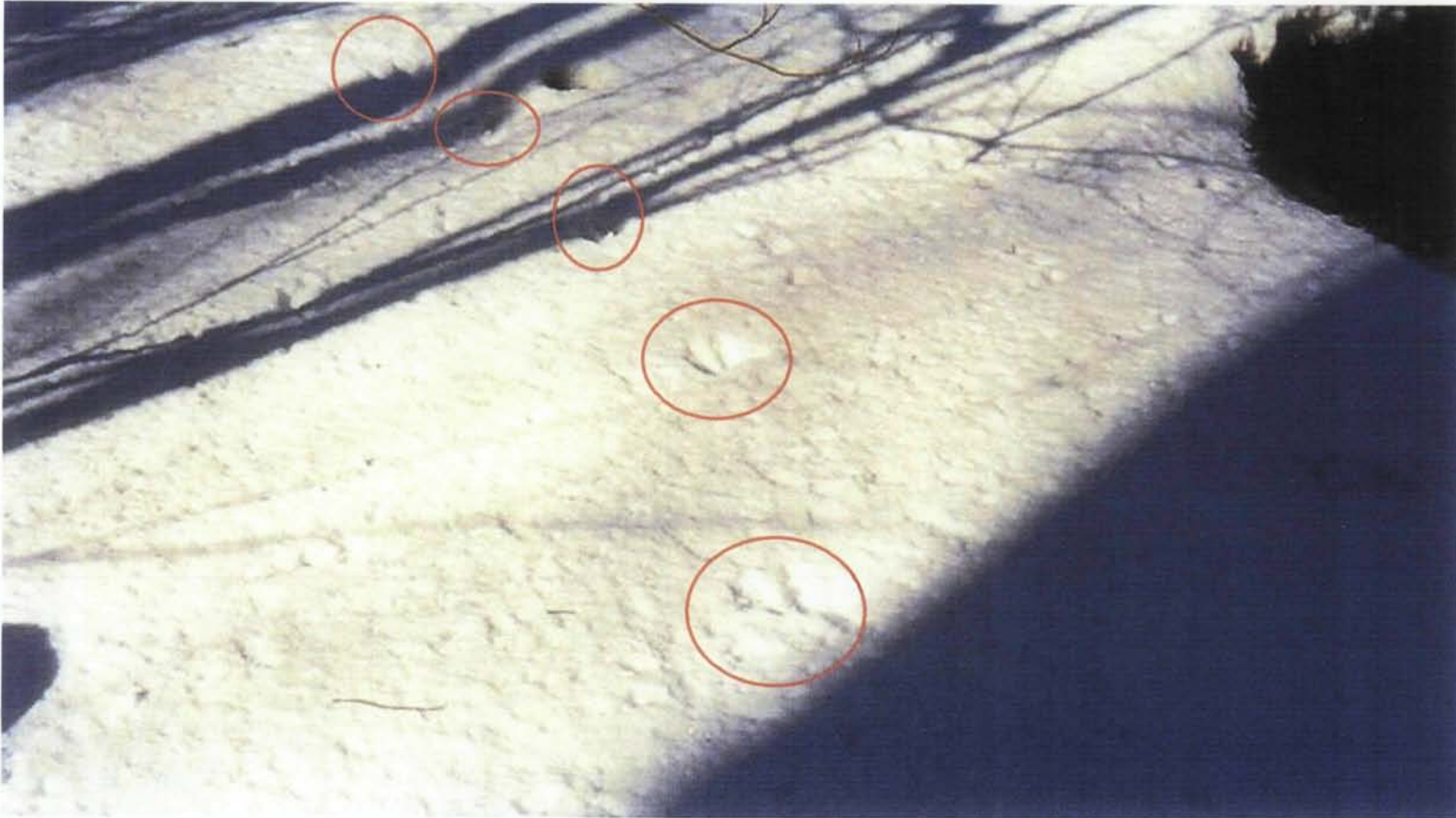
Tracks and scat on sand

Track 10



Roaring Brook Road bridge over Mill Brook,
East Bank

Track 11



Roaring Brook Road bridge over Mill Brook

Track 13



Roaring Brook Road bridge

Track 14



Female – tracks into river

Track 15



Mink tracks and trail at old beaver lodge – main stem;
female – possible den

Track 20



Female in between MS-42 and 44 on the mainstem

Track 23



Male, in and out of water and holes, Roaring Brook
Road bridge over Mill Brook

Track 24



Male, in between MS – 42/44, East Bank

Track 27



Female running under Roaring Brook Road bridge,
trail and tracks

Track 28



Male, walkway south of MS-43, east bank

Track 29



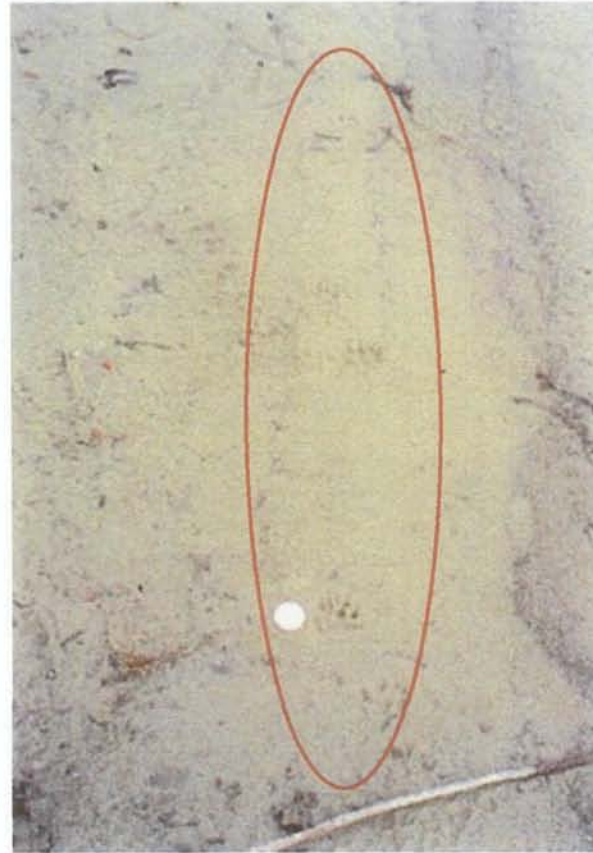
Female going into old beaver lodge, mainstem

Track 31



MS-52 walkway, visiting animal carcass

Track 35



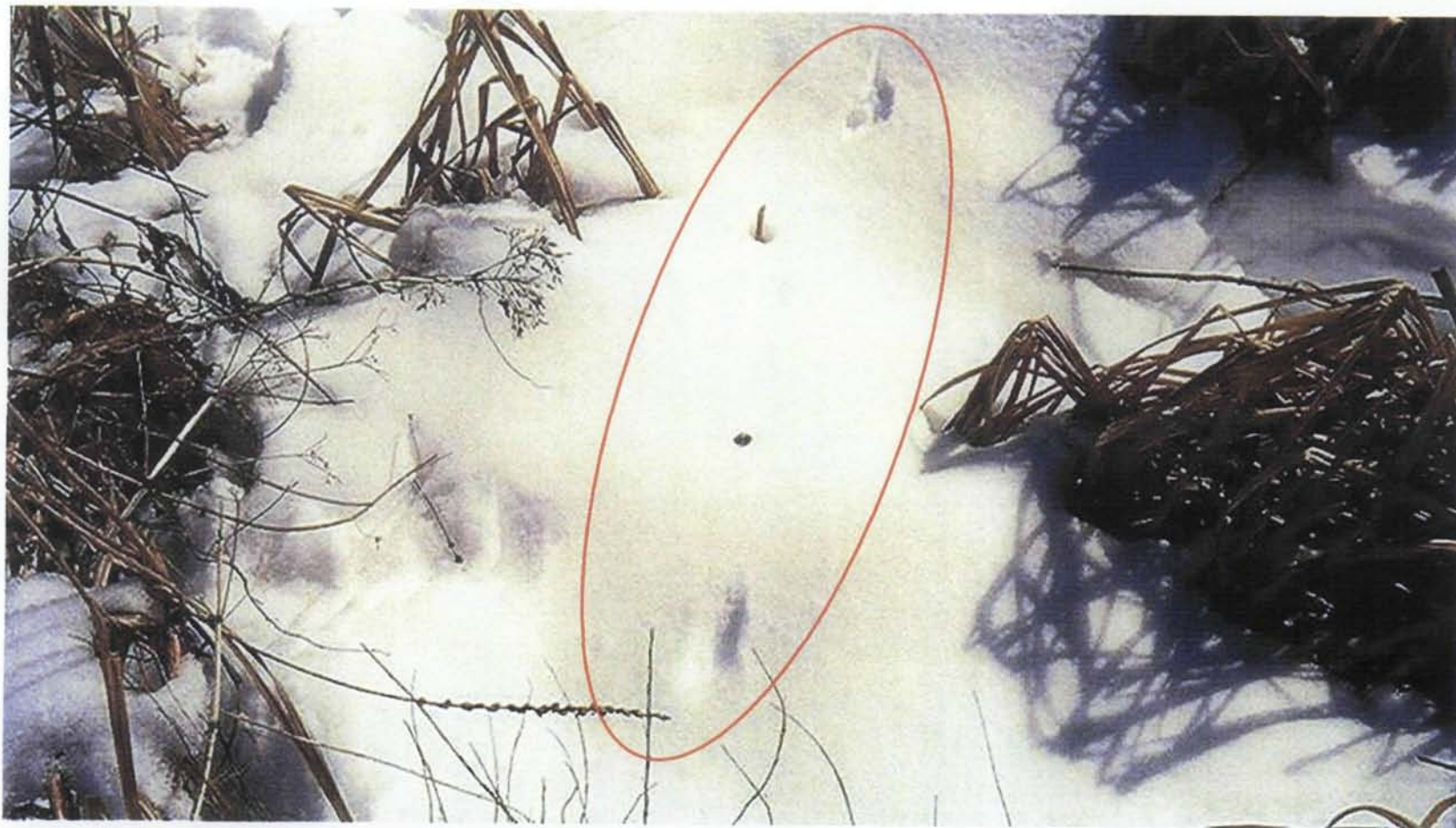
West bank, between MS8
and MS9, 200 yards south
of, and running towards.
track 34

Track 36



Large male, in and out of water, south of box #711,
west bank

Track 39



30 yards west of Box #899, in and out of marsh

Track 41



Female on MS 16, 10 feet off river bank

Paul Bernstein - Curriculum Vitae

PAUL BERNSTEIN

133 FIREHILL ROAD, BOX 91 • SPENCERTOWN, NEW YORK 12165
PHONE (518) 392-5111 • FAX (518) 392-2042

Paul Bernstein worked for the New York State Department of Environmental Conservation for forty years. He spent six years as a Fish and Wildlife Field Supervisor and thirty four years as an Environmental Conservation Officer. At retirement he held the rank of Lieutenant. As a Lieutenant, Mr. Bernstein supervised Environmental Conservation Officers in Columbia and Rensselaer counties. He also served as a Senior Training Officer for the New York State Department of Environmental Conservation and lectured to state and local police agencies as well as the environmental police force, specializing in fish and wildlife identification.

Since his retirement, Mr. Bernstein has worked as a consulting naturalist on the upper Hudson River and on the Housatonic River cataloging, identifying and tracking the many species of fish, wildlife and fauna that live in this unique area.

EXPERIENCE

1999–Present Private Consulting New York

Consulting Naturalist

- Providing consulting services in wildlife trapping and tracking.
- Cataloging species of fish, wildlife, and fauna in New York and Massachusetts.

1977–1994 New York State Department of Environmental Conservation New York

Police Training Officer, 1985-1994

- Served as instructor for classes teaching how to track both wildlife and people.
- Lectured classes in trial testimony and courtroom seminars, police ethics and ethnic awareness, and fish and wildlife identification.

Hazardous Materials Lieutenant, 1983-1994

- Served as New York State Region 4 Hazardous Materials Lieutenant.

Enforcement Officer, 1977-1983

- Officer in Charge of second basic training school for New York State Environmental Conservation Officers in 1977. School held at the New York State Police Academy. Spent one year getting the school up and running. In the first year, the school graduated 45 officers.

1959–1977 New York State Conservation Department New York

Enforcement Officer, 1966-1977

- Transferred to Putnam County in 1966 and promoted to Enforcement Officer.
- Enforced wildlife-related hunting, fishing and trapping laws.
- Founded the first edition of the New York State Conservation Officer Newsletter in 1972.

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PHONE (518) 392-5111 • FAX (518) 392-2042

Conservation Officer, 1966

- Placed first in the promotion test for New York State Conservation Officer. Appointed in September 1966.
- Assigned to Westchester County, New York.
- Patrolled the Long Island Sound, enforcing marine and shellfish laws.

Field Supervisor, 1959-1966

- In charge of field crews in building wildlife marshes under the Federal Pittman Robertson Program.
- In charge of crews building the 1000-acre Birch Kill Game Management Area in Putnam County, New York.
- Worked as a nuisance Beaver Trapper conducting live trapping and transfer of beavers.
- Supervised field team in live trapping, collaring, and monitoring of white tail deer.
- Certified as a deer ager [was taught by Jack Tanck and Bill Leverinhaus, the inventor of the technique].
- Supervised wildlife census teams for pheasant, quail, mourning dove and waterfowl.
- Supervised teams in the acquisition of the 8000-acre Public Hunting Area in Putnam County, New York.
- Worked privately as a trapper of furbearers, including mink.

TRAINING

- | | | |
|------|---|-------------------------------|
| 1972 | Service School Training | New York State Police Academy |
| ■ | Attended month-long Service School training in 1972 at the New York State Police Academy. Training specialized in enforcement aspects of environmental quality. | |
| 1980 | Hazardous Materials and the Law | New York |
| ■ | Attended week-long training course by the U.S. Environmental Protection Agency. | |
| 1982 | Defensive Tactics Instructor School | New York |
| ■ | Attended Federal Bureau of Investigation defensive tactics instructor school. Training conducted by a certified defensive tactics instructor. | |
| 1983 | Hazardous Materials Transportation Law | New York |
| ■ | Attended U.S. Department of Transportation course in Hazardous Materials Transportation Law and Compliance. | |
| 1985 | Police Supervision | New York |
| ■ | Attended Monroe County Community College course in Police Supervision. | |

CERTIFICATIONS

N.R.A. Certified Hunting and Trapping Training Instructor.
Certified Deer Ager.

INTERESTS

Outdoor activities, including hunting, fishing and hiking.

Michael J. Chamberlain - Curriculum Vitae

Curriculum Vitae - Michael J. Chamberlain

Work Address

School of Renewable Natural Resources
Louisiana State University
Baton Rouge, LA 70803
(225) 578-4241
(225) 578-4227 (fax)
mchamb2@lsu.edu

Home address

1026 Brookhollow Drive
Baton Rouge, LA 70810
(225) 753-9216

Education

Ph.D., Forest Resources with major in Wildlife Ecology; Mississippi State University, Mississippi State, MS. GPA - 3.84. December 1999

M. S. Wildlife Ecology; GPA - 3.54; Mississippi State University, Mississippi State, MS. December 1995

B. S. Wildlife Science; Minor - Biology; GPA - 3.3; Virginia Polytechnic Institute and State University, Blacksburg, VA

A. S. Biological Sciences; GPA - 3.4; Danville Community College, Danville, VA

Work Experience

March 2000-present

Assistant Professor - School of Renewable Natural Resources, Louisiana State University
Design, implement, and coordinate applied and basic research examining wildlife communities throughout the United States. Research foci include ecology and management of mammalian carnivores, upland game bird ecology and management, wildlife/habitat relationships, and applications of Geographic Information System (GIS) technology to natural resource management. Also serve as instructor for graduate-level courses detailing the ecology, population dynamics, and management of upland game birds and large mammals inhabiting North America (RNR 7011, 7015), as well as a graduate seminar series (RNR 7070). Undergraduate teaching responsibilities include Principles of Wildlife Management (RNR 2031) and Wildlife Habitat Management (RNR 4045).

September 1998 - February 2000

Wildlife Research Assistant I - Mississippi State University - maintain hardware, software, and operating systems on UNIX and PC-based workstations in the Department of Wildlife and Fisheries GIS laboratory. Also provide GIS-related technical assistance to graduate students, faculty, and staff of the Department of Wildlife and Fisheries, Mississippi State University and the Mississippi Department of Wildlife, Fisheries and Parks. Develop multi-layered GIS systems of study areas used by graduate research projects. Maintain GIS systems for several state-owned wildlife management areas and

data associated with Global Positioning System (GPS) base station. Use Trimble hand-held GPS units to gather field locations associated with various research projects. Provide GPS technical assistance to graduate students, faculty, and staff. Assist with capture/tagging of Northern bobwhite and analyze data from field research and surveys. Assist with design of graduate research projects. Conducted winter and summer bobwhite calling surveys.

January 1996 - August 1998

Doctoral Graduate Research Assistant, Mississippi State University - conducted research on bobcats, coyotes, gray foxes, raccoons, opossums, and wild turkeys to examine and model the process of predation involving turkeys. Develop habitat use models to predict selection patterns of carnivores and turkey hens. Field research included capture of listed species and extensive radio-tracking. Coordinated efforts of 4 technicians. Additional field work included extensive vegetation sampling using point-center-quarter method, forest densiometer, Daubenmire frame, Nudd's density board, and 10-factor prism to assess microhabitat conditions of macrohabitats selected by carnivores and turkey hens. Also conducted small mammal trapping to assess habitat-specific rodent abundance for medium-sized and larger mammalian carnivores and omnivores on 2 study sites. Performed long-term dietary analysis of bobcats and coyotes. Coordinated and conducted research on Singing River Island, Mississippi assessing influence of introduced bobcats on rabbit and nutria populations.

Assisted in design, coordination, and implementation of 2 graduate research projects designed to supplement information gained directly through my doctoral research. These projects were (1) assess impacts of summer hunting on raccoon population dynamics and (2) assess relationships between carnivore densities and visitation rates using multiple index methods.

Created, coordinated, and assisted in the implementation of web-based completion report for the overall predation project my dissertation detailed. This web site served as a final completion report for the Mississippi Department of Wildlife, Fisheries and Parks, the National Wild Turkey Federation, Georgia-Pacific Corporation, and the USDA Forest Service. Site can be viewed at <http://www.cfr.msstate.edu/predator/projecthome.html>

July 1993 - December 1995

Graduate Research Assistant, Mississippi State University - coordinated and conducted research on wild turkeys including capture using cannon nets, field marking, radio-telemetry, collection of harvest data, and gobbler call counts. Also coordinated and conducted baseline monitoring system for the U. S. Army Corps of Engineers to determine relative abundance of numerous species including white-tailed deer, wild turkey, small mammals, lagomorphs, tree squirrels, songbirds, reptiles/amphibians and waterfowl. Used multiple census techniques to monitor relative abundance of the aforementioned species, including spotlight counts, track counts, pellet-group counts, time-area counts, flush counts, circular bird plots, and reptile/amphibian call counts.

May - June 1993

Research Technician, Virginia Polytechnic Institute and State University - assisted with collection of vegetation data to implement a GIS-based habitat model. Field sampling techniques included line-intercept sampling and tree density surveys.

May - June 1989, 1990

General Laborer - Bryant Contracting, Inc., Toano, VA; performed various tasks including welding, painting equipment, repairing engines and transmissions, and servicing company vehicles.

Research Interests

Wildlife Population Ecology
Population Dynamics
Population Estimation
Avian Ecology and Management

Wildlife/Habitat Relationships
Predator-prey relationships
GIS applications

Awards and Honors

Ernest A. Gluesing Memorial Award for outstanding graduate student in the Department of Wildlife & Fisheries, Mississippi State University - 1999

David H. Nabi Memorial Award for outstanding service to fellow graduate students and faculty at Mississippi State University - 1998

Hanover-Caroline Soil Conservation Service Scholarship - 1989

Dean's List - Danville Community College (3 times)

Dean's List - Virginia Polytechnic Institute and State University (2 times)

Xi Sigma Pi Honor Society (1992 - present)

Alpha Zeta Honor Fraternity (1992-1993)

Certifications

Associate Wildlife Biologist - The Wildlife Society - 27 March 2000

Committees Chaired

Spatial and Information Technologies in Natural Resources - 2000/2001 - Louisiana State University - committee to review proposed undergraduate course examining spatial and information technologies in the natural resource disciplines.

Committee Assignments

Wildlife Faculty Search Committee - 2000 - Louisiana State University - committee to identify and hire wildlife faculty member specializing in wetland ecology

Technology Committee - 2000-present - School of Renewable Natural Resources - Louisiana State University

Natural Resource Conservation Course Committee - 2001 - committee responsible for designing class to be included in core curriculum of School of Renewable Natural Resources.

Louisiana State University Institutional Animal Care and Use Committee - 2001

Criteria for Endowed Professorship Committee - 2001 - committee responsible for drafting criteria for selecting endowed professors in the School of Renewable Natural Resources.

Web-page Design Committee - 2002-present - School of Renewable Natural Resources - committee responsible for designing website for school

Assessment Committee - 2002-2003 - School of Renewable Natural Resources - committee reviewing and revising guiding principles for assessment of the School

Advising/Mentoring of Undergraduate Students Committee - 2002-2003 - School of Renewable Natural Resources - committee developing guidelines for decentralizing of undergraduate advising

Peer-reviewed publications

Published , or in-press

Chamberlain, M. J., D. A. Miller, B. D. Leopold, and G. A. Hurst. 1996. Predation rates on wild turkey hens in a hardwood bottomland forest and a mixed forest in Mississippi. *Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies* 50:428-435.

Bowman, J. L., **M. J. Chamberlain**, B. D. Leopold, and H. A. Jacobson. 1996. Use of infrared monitors to estimate black bear populations on White River National Wildlife Refuge, Arkansas. *Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies* 50:614-621.

Chamberlain, M. J. and B. D. Leopold. 1998. Microhabitat characteristics of wild turkey hen prenest and nest site selection in central Mississippi. *Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies* 52:274-282.

Chamberlain, M. J., L. M. Conner, B. D. Leopold, and K. J. Sullivan. 1998. Diel

activity patterns of adult bobcats in central Mississippi. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 52:191-196.

Chamberlain, M. J., B. D. Leopold, L. W. Burger, B. W. Plowman, and L. M. Conner. 1999. Survival and cause-specific mortality rates of adult bobcats in central Mississippi. Journal of Wildlife Management. 63:613-620.

Chamberlain, M. J., K. M. Hodges, B. D. Leopold, and T. S. Wilson. 1999. Survival and cause-specific mortality of adult raccoons in central Mississippi. Journal of Wildlife Management 63:880-888.

Chamberlain, M. J. and B. D. Leopold. 1999. Survival and cause-specific mortality of hardwood seedlings in the Mississippi Alluvial Valley. Ecology and Management of Bottomland Hardwood Systems: The State of Our Understanding. Pages 119-123.

Hodges, K. M., **M. J. Chamberlain,** and B. D. Leopold. 2000. Effects of summer hunting on ranging behavior of adult raccoons in central Mississippi. Journal of Wildlife Management 64:194-198.

Bowman, J. L., B. T. Bond, B. D. Leopold, **M. J. Chamberlain,** and J. M. Ross. 1999. Effect of harvest on previously unexploited populations of fox and gray squirrels. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 53:282-295.

Chamberlain, M. J. and B. D. Leopold. 1999. Dietary patterns of sympatric bobcats and coyotes in central Mississippi. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 53:204-219.

Chamberlain, M. J., J. W. Mangrum, B. D. Leopold, and E. P. Hill. 1999. Evaluation of four attractants for indices to monitor relative abundance of carnivores. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 53:296-304.

Chamberlain, M. J., J. M. Ross, and B. D. Leopold. 1999. Influence of forest management and microhabitat conditions on abundance of southern fox and gray squirrels. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 53:402-414.

Chamberlain, M. J., and B. D. Leopold. 2000. Spatial use patterns, seasonal habitat selection, and interactions among adult gray foxes in Mississippi. Journal of Wildlife Management 64:742-751.

Miller, D. A., **M. J. Chamberlain**, G. A. Hurst, and B. D. Leopold. 2000. Lessons from Tallahala: What have we learned for turkey management into the 21st century? Proceedings of the National Wild Turkey Symposium 8:in press.

Chamberlain, M. J. and B. D. Leopold. 2000. Habitat sampling and selection by female wild turkeys during preincubation. The Wilson Bulletin. 112:326-331.

Chamberlain, M. J., B. D. Leopold, and L. W. Burger. 2000. Characteristics of roost sites of adult wild turkey females. Journal of Wildlife Management. 64:1025-1032.

Chamberlain, M. J., B. D. Leopold, K. M. Hodges, and J. G. Burton. 2000. Space use and movements of raccoons in two forested ecosystems. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies. 54:391-399.

Chamberlain, M. J., C. D. Lovell, and B. D. Leopold. 2000. Spatial use patterns, habitat selection, and interactions among adult coyotes in central Mississippi. Canadian Journal of Zoology 78:1-9.

Chamberlain, M. J., and B. D. Leopold. 2001. Survival and cause-specific mortality of adult coyotes in Mississippi. American Midland Naturalist 145:414-418.

Conner, L. M., **M. J. Chamberlain**, and B. D. Leopold. 2001. Bobcat home range size relative to habitat quality. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 55:in press.

Greenfield, K. C., L. W. Burger, Jr., and **M. J. Chamberlain**. 2001. Herbicide application and prescribed fire as habitat management tools for northern bobwhite in Conservation Reserve Program fields. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies 55:in press.

Williamson, S. C., L. W. Burger, S. Demarais, and **M. J. Chamberlain**. 2001. Effects of northern bobwhite habitat management practices on red-imported fire ants. Quail V: Proceedings of the Fifth National Quail Symposium. In press.

Chamberlain, M. J., L. M. Conner, and B. D. Leopold. 2002. Seasonal habitat selection of raccoons in intensively managed pine forests of central Mississippi. American Midland Naturalist 147:102-108.

Greenfield, K. C., L. W. Burger, Jr., **M. J. Chamberlain**, and E. W. Kurzejeski. 2002. Vegetation management practices on Conservation Reserve Program fields to improve northern bobwhite habitat quality. Wildlife Society Bulletin 30:527-538.

Chamberlain, M. J., and B. D. Leopold. 2002. Movements and space use of gray foxes (*Urocyon cinereoargenteus*) following mate loss. *American Midland Naturalist* 147:409-412.

Chamberlain, M. J., and B. D. Leopold. 2003. Effects of flooding on relative abundance and diversity of small mammals in a regenerating bottomland hardwood forest. *The Southwestern Naturalist*. In press.

Chamberlain, M. J., and B. D. Leopold. 2002. Spatio-temporal relationships among adult raccoons (*Procyon lotor*) in central Mississippi. *American Midland Naturalist*. 148:297-308.

Chamberlain, M. J., L. M. Conner, B. D. Leopold, and K. M. Hodges. 2003. Space use, movements, and multi-scale habitat selection of adult raccoons in central Mississippi. *Journal of Wildlife Management*. 67:in press.

Leopold, B. D., and **M. J. Chamberlain**. 2002. Predator management: Here we go again? *Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies*. 56:in press.

Greenfield, K. C., **M. J. Chamberlain,** L. W. Burger, Jr., and E. W. Kurzejeski. 2002. Effects of prescribed burning and discing on Conservation Reserve Program fields and habitat quality for northern bobwhite in Mississippi. *American Midland Naturalist*. 148:in press.

Chamberlain, M. J., B. D. Leopold, and L. M. Conner. 2002. Space use, movements, and habitat selection of adult bobcats in central Mississippi. *American Midland Naturalist*. 148:in press.

Richkus, K. J., F. D. Rohwer, and **M. J. Chamberlain**. 2002. Survival and cause-specific mortality of northern pintails in southern Saskatchewan. *Journal of Wildlife Management*. 67:in press.

Henner, C. M., **M. J. Chamberlain,** B. D. Leopold, and L. W. Burger, Jr. 2003. A multi-resolution assessment of raccoon den site selection. *Journal of Wildlife Management*. 67:in press.

In Review

Van Why, K. R., and **M. J. Chamberlain**. 2002. Mortality of Louisiana black bears associated with elevated train trestles. *Canadian Field-Naturalist*.

Books/Book Chapters

Chamberlain, M. J. and B. D. Leopold. 2001. Omnivorous furbearers. Pages 278-292 in J. G. Dickson, editor. *Wildlife of Southern Forests: Habitat and Management*. Hancock House Publishers, Blaine, Washington, USA.

Leopold, B. D. and **M. J. Chamberlain**. 2001. Carnivorous furbearers. Pages 248-277 in J. G. Dickson, editor. *Wildlife of Southern Forests: Habitat and Management*. Hancock House Publishers, Blaine, Washington, USA.

Bowman, J. L. and **M. J. Chamberlain**. 2001. Squirrels. Pages 176-185 in J. G. Dickson, editor. *Wildlife of Southern Forests: Habitat and Management*. Hancock House Publishers, Blaine, Washington, USA.

Leopold, B. D., **M. J. Chamberlain**, and D. Miller. 2002. *The Bobcat: Biology, Conservation, and Management*. The Hancock Press. In preparation.

Invited papers

Chamberlain, M. J., and B. D. Leopold. 2000. Spatio-temporal relationships among adult bobcats in central Mississippi. Pages 45-50 in Woolf, A., C. K. Nielsen, and R. D. Bluett, editors. *Proceedings of a symposium on current bobcat research and implications for management*. The Wildlife Society 2000 Conference, Nashville, Tennessee, USA..

Peer-edited publications

Chamberlain, M. J., J. W. Mangrum, B. D. Leopold, and E. P. Hill. 2000. Evaluation of four attractants for indices to monitor relative abundance of raccoons. *North American Aquatic Furbearer Symposium*. 1:in press.

Chamberlain, M. J. and B. D. Leopold. 2000. Movement and activity patterns of adult raccoons in intensively managed pine forests. *North American Aquatic Furbearer Symposium*. 1:in press.

Conner, L. M., B. D. Leopold, and **M. J. Chamberlain**. 2000. Multivariate habitat models for bobcats in southern forested landscapes. Pages 51-55 in Woolf, A., C. K. Nielsen, and R. D. Bluett, editors. *Proceedings of a symposium on current bobcat research and implications for management*. The Wildlife Society 2000 Conference, Nashville, Tennessee, USA.

Non-peer reviewed publications

Chamberlain, M. J., D. A. Miller, G. A. Hurst, and B. D. Leopold. 1995. Comparison of predation rates on wild turkey hens in two forest ecosystems in Mississippi. *Proceedings of the Eastern Damage Management Workshop*. 7:abstract only.

- Chamberlain, M. J.**, G. A. Hurst, and B. D. Leopold. 1995. Survival rates of wild turkey hens in bottomland hardwood forests in the Mississippi Alluvial Valley. Mississippi Chapter of the Wildlife Society. Abstract only.
- Miller, D. A., M. Weinstein, **M. J. Chamberlain**, W. E. Palmer, G. A. Hurst, and B. D. Leopold. 1995. Ecological importance of southern forested wetlands for the wild turkey. Proceedings of the Southern Forested Wetlands Ecology and Management Conference 1:36-38.
- Chamberlain, M. J.** and B. D. Leopold. 1996. Preliminary hardwood seedling survival rates in the Mississippi Alluvial Valley. Mississippi Chapter of the Wildlife Society. Abstract only.
- Chamberlain, M. J.**, G. A. Hurst, and B. D. Leopold. 1996. Preliminary survival and habitat use of juvenile wild turkeys in central Mississippi. Midwest Fish and Wildlife Conference. Abstract only.
- Chamberlain, M. J.**, B. D. Leopold, and C. D. Lovell. 1997. Effectiveness of using snap-traps to monitor trends in relative abundance of small mammals in central Mississippi. Mammal Trapping Symposium, Edmonton, Alberta. Abstract only.
- Bowman, J. L., **M. J. Chamberlain**, B. D. Leopold, and B. W. Plowman. 1999. Bobcats as biological control agents. National Wildlife Society Conference, Austin, Texas. Abstract only.
- Chamberlain, M. J.** and B. D. Leopold. 1999. Survival and cause-specific mortality rates of sympatric coyotes and gray fox in central Mississippi. National Wildlife Society Conference, Austin, Texas. Abstract only.
- Burger, Jr., L. W., **M. J. Chamberlain**, K. D. Godwin, and B. L. Watkins. 2000. Management of introduced vegetation in restoration of native plant communities on Blackland Prairie soils in Mississippi. Blackland Prairies of the Gulf Coastal Plain: Culture, Nature, and Sustainability.
- Jones, B. J., G. A. Hurst, J. E. Inglis, and **M. J. Chamberlain**. 2002. Wild turkey nest site selection on an area managed for red-cockaded woodpecker habitat: potential impacts of spring burning and changes in vegetation structure. 9th Annual Wildlife Society National Conference. Abstract only.
- Chamberlain, M. J.**, and B. D. Leopold. 2002. Spatio-temporal relationships among adult raccoons in central Mississippi. 9th Annual Wildlife Society National Conference. Abstract only.

Van Why, K., and **M. J. Chamberlain**. 2002. Restoration of the Louisiana Black Bear. 9th Annual Wildlife Society National Conference. Abstract only.

Unpublished Documents

Chamberlain, M. J. 1995. Ecology of wild turkeys in bottomland hardwood forests in the Mississippi Alluvial Valley. Thesis. Mississippi State University, Mississippi State, MS, 82pp.

Chamberlain, M. J. and B. D. Leopold. 1995. Vertebrate monitoring of the Mississippi Delta lands: Twin Oaks and Mahannah WMA's. Final Completion Report for U. S. Army Corps of Engineers, Special Contract, 60pp.

Chamberlain, M. J. and B. D. Leopold. 1996. Faunal inventory and permanent monitoring program for the Nutmeg Hickory RNA, Bienville National Forest. Final Completion Report for U.S.D.A. Forest Service, Special Contract 7pp.

Chamberlain, M. J. 1999. Ecological relationships among bobcats, coyotes, gray foxes, and raccoons, and their interactions with wild turkey hens. Dissertation, Mississippi State University, Mississippi State, MS, 446pp.

Leopold, B. D., and **M. J. Chamberlain**. 2000. Ecology of carnivores in pine-dominated systems. Forest and Wildlife Research Center, Annual Performance Report. Mississippi State University, Mississippi State, MS.

Burger, Jr., L. W., and **M. J. Chamberlain**. 2000. Effects of management practices for the red-cockaded woodpecker on relative abundance of northern bobwhite in mixed pine-hardwood ecosystems of southern Mississippi. Final Completion Report for U.S.D.A. Forest Service, Special Contract 14pp.

Publications in Progress

Chamberlain, M. J., J. F. Benson, and B. D. Leopold. 2003. Land tenure and home range replacement in bobcats. *Journal of Mammalogy*.

Chamberlain, M. J., L. M. Conner, and B. D. Leopold. 2003. Effects of density on space use and habitat selection of adult bobcats. *Journal of Wildlife Management*.

Chamberlain, M. J., and B. D. Leopold. 2003. Landscape characteristics associated with space use of 4 meso-carnivores in Mississippi. *Journal of Wildlife Management*.

Chamberlain, M. J., and B. D. Leopold. 2003. Spatio-temporal relationships among sympatric bobcats, coyotes, and gray foxes in central Mississippi. *Journal of Wildlife Management*.

Chamberlain, M. J., and B. D. Leopold. 2003. The efficacy of radio-marking adult opossums. *Wildlife Society Bulletin*.

Scognamillo, D. A., **M. J. Chamberlain**, and B. D. Leopold. 2003. Effects of microhabitat conditions on capture probabilities of raccoons in cage traps. *American Midland Naturalist*.

Chamberlain, M. J., and L. W. Burger, Jr. 2003. Landscape-level effects of red-cockaded woodpecker management on bobwhite abundance and distribution. *Journal of Wildlife Management*.

Chamberlain, M. J., J. Constible, and L. M. Hooper-Bui. 2003. Effects of using chemical ant repellents during small mammal trapping. *The Southwestern Naturalist*.

Popular articles

Chamberlain, M. J., G. A. Hurst, and B. D. Leopold. 1997. Wild Turkey and Predator Research. Pages 2-3 in *Cycles of Nature*, a Georgia-Pacific newsletter. Vol 6 (1).

Chamberlain, M. J., and B. D. Leopold. 1999. Coyotes: Rightfully Maligned or Misunderstood. *Mississippi Outdoors*.

Chamberlain, M. J., and B. D. Leopold. 2000. Coyote menu: fuzz and roughage. *Turkey Call*. January/February issue.

Chamberlain, M. J. 2000. Managing Your Forest for Bobwhite Quail: Build and maintain a habitat that works. *Forest Landowner*. May/June issue.

Chamberlain, M. J. 2002. Restoring the Louisiana Black Bear to Suitable Habitats - The Pilot Study Gains Steam. *Louisiana Agriculture*.

Chamberlain, M. J. 2002. Renovating Quail Habitat Using Herbicides. *Louisiana Agriculture*.

Chamberlain, M. J. 2003. Restoration of the Louisiana black bear. *The Wildlife Society Restoration Working Group Newsletter*.

Local Presentations

Ecology of wild turkeys in bottomland hardwood forests in the Mississippi Alluvial Valley. 1995. Mississippi State, MS.

Wild turkey hen survival rates in bottomland hardwood forests in the Mississippi Alluvial Valley. 1995. Mississippi Chapter of the Wildlife Society, Mississippi State, MS

Vertebrate monitoring of the Mississippi Delta lands: Twin Oaks and Mahannah WMA's. 1995. U. S. Army Corps of Engineers Special Contract, Mississippi State, MS.

Preliminary hardwood seedling survival rates in the Mississippi Alluvial Valley. 1996. Mississippi Chapter of the Wildlife Society, Jackson, MS

Predator Control: Are We Headed in the Right Direction? 1997. The Mississippi State Chapter of the Wildlife Society, Mississippi State, MS.

Effects of Flooding on Relative Abundance and Diversity of Small Mammals in a Regenerating Bottomland Hardwood Forest. 1997. Mississippi Chapter of the Wildlife Society, Mississippi State, MS

Science-based Carnivore Management: A Review of Current Perspectives. 1999. Mississippi Chapter of the Wildlife Society, Vicksburg, MS.

Ecological relationships among bobcats, coyotes, gray fox, and raccoons, and their interactions with wild turkey hens. 1999. Mississippi State, MS.

"Quail, Turkey and Deer: Are They Compatible?". 2000. East Feliciana Parish, LSU Cooperative Extension Service. Jackson, LA.

Relationships among Louisiana's predators. 2000. The Louisiana State University Chapter of the Wildlife Society. Baton Rouge, LA.

Artificial regeneration: Impacts on avian wildlife. 2000. Continuing Education in Natural Resources. Louisiana State University Agricultural Center. Ruston, LA.

Predator Management: Implications for Gamebirds in the Southeast. 2001. Louisiana Wildlife Federation, Cypress Bend, LA.

Spatial Technologies: Improving Inferences or Serving as Aesthetics? 2001. Louisiana State University, Community of Scholars Seminar Series, Baton Rouge, LA.

Managing Native Habitat for White-tailed Deer. 2002. Continuing Education in Natural Resources. Louisiana State University Agricultural Center. DeRidder, LA.

Regional Presentations

Chamberlain, M. J., D. A. Miller, G. A. Hurst, and B. D. Leopold. 1995. Comparison of predation rates on wild turkey hens in two forest ecosystems in Mississippi. Proceedings of the Eastern Damage Management Workshop, Jackson, MS.

Chamberlain, M. J., D. A. Miller, B. D. Leopold, and G. A. Hurst. 1996. Predation rates on wild turkey hens in a hardwood bottomland forest and a mixed forest in Mississippi. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Hot Springs AR.

Chamberlain, M. J., and B. D. Leopold. 1998. Impacts of Coyotes on Selected Game

Species Using Dietary Analysis: Should We Re-evaluate Our Ideas? Colloquium on the Conservation of Southeastern Mammals, Hot Springs, AR.

Chamberlain, M. J., and B. D. Leopold. 1998. Microhabitat Characteristics of Wild Turkey Hen Prey and Nest Site Selection in Central Mississippi. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Orlando, FL.

Chamberlain, M. J., L. M. Conner, B. D. Leopold, and K. J. Sullivan. 1998. Diel activity patterns of adult bobcats in central Mississippi. Proceedings of the Annual Conference of the Southeastern Association of Fish and Wildlife Agencies, Orlando, FL.

Chamberlain, M. J., and B. D. Leopold. 1999. Survival and cause-specific mortality of hardwood seedlings in the Mississippi Alluvial Valley. Ecology and Management of Bottomland Hardwood Systems: The State of Our Understanding. Memphis, TN.

Chamberlain, M. J., and B. D. Leopold. 1999. Dietary patterns of sympatric bobcats and coyotes in central Mississippi. Proceedings of the Annual Conference of the Southeastern Association of Fish and Wildlife Agencies, Greensboro, NC.

Chamberlain, M. J., J. M. Ross, and B. D. Leopold. 1999. Influence of forest management and microhabitat conditions on abundance of southern fox and gray squirrels. Proceedings of the Annual Conference of the Southeastern Association of Fish and Wildlife Agencies, Greensboro, NC.

Chamberlain, M. J., J. W. Mangrum, B. D. Leopold, and E. P. Hill. 1999. Evaluation of four attractants for indices to monitor relative abundance of bobcats, coyotes, and gray fox. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Greensboro, NC.

Chamberlain, M. J., B. D. Leopold, K. M. Hodges, and J. E. G. Burton. 2000. Space use and movements of raccoons in two forested ecosystems. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Baton Rouge, LA.

Greenfield, K. C., L. W. Burger, and **M. J. Chamberlain**. 2001. Herbicide and prescribed fire as habitat management tools for northern bobwhite. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Louisville, KY.

Conner, L. M., **M. J. Chamberlain**, and B. D. Leopold. 2001. Bobcat home range size relative to habitat quality. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Louisville, KY.

Leopold, B. D., and **M. J. Chamberlain**. 2002. Predator management: here we go again? Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies, Baltimore, MD.

International and National Presentations

Chamberlain, M. J., B. D. Leopold, and C. D. Lovell. 1997. Effectiveness of snap-traps for monitoring trends in relative abundance of small mammals. Mammal Trapping Symposium, Edmonton, Alberta, Canada.

Chamberlain, M. J. and B. D. Leopold. 1999. Survival and cause-specific mortality rates of sympatric coyotes and gray fox in central Mississippi. National Wildlife Society Conference, Austin, Texas, USA.

Chamberlain, M. J., and B. D. Leopold. 2000. Spatio-temporal relationships among adult bobcats in central Mississippi. National Wildlife Society Conference, Nashville, Tennessee, USA.

Jones, B. J., G. A. Hurst, J. E. Inglis, and **M. J. Chamberlain**. 2002. Wild turkey nest site selection on an area managed for red-cockaded woodpecker habitat: potential impacts of spring burning and changes in vegetation structure. 9th Annual Wildlife Society National Conference. Bismarck, North Dakota, USA.

Chamberlain, M. J., and B. D. Leopold. 2002. Spatio-temporal relationships among adult raccoons in central Mississippi. 9th Annual Wildlife Society National Conference. Bismarck, North Dakota, USA.

Van Why, K., and **M. J. Chamberlain**. 2002. Restoration of the Louisiana Black Bear. 82nd Annual Meeting of the American Society of Mammalogists. Lake Charles, Louisiana, USA.

Poster Presentations

Using smoked aluminum track plates to assess relative abundance of medium-sized carnivores. 1997. **M. J. Chamberlain** and B. D. Leopold. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies. Oklahoma City, OK.

Comparison of censusing techniques to estimate white-tailed deer populations on mitigation lands in the Mississippi Delta. 1998. **M. J. Chamberlain**, J. L. Bowman, and B. D. Leopold. Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies. Orlando, FL.

Effects of flooding on relative abundance and diversity of small mammals in a regenerating bottomland hardwood forest. 1999. **M. J. Chamberlain**, B. D. Leopold, and S. E. Stephens. Proceedings of the Annual Conference of Southeastern Association

of Fish and Wildlife Agencies. Greensboro, NC.

Bobwhite use patterns in relation to cover strips. 1999. **M. J. Chamberlain**, L. W. Burger, and M. D. Smith. Southeast Quail Study Group. Starkville, MS.

Herbicide renovation of fescue-dominated CRP fields. 1999. **M. J. Chamberlain**, L. W. Burger, and B. L. Watkins. Southeast Quail Study Group. Starkville, MS.

Herbicide renovation of fescue-dominated CRP fields using individual and combination treatments. 1999. **M. J. Chamberlain**, and L. W. Burger. Southeast Quail Study Group. Starkville, MS.

Renovation of fescue-dominated CRP fields using fire and Roundup. 1999. L. W. Burger, and **M. J. Chamberlain**. Southeast Quail Study Group. Starkville, MS.

Protection of Quail from Red-imported fire ant attack using bait. 2001. J. Rosson, L. M. Hooper-Bui, D. Sanders, and **M. J. Chamberlain**. Entomological Society of America, Annual Meeting. San Diego, CA.

Jones, J. J., **M. J. Chamberlain**, L. M. Hooper-Bui. 2002. Reducing red-imported fire ant activity when live-trapping small mammals. 9th Annual Wildlife Society National Conference. Bismarck, ND.

Van Why, K. R., R. D. Applegate, T. T. Cable, P. S. Gipson, and **M. J. Chamberlain**. 2002. Use of the Internet and Email by Hunters: a potential tool for sportsmen surveys. 9th Annual Wildlife Society National Conference. Bismarck, ND.

Van Why, K. R., and **M. J. Chamberlain**. 2002. Restoration of the Louisiana black bear to portions of its former range. 9th Annual Wildlife Society National Conference. Bismarck, ND.

Chodachek, K. D., and **M. J. Chamberlain**. 2002. Estimating waterfowl nest numbers using pair counts in north-central North Dakota. 9th Annual Wildlife Society National Conference. Bismarck, ND.

Informal presentations

Ecology of wild turkeys in bottomland hardwood forests. 2002. Louisiana Chapter of the National Wild Turkey Federation.

Reproductive ecology of wild turkeys in bottomland hardwood forests of Louisiana. 2002. Wild Turkey Committee meeting - Southeastern Section of the Wildlife Society.

2001 Louisiana High School Science Expo - Louisiana State University - provide

informal seminars to outstanding high school students regarding opportunities in wildlife and natural resources management.

10th Annual Feliciana Forestry Field Day - Idlewild Experiment Station - 2001. Wildlife Habitat Enhancement Using Herbicides

Recruiting students into the School of Renewable Natural Resources - 2000. Avoyelles Parish Teachers Association

Jasper County Annual Forestry Field Day, Newton, MS - 1997

Lee-Davis High School, Hanover County, VA - 1994 - Topic: How to get into the wildlife management field.

Grantsmanship

Grants Awarded

Impacts of Summer Hunting of Raccoons on Selected Game Animals. 1996. Mississippi Raccoon Hunters Association. Co-Investigator with Bruce D. Leopold. Grant Amount: \$2,000.00. Starting Date: 8/1/96. Project Duration: 1 year.

Monitoring of impacts of introduced bobcats upon lagomorph populations on Singing River Island, Pascagoula Naval Area Station. 1995-7. Co-Investigator with Bruce D. Leopold and Jacob L. Bowman. United States Department of the Navy. Starting Date: April 1, 1995. Amount: \$1,500.00 per investigator. Project Duration: 1 year.

Effects of predation on the wild turkey. 1997. Georgia-Pacific Corporation. Co-Investigator with Bruce D. Leopold. Amount: \$12,000.00. Starting date 1/1/97. Project Duration: 1 year.

Faunal inventory and permanent monitoring program for the Nutmeg Hickory Resource Natural Area, Bienville National Forest. 1995. RNA Matching Grants Proposals, U. S. Forest Service, Bienville National Forest. Co-Investigator with Bruce D. Leopold. Grant Amount: \$12,000. Starting Date: 8/1/95. Project Duration: 2 years.

Development of a Forest Wildlife Management Plan for Twin Oaks and Mahannah Wildlife Management Areas. 1994. Mississippi Department of Wildlife, Fisheries and Parks through the U.S. Army Corps of Engineers. Co-Investigator with Bruce D. Leopold. Starting Date: August, 1993. Amount: \$76,641. Project Duration: 2 years.

Effects of Selective Herbicide Application on Vegetation Structure, Availability and Diversity of Food Plants and Invertebrates for Northern Bobwhite, and Small Mammal

Community Dynamics Within Managed Pine Forests. 2000. McIntire-Stennis program. Amount: \$32,250. Project Duration: 2.5 years. Starting Date: August 2000.

Effects of Herbicide Application on Habitat Quality for Northern Bobwhite in Managed Pine Forests. 2001. McIntire-Stennis program. Amount: \$5,000. Project Duration: 1 year. Starting Date: October 2000.

Evaluating effects of trapping carnivores on 1-square mile sections on waterfowl nest success. 2001. McIntire-Stennis. Amount: \$11,000. Project Duration: 2 years. Starting Date: August 2001.

Influences of 2 herbicide treatments on habitat quality for Northern bobwhite. 2000. BASF Corporation. Amount: \$15,000/year. Project Duration: 2 years. Starting Date: October 2000.

Monitoring Abundance and Distribution of Northern Bobwhite on Kisatchie National Forest, Louisiana. USDA Forest Service. Amount: \$12,500. Project Duration: 5 years. Starting Date: June 2001.

Evaluating effects of trapping carnivores on 1-square mile sections on waterfowl nest success and nest density. Delta Waterfowl Foundation. Amount: \$60,000. Project Duration 2 years. Starting Date: January 2001.

Repatriation of the Louisiana Black Bear into Suitable Habitats. 2000. CoyPu Foundation. Amount: \$50,000. Project Duration: 1 year. Starting Date: January 2001.

Monitoring Abundance and Distribution of Northern Bobwhite on Managed Forests in Louisiana. Northwest Louisiana Chapter of Quail Unlimited. Amount: \$5,000. Project Duration: 1 year. Starting Date: March 2001.

Ecology of the eastern wild turkey on Sherburne Wildlife Management Area. Louisiana Chapter of the National Wild Turkey Federation. Amount: \$6,000. Project Duration: 4 months. Starting Date: February 2001.

Development of a Geographical Information System/Global Positioning System Student Training Center. Louisiana State University College of Agriculture. Amount: \$103,179. Co-investigator with G. Breitenbeck, C. F. deHoop, J. Chang, H. Capello, and W. H. Hudnall.

Repatriation of the Louisiana Black Bear into Suitable Habitats in Louisiana. 2001. The Nature Conservancy. Amount: \$5,000. Project Duration: 1 year. Starting Date: September 2001.

Restoration of the Louisiana Black Bear to the Red River Wildlife Management Area. 2001. Louisiana Department of Wildlife and Fisheries. Amount: \$19,375. Project Duration: 1 year. Starting Date: September 2001.

Producing an Interactive Knowledge Base for Pine Regeneration for the Louisiana Forestry Productivity Program. 2001. Louisiana Department of Agriculture and Forestry. Amount: \$370,303. Project Duration: 3 years. Co-investigator with T. Dean and M. Dunn.

Examining Population and Individual-level Response of Northern Bobwhite to Landscape Enhancement Using Selective Herbicides. 2001. Louisiana Department of Wildlife and Fisheries. Amount: \$15,000/year. Project Duration: 3 years.

Repatriation of the Louisiana Black Bear into Suitable Habitats. 2001. CoyPu Foundation. Amount: \$31,900. Project Duration: 1 year. Starting Date: January 2002.

Ecology of the eastern wild turkey on Sherburne Wildlife Management Area. Louisiana Chapter of the National Wild Turkey Federation. Amount: \$8,000. Project Duration: 5 months. Starting Date: February 2002.

Restoration of the Louisiana Black Bear into Suitable Habitats in Louisiana. 2002. The Boone and Crockett Club. Amount: \$5,000. Project Duration: 1 year. Starting Date: January 2002.

The Continuing Repatriation of the Louisiana Black Bear. 2002. The United States Fish and Wildlife Service. Amount: \$43,200. Project Duration: 1 year. Starting Date: March 2002.

Effects of Forest Management on Herpetile and Bird Communities in Louisiana. 2002. Louisiana Department of Wildlife and Fisheries. Amount: \$144,000. Project Duration: 2 years. Starting Date: August 2002.

Restoration of the Louisiana black bear. 2002. The Pope and Young Club. Amount: \$2,800. Project Duration: 1 year. Starting Date: September 2002.

Using River Otters as a Bioindicator Species in Louisiana. 2002. J. Bennett Johnston Science Foundation. Amount: \$5,000. Project Duration: 1 year. Starting Date: September 2002.

Ecological Variables Related to Distribution of River Otter. 2002. Louisiana Wildlife Federation. Amount: \$2,920. Project Duration: 1 year. Starting Date: January 2003.

Repatriation of the Louisiana Black Bear into Suitable Habitats. 2002. CoyPu Foundation. Amount: \$16,500. Project Duration: 1 year. Starting Date: January 2003.

Ecology of wild turkeys on Sherburne Wildlife Management Area. 2002. Louisiana Chapter of the National Wild Turkey Federation. Amount: \$7,100. Project Duration: 1 year. Starting Date: January 2003.

Effects of selective herbicide application on northern bobwhite. 2003. Weyerhaeuser Company. Amount: \$3,100. Project Duration: 1 year. Starting Date: January 2003.

Ecological, environmental, and spatial variables in the distribution and abundance of river otter populations in Louisiana. 2003. Louisiana Department of Wildlife and Fisheries. Amount: \$96,300. Project Duration: 4 years. Starting Date: July 2003.

Grants Pending

Ecology of Wild Turkeys in Bottomland Hardwood Forest Systems of Louisiana. 2003. U.S. Army Corps of Engineers. Amount: \$85,330. Project Duration: 3 years.

Examining Harvest Rate of Male Wild Turkeys on Indian Bayou. 2003. U. S. Army Corps of Engineers. Amount: \$27,945. Project Duration: 3 years.

Grants Not Funded

Using Spatial Technologies to Examine Landscape-level Effects of Red-imported Fire Ants on Faunal and Floral Communities. Louisiana Board of Regents Traditional Enhancement. Amount: \$50,700.

The Evaluation of the Feasibility and Impact of Landscape-Level Red Imported Fire Ant Control on Floral and Faunal Communities. Co-authored with L. M. Hooper-Bui. Louisiana Board of Regents. Amount: \$180,000.

Ecology of the Wild Turkey in a Bottomland Hardwood System of Louisiana. 2001. National Wild Turkey Federation. Amount: \$50,000.

Restoration of the Louisiana Black Bear. 2002. International Association of Bear Research. Amount: \$13,500.

Interviews

Georgia Department of Natural Resources - Fall 1997 - Diets of coyotes in the southeastern United States

National Wildlife Federation - Gary Turbak - Interactions among bobcats, coyotes, gray fox, and raccoon. Appeared in National Wildlife Federation Magazine June/July 1998 and organization website (<http://www.nwf.org/nwf/natlwild/1998/hunted.html>).

CNN - Robert Zuill - October 5, 1999 - Coyotes in suburban areas of the Southeast.

Appalachian Voice - Elizabeth Hunter - November 16, 1999 - Eastern coyotes.

National Geographic Society - 2001 - Restoration of the Louisiana black bear.

Professional Activity

The Wildlife Society

Wildlife Society Bulletin

Referee 1998, 1999

Associate Editor 1999-2002

Faculty Advisor - Louisiana State University Chapter 2000-2002

President-elect - Louisiana Chapter - 2001

President - Louisiana Chapter - 2002

Past-President - Louisiana Chapter - 2003

Member - Mississippi Chapter - 1995 - 1999

Member - Mississippi State University Chapter - 1994-97

Committee Chairman - Mississippi State University Chapter - 1996-97

Journal of Wildlife Management

Referee 1999-2002

Proceedings of the Southeastern Association of Fish and Wildlife Agencies

Referee 1999

Co-Associate Editor (Wildlife Technical Sessions) 2000

Associate Editor (Wildlife Technical Sessions) 2001-2002

Journal of Mammalogy

Referee 2001

American Midland Naturalist

Associate Editor 2002-2003

Referee 2000

Biological Conservation

Referee 2002

Western North American Naturalist

Referee 2002

Southern Journal of Applied Forestry

Referee 2001

Journal of Range Management

Referee 2000

North American Aquatic Furbearer Symposium

Referee 1999-2000

Ecology and Management of Bottomland Hardwood Systems - Symposium

Referee 1999

Forest and Wildlife Research Center, Mississippi State University
Internal Referee 1997-2000

The Virginia Tech Outdoor Sportsman's Society (President/Founder) - 1992-1993.
Virginia Tech Forestry Club - 1992 -1993.
Head Student Senator - College of Agriculture - Virginia Tech.
Academic Affairs Committee - Virginia Tech Student Government - 1992-1993.
Xi Sigma Pi Honors Society - 1994 - present
Active or past member of National Rifle Association, Rocky Mountain Elk Foundation,
Ducks Unlimited, National Wild Turkey Federation, Quail Unlimited, and Virginia Deer
Hunter's Association
Committee Member - Bulldog Chapter of the National Wild Turkey Federation - 1998
Executive Board Member - Northwest Louisiana Chapter of Quail Unlimited - 2001

Graduate Student Advising

The following students have or are currently conducting research under my supervision as graduate research assistants:

Judy J. Jones - Thesis title: Effects of selective herbicide application on vegetation, invertebrate, and small mammal communities. Expected graduation date: May 2003.

Kristen D. Chodachek - Thesis title: The feasibility and effectiveness of using predator removal on insular prairie habitats to improve waterfowl reproduction. Expected graduation date: May 2003.

Kyle W. Van Why - Thesis title: Feasibility of restoring the Louisiana black bear to suitable habitats in central Louisiana. Expected graduation date: December 2002.

Daniel Scognamillo - Dissertation title: Ecological, environmental, and spatial variables related to distribution and abundance of river otter in Louisiana. Expected graduation date: May 2006.

Keri Landry - Thesis title: Effects of red-imported fire ants on faunal communities in pine-dominated forests of Louisiana. Expected graduation date: May 2004.

Charles Kitts - Thesis title: Effects of landscape-level habitat renovation using selective herbicides on northern bobwhite space and habitat use. Expected graduation date: May 2004.

Walker Wilson - Thesis title: Space use, habitat selection, and nesting ecology of wild turkeys in bottomland hardwood forests. Expected graduation date: December 2004.

John Benson - Thesis title: Space use, movements, and reproductive ecology of relocated Louisiana black bears. Expected graduation date: December 2004.

Holly LeGrand - Thesis title: Relationships between forest management and avian and herpetile communities in 3 forest types of Louisiana. Expected graduation date: May 2005:

I'm currently serving on or have served on graduate committees for the following students:

Kenneth D. Richkus - Dissertation title: Northern pintail nest site selection, nest success, reneesting ecology, and survival in the intensively farmed prairies of southern Saskatchewan: an evaluation of the ecological trap hypothesis. Graduation date: May 2002.

Jon Einar Jonsson - Dissertation title: Effects of body size and habitat on goose behavior: Lesser snow goose and Ross's goose. Expected graduation date: May 2004.

Jesse Oetgen - Thesis title: Effects of nonresponse and repeat sampling in the federal waterfowl parts survey. Graduation date: May 2002.

Jeremy Adkins - Thesis title: Effects of predator removal on small mammal abundance. Expected graduation date: December 2002.

Andrea Hoover - Thesis title: Patterns of female nest attendance in northern pintails and mallards. Graduation date: May 2002.

Jason Watton - Thesis title: Designing golf courses to benefit wildlife. Graduation Date: May 2002.

Teaching Experience

Invited lectures -

Upland Game Management - 1993 (Mississippi State University)

Mourning dove ecology and management

Wildlife Techniques - 1996-99 (Mississippi State University)

Capture and marking of wild turkeys,

Relationships between forest management and wild turkey management

Principles of Wildlife Conservation and Management - WF 4153/6153 - Spring 1998 (Mississippi State University)

Mourning dove ecology and management

Wild turkey ecology and population dynamics

Relationships between water and wildlife management

Economics of wildlife management

Wildlife Nutrition and Physiology - WF 5143/7143 - Fall 1997 (Mississippi State University)

Feeding and reproductive strategies of bobcats and coyotes

Mississippi State University lecture series - 1998

Pearl River Community College - Mississippi's carnivores

Mississippi State Continuing Education Short Course - 1999
Ecology and management of Gray and Fox Squirrels
Wildlife Management Techniques - WF 4011 - (Louisiana State University)
Understanding basics of GIS and GPS technologies
Applications of GIS and GPS to natural resource management
Techniques for aging and sexing galliformes
Techniques for trapping and handling mammals
Wildlife diseases
Examining cause-specific mortality in wildlife research
Applied Special Topics in Entomology - ENTM 7008 - Fall 2000 (Louisiana State University)
Using GIS applications in Entomology

Teaching Assistant to Dr. L. Wes Burger - Fall 1998 - Mississippi State University
Principles of Wildlife Conservation and Management (WF 4153/6153)

Full responsibility - *Principles of Wildlife Conservation and Management* (WF 4153/6153; Mississippi State University). Split-level undergraduate/graduate course designed to relate biological concepts and ecological principles to the management of natural resources, habitats, and wildlife populations. Also to encourage professional development including problem solving and critical thinking skills. Design and conduct laboratories emphasizing ecology and management of white-tailed deer, eastern wild turkey, waterfowl, Northern bobwhite, fox and gray squirrel, cottontail and swamp rabbit, feral hogs, and red-cockaded woodpeckers.

Ecology and Management of Upland Game Birds (RNR 7015; Louisiana State University). Graduate course designed to equip graduate students with essential knowledge and skills to understand and better manage a diversity of avian and mammalian species. Selected species covered within course included northern bobwhite, wild turkey, woodcock, northern grouse, and mourning dove. Class structured to provide students with a solid knowledge base of fundamental life history traits, behavioral and physiological adaptations, and habitat requirements of selected avian species common to the United States.

Thoughts Guiding the Evolution of Wildlife Science (RNR 7070; Louisiana State University). This course exposes students to critical thoughts and writings that have advanced the wildlife science profession within the past 15 years. Students are expected to conduct weekly roundtable discussions with instructor regarding selected manuscripts and critical thoughts directed at our evolution as scientists. The course culminates in each student providing a formal seminar that details the student's thoughts and dialogue pertaining to the assigned readings.

Principles of Wildlife Management (RNR 2031; Louisiana State University). Undergraduate course designed to relate biological concepts and ecological principles to the management of natural resources, habitats, and wildlife populations. Also to encourage professional development including problem solving and critical thinking skills. Course emphasizes history of wildlife management, population biology, and current issues facing natural resource professionals.

Mammalian Ecology and Management (RNR 7011; Louisiana State University). Graduate course designed to equip students with fundamental knowledge necessary to understand and manage a diversity of large mammals, including black bear, white-tailed deer, mammalian carnivores, and medium-sized furbearers. Class is structured to provide students with a working knowledge of life history traits, behavioral and physiological adaptations, and habitat requirements of the referenced mammalian species.

Wildlife Habitat Management (RNR 4045; Louisiana State University). Undergraduate course designed to provide students with basic information regarding management of habitats for wildlife and issues facing management and stewardship of habitats. Students are exposed to basic ecological concepts pertaining to managing wildlife habitats, and asked to understand relationships between land use and habitat management. Students also prepare a comprehensive habitat management plan for a particular wildlife species.

Continuing Education - Courses Taken

Spatial Statistics: Analytic Tools for Remote Sensing Research - January 2000

Volunteer Activities

National Wild Turkey Federation, JAKES events, 1995-98

Youth Waterfowl Workshop, Noxubee National Wildlife Refuge - 1996-98

Women in the Outdoors - National Wild Turkey Federation - 2000

Judge - Governor's Award for Excellence in Conservation - sponsored by the Louisiana Wildlife Federation - 2002

Louisiana Black Bear Conflict Resolution Team - 2002-present

Other Skills

Have extensive experience with the following software packages or analytical packages:

Wordperfect 5.0-8.0

Harvard Graphics

HOMER (home range)

SAS	Microsoft Power Point	SURVIV
SPSS	Corel Presentations	CALHOME
Adobe Photoshop	Adobe Acrobat	LOCATE II
Arcview 2.0-3.2	Dbase 3-5	Microsoft Outlook
Quattro Pro	Microsoft Excel	Lotus Notes
Pathfinder Office	ArcInfo (PC and Unix)	Microsoft Word
Kaplan (Stagkam)	MICROMORT	CAPTURE
CONTRAST	Telebase	Asymetrix Compel
ERDAS Imagine		

Have experience trapping furbearers and small mammals with following trap types:
 Egg traps Nos. 1.5, 1.75, and 3.0 Victor soft-catch
 110 and 330 Conibear Tomahawk, New Haven, and Hava-heart live traps
 Sherman traps

Have experience capturing and tranquilizing/restraining various species including:

Bobcat	Coyote	Muskrat
Gray fox	Red fox	Beaver
Raccoon	Opossum	Wild turkey
Striped skunk	Black bear	Northern bobwhite
Fox squirrel	Gray squirrel	

Consultation

Provide technical advice and assistance to private groups regarding research monitoring abundance and ecology of mammalian carnivores.

Provide technical advice and assistance to landowners in Texas, Mississippi, Louisiana and Virginia regarding habitat management programs to benefit wild turkeys, white-tailed deer, and Northern bobwhite

Provided technical assistance to Mississippi Department of Wildlife, Fisheries and Parks concerning GIS applications for wildlife law enforcement and license agents

Provided extensive technical advice and assistance, including statistical techniques and field methods to graduate students, staff, and faculty of the Department of Wildlife and Fisheries, Mississippi State University.

Provided advice and assistance concerning nuisance furbearer damage to personal property for 15-25 households in Starkville, Mississippi.

Interests/hobbies

Enjoy hunting, hunting retriever training, landscaping, and camping.

Thomas W. McClenahan II - Curriculum Vitae

Thomas W. McClenahan II
52 Craven Road
Delanson, New York 12053
Home Phone 518-895-8042

EDUCATION

1995-1999 Bachelor of Science, St. Lawrence University, Canton, New York

EMPLOYMENT

1999-Present *Scientist, ARCADIS*

Responsible for ecological and environmental investigations, data collection, analysis and remediation. Leader and member of field teams implementing protocols designed to study existing conditions and probable solutions.

SPECIAL TRAINING

- Senior study project on amphibian abnormalities occurring in the Adirondack State Park wetlands, ponds, and lakes, examining their possible causes and contributors. Also studied cryogenics and wintering habits of Wood Frogs (*Rana sylvatica*).
- Apprenticed with former New York State Lieutenant in the Department of Environmental Conservation's Law Enforcement Division for all Mink and Otter work.
- Received direct training alongside licensed instructor to gain certificate and license for small game trapping

WORK EXPERIENCE

Ecological Risk Assessment

Conducted numerous field studies in support of ecological risk assessment investigations. Specific experience associated with these studies is described below.

Semi-Aquatic Mammals

Used several techniques to document the presence of semi-aquatic mammals, including mink (*Mustela vison*) and river otter (*Lutra canadensis*), in riverine system and wetland systems including:

- Scent post stations
- Snow tracking
- Live trapping

Avian Species

Presence/absence, census and reproductive surveys of several avian species including the American robin (*Turdus migratorius*), the American bittern (*Botaurus lentiginosus*) and the belted kingfisher (*Ceryl alcyon*). Experience includes:

- Used habitat suitability index and habitat surveys to identify suitable nesting and breeding habitat
- Locating kingfisher burrows and defining and monitoring territories throughout the breeding season
- Nest searching and monitoring to determine exposure and nest survival success rates.

Amphibians

Conducted surveys to identify favorable breeding ponds for wood frogs (*Rana sylvatica*). Call surveys were used to determine the location of the breeding individuals. Participated in reproductive study monitoring larval growth, mortality and metamorphosis.

Small Mammals

Trapping study of short-tailed shrews (*Blarina brevicauda*) (and other incidentally caught species). Activities included routine trap monitoring and providing support for team members marking trapped individuals.

Land/Human Use Survey

Conducted car parking access, canoe surveys, and walking surveys over a six month period to determine the amount of human use in the study area. Coordinated field staff and data processing.

Environmental Remediation

Collection of groundwater, surface water, soil and air samples for investigative and progress monitoring remedial efforts.

- Interpretation and Assessment of hydrological conditions
- Interpretation of faunal assemblages within impacted lake sediments to determine sedimentary depositional environments and depositional history beneath a former MGP plant site.
- Installation of monitoring wells and soil borings.
- Responsible for health and safety monitoring during field activities.
- Responsible for operation and maintenance activities for a number of remedial systems in New York.

Errata

ERRATA

1. p. 5, paragraph 3, sentence 7 should read “Finally, Dr. Chamberlain concluded that at least two other mink of unknown sex were also present in the Study Area, based on the findings of other sets of tracks (Tr. 13 and Tr. 22) in separate areas during the same time period (Tr-13-U distant from Tr-14-F/Tr-15-F/Tr-16-U; Tr-22 distant from Tr-19-F/Tr-20-F/Tr-21-F).”
2. Revised Table 1 (attached)
3. Revised Figure 1 (attached)

Table

Table 1. Mink Track Observations

DATE	LOCATION	OBSERVATION	NOTES	NAME	OBSERVER ¹
1/18/01	New Lennox Launch	Mink Tracks in snow	Tracks from river to land	Tr-1	PB
1/18/01	Woods Pond	Mink Tracks in snow	East side of Woods Pond	Tr-25	PB
5/11/01	Mainstem River Bank	Mink Tracks in mud	Male tracks running on mud shore	Tr-5	MC,TM,DD
6/14/01	Trib Station #17	Mink Tracks in mud	Male tracks in mud - Felton Brk	Tr-6	TM,II,DD
6/27/01	Trib Station #11	Mink Tracks in sand	Tracks on station	Tr-7	PB,TM,DD
6/28/01	Trib Station #12	Mink Tracks in sand	Tracks on station	Tr-8	PB,TM,DD
12/19/01	MS-18	Mink Tracks in sand	Tracks on sand- scat left/collect	Tr-9	TM,II
1/9/02	Roaring Brk Rd	Mink Tracks in snow	Roaring Brk Rd. Bridge over Mill Brk	Tr-10	PB,TM
1/9/02	Roaring Brk Rd	Mink Tracks in snow	Roaring Brk Bridge	Tr-11	PB,TM
1/9/02	Main Stem	Mink Tracks in snow	Along log on main river near Box ² #899	Tr-12	PB,TM
1/17/02	Roaring Brk Rd	Mink Tracks in snow	Roaring Brk Bridge	Tr-13	PB,TM
1/17/02	MS-37 Backwater	Mink Tracks in snow	Female - tracks into river	Tr-14	PB,TM
1/17/02	South of MS-48	Mink Tracks in snow	Female - Possible Den	Tr-15	PB,TM
1/17/02	Big Spring	Mink Tracks in snow	Passes through open spring area	Tr-16	PB,TM
1/23/02	Roaring Brk Rd	Mink Tracks in snow	Roaring Brk Bridge	Tr-18	PB,TM
1/23/02	MS-37 Backwater	Mink Tracks in snow	Likely Female, in and out holes	Tr-19	PB,TM
1/23/02	Mainstem	Mink Tracks in snow	Female-in b/w MS ³ -42/44	Tr-20	PB,TM
1/23/02	South of MS-48	Mink Tracks in snow	Same poss. Den location - Fem.	Tr-21	PB,TM
1/23/02	W. Side Mainstem	Mink Tracks in snow	Mink trail from river to hole ~20'	Tr-22	PB,TM
2/28/02	Mill Brk. Under R. Brk Rd	Mink Tracks in snow	Male, by mail box #37	Tr-26	PB,TM
2/28/02	Roaring Brk Rd	Mink Tracks in snow	Female, running under bridge	Tr-27	PB,TM
2/28/02	Mainstem	Mink Tracks in snow	Male, walkway S of MS-43	Tr-28	PB,TM
2/28/02	Mainstem	Mink Tracks in snow	Female, same possible den site	Tr-29	PB,TM
2/19/02	Roaring Brk Rd Bridge	Mink Tracks in snow	Male, in and out water & holes	Tr-23	PB,TM
2/19/02	Mainstem	Mink Tracks in snow	Male, in b/w MS-42/44	Tr-24	PB,TM
3/18/02	Mainstem	Mink Tracks in snow	MS-52 Walkway, visiting animal carcass	Tr-31	PB,TM
3/19/02	MS-37 Backwater	Mink Tracks in snow	lope along shore, in/out water	Tr-32	PB,TM
3/19/02	MS-52 Walkway	Mink Tracks in snow	Large Male, in/out water	Tr-33	PB,TM
3/19/02	Mainstem	Mink Tracks in snow	Around tree/water by Box #899	Tr-34	PB,TM
3/19/02	Mainstem	Mink Tracks in snow	In mud, on W bank, b/w MS8 and MS9. Possibly same mink as above, running towards above location. 200 yds S of above siting.	Tr-35	PB,TM
3/19/02	Mainstem	Mink Tracks in snow	Large Male, in/out water, S of Box #711	Tr-36	PB,TM
3/19/02	Mainstem	Mink Tracks in snow	Large Male, 100 yds S of Box #711. Possibly same mink as above, but at a different location and feeding area.	Tr-37	PB,TM
3/21/02	Woods pond footbridge	Mink Tracks in snow	Large Male, in/out small stream/culvert	Tr-38	PB,TM
3/21/02	Mainstem	Mink Tracks in snow	30 yds W of Box #899, in/out marsh	Tr-39	PB,TM
3/21/02	Mainstem	Mink Tracks in snow	Female, on MS-16, 10' off river bank	Tr-41	PB,TM

¹PB-Paul Bernstein, TM-Thom McClenahan, MC-Michael Chamberlain, DD-Dan DeOrazio, II-Ian Ippolito

²Box refers to EPA tree swallow box number

³MS refers to Main Stem scent station number

Figure

Figure 2. Mink Track Locations

