

Theron M. Terhune

Home address:

200 Brookstone Drive
Athens, GA, USA 30605
Tel: (706) 548.4436
Email: terhutm@uga.edu

Business address:

3-328A WSFNR
The University of Georgia
Athens, GA, USA 30602
Tel: (706) 542.3932
Fax: (706) 542.8356

Education

Doctor of Philosophy (Candidate) - The University of Georgia **2003 to 2007**

- *Dissertation:* Translocation effects on survival, fecundity, and gene flow in an isolated population of Northern Bobwhite
- *Emphasis:* Population genetics, reproductive ecology, translocation and conservation ecology, habitat use and modeling

Master of Science in Wildlife Science - Auburn University **2000 to 2004**

- *Thesis:* Two techniques for the northern bobwhite: Relocation and summer male call counts
- *Emphasis:* Reproductive ecology, population ecology, and social behavior

Bachelor of Science in Wildlife Science - Auburn University **1995 to 1998**

- *Emphasis:* Wildlife Ecology and Management

Honors and Awards

- UGA - WSFNR, Graduate Student Presentation Award (2007).
- Southeastern Association of Fish and Wildlife Agencies (SEAFWA), Best Paper Award (2006).
- Environmental Systems Research Institute (ESRI), GIS student Assistantship Award (2005).
- Graduate Tuition Scholarship, Auburn University (2001, 2002, 2003).
Presented to outstanding graduate students with the highest GPAs in their professional course work.
- Certified Associate Wildlife Biologist (1999).
Awarded to wildlife professionals demonstrating expertise via education and research experience in the art and science of applying the principles of ecology and management.
- Eagle Scout, Boy Scouts of America (1992).

Research Experience

Wildlife and GIS Consultant

Adaptive Resource Management

1998 - present

- Habitat assessment, manipulation, and management for white-tailed deer, wild turkey, waterfowl, northern bobwhite, and other game species.
- GIS habitat mapping and analysis.

Provide pragmatic, technical assistance to private landowners and commercial businesses via management plans, technical reports, and professional meetings. Responsible for preparing habitat maps and GIS database management.

Research Assistant

Warnell School Forestry and Natural Resources, UGA

2003 - 2006

- Conservation, translocation, and demographic systems in a non-migratory, upland game species.
- Early-succession habitat restoration, manipulation, and management.

Conducted research to determine the efficacy of translocation and the associated demographic and genetic response to an isolated Northern Bobwhite (*Colinus virginianus*) population. The research was a collaborative effort between the Albany Quail Project and Tall Timbers Research Station in conjunction with John Carroll, Bill Palmer, D. Clay Sisson, and H. Lee Stribling. Provided technical assistance and consulting advice to managers, staff, and landowner.

Research Assistant

School of Forestry and Wildlife Sciences, AU

2000 - 2003

- Demographic systems in a non-migratory, avian species bearing precocial young.
- Ramifications of long-term, intensive habitat management regimes on vegetation and population structure of Northern Bobwhite.
- Disparities in reproductive and brood ecology relative to population density and geographical locale.

Conducted research on Northern Bobwhite reproductive and brood ecology, breeding season male vocalization and mating structure, vegetation response and habitat use following fertilization of weed fields, seasonal survival, and population monitoring. Produced and maintained electronic archives of research data, analyzed data, and prepared professional manuscripts, posters, and technical reports.

Research Technician

Pineland Plantation and Albany Quail Project

1999 - 2000

- Vegetation response to various habitat management techniques through adaptive resource management and research: an integrative study.
- Habitat alteration through chemical and mechanical means, and, prescribed fire to restore and maintain early-succession vegetation for Northern Bobwhite.

Operated heavy machinery and farm equipment to implement habitat management and alteration including planting food plots and winter cover patches, harvesting agricultural crops, brood field management, and prescribed burning. Assisted with bobwhite hunting and training/handling bird dogs.

Wildlife Technician

Department of Fisheries and Wildlife, MSU

Summer 1999

- Reproductive ecology and the effects of early growing-season burns on wild turkeys (*Meleagris gallopavo*).

Conducted research using radio-telemetry and infrared cameras to monitor demographic rates of eastern wild turkeys. Utilized Trimble GPS units and ArcView GIS software to create maps and log data. Evaluated and performed vegetation sampling surrounding nest sites at macro- and micro-habitat scales.

Research Technician

School of Forestry and Wildlife Sciences, AU

Spring 1999

- Reproductive ecology, mating systems, and social behavior in a sexually dimorphic songbird species.
- Mark-recapture and disease prevalence in House Finches (*Carpodacus mexicanus*) and Northern Cardinals (*Cardinalis cardinalis*)

Conducted trapping and monitoring of song birds including bird identification by leg-bands, banding juvenile and adult birds, assessing condition of birds and disease prevalence, drawing blood from chicks, observing mate selection relative to plumage appearance and diet, video monitoring, and nest surveys.

Teaching Experience

Courses Taught

1. **BIOL 1101 & BIOL 1101 Lab** – (Gainesville State College, Oconee Campus.) Essential Biology with Physiology. Fall 2006; Spring 2007 [2 sections].

Guest Lectures

1. **FORS 8290** (University of Georgia) – Wildlife Telemetry: ‘GIS & Telemetry,’ February 2006.
2. **FORS 8290** (University of Georgia) – Wildlife Telemetry: ‘GIS Extensions: use and utility,’ March 2006.
3. **FORS 8290** (University of Georgia) – Wildlife Telemetry: ‘GIS & Python Scripting: batch processing and model builder,’ March 2006.

Grants

Funded

1. Georgia Ornithological Society, Bill Terrell Graduate Student Grant. 2006. Effects of translocation on avian population genetics and demographics within a fragmented landscape. **T. Terhune** & B. Faircloth. \$2,980.00.

2. The Wildlife Society, Student Travel Grant. 2006. Grant provided to a limited number of outstanding students presenting a paper or poster at the annual conference in Anchorage, AK.
T. Terhune. \$500.00
3. University of Georgia, Graduate Student Travel Grant. 2006. Travel to Anchorage, AK for the annual Wildlife Society Conference.
T. Terhune. \$220.00
4. Environmental Systems Research Institute (ESRI), Graduate Student Registration and Housing Grant. 2005. Hotel accommodations and board funded during the Annual ESRI User GIS Conference. 25-29 June.
T. Terhune. \$1,800.00.
5. The University of Georgia Research Foundation, Inc., Graduate Student Travel Grant. 2005. Travel to San Diego, CA for The Annual ESRI User GIS Conference, 25-29 June.
T. Terhune. \$400.00.
6. Albany Quail Project, Graduate Student Travel Grant. 2005. Travel to St. Louis, MO for Southeastern Association of Fish and Wildlife Agencies Conference, 16-19 October.
T. Terhune. \$450.00.
7. Albany Quail Project, Graduate Student Travel Grant. 2002. Travel to Corpus Christi, Tx. for the The Sixth National Quail Symposium, 23-27 January.
T. Terhune. \$1,250.00.

Peer-reviewed Publications

1. **Terhune, T. M.**, J. B. Grand, D. C. Sisson, and H. L. Stribling. 2007. Factors influencing survival of radio-tagged and banded bobwhites in Georgia. *Journal of Wildlife Management. In Press.*
2. Folk, T. H., J. B. Grand, W. E. Palmer, J. P. Carroll, D. C. Sisson, **T. M. Terhune**, S. D. Wellendorf, H. L. Stribling. 2007. Estimates of survival from radiotelemetry: a response to Guthery and Lusk. *Journal of Wildlife Management. In Press.*
3. **Terhune, T. M.**, R. G. Hamrick, D. C. Sisson, and H. L. Stribling. 2007. Summer Male Call Index relative to nesting activity and autumn density of the Northern Bobwhite. *Proceedings of the Sixth National Quail Symposium In press.*
4. **Terhune, T. M.**, D. C. Sisson, H. L. Stribling, and S. Mitchell. 2007. Northern bobwhite demographic response to an intensive modification of an agriculture landscape in middle Georgia. *Proceedings of the Sixth National Quail Symposium In press.*
5. **Terhune, T. M.**, D. C. Sisson, and H. L. Stribling. 2006. The efficacy of relocating wild Northern Bobwhites prior to breeding season. *Journal of Wildlife Management* 74: 914-921.
6. **Terhune, T. M.**, D. C. Sisson, H. L. Stribling, and J. P. Carroll. 2006. Home range, movement, and site fidelity of translocated Northern Bobwhite. *European Journal of Wildlife Research* 52: 119-124.

7. Hughes, D. W., **T. M. Terhune**, D. C. Sisson, and H. L. Stribling. 2005. Demographics of northern bobwhite on agricultural and intensively managed bobwhite plantation landscapes. *Proc. Annu. Southeast Assoc. of Fish and Wild. Agencies* 59:30-42.
8. **Terhune, T. M.**, D. C. Sisson, and H. L. Stribling. 2005. Above-ground nesting by Northern Bobwhite. *Wilson Bulletin* 117:315-316.
9. Faircloth, B. C., A. Reid, T. Valentine, S. H. Eo, **T. M. Terhune**, T. C. Glenn, C. J. Nairn, W. E. Palmer, and J. P. Carroll. 2005. Tetranucleotide, trinucleotide, and dinucleotide microsatellite loci from the bobcat (*Lynx rufus*). *Molecular Ecology Notes* 5:387-389.
10. **Terhune, T. M.** 2004. Two Techniques of the Northern Bobwhite: Relocation and Summer Male Call Counts. Thesis, Auburn University, Auburn, AL.

Submitted

1. **Terhune, T. M.**, D. C. Sisson, H. L. Stribling, W. E. Palmer, and J. P. Carroll. *Submitted*. Raptor predation of northern bobwhite nests. *J. of Raptor Research*.
2. Sisson, D. C., **T. M. Terhune**, and H. L. Stribling. *Submitted*. Additional evidence against radio-handicapping among Northern Bobwhites. *Proceedings of the Sixth National Quail Symposium*.
3. Sisson, D. C., **T. M. Terhune**, H. L. Stribling, J. F. Sholar, and S. Mitchell. *Submitted*. Survival and cause-specific mortality of Northern Bobwhites in the deep South. *Proceedings of the Sixth National Quail Symposium*.

In Preparation

1. **Terhune, T. M.**, B. Faircloth, M. J. Conroy, D. C. Sisson, H. L. Stribling, W. E. Palmer, and J. P. Carroll. *In prep*. Arbitrary censor periods of northern bobwhite survival.
2. Faircloth, B. C., T. Valentine, S. H. Eo, **T. M. Terhune**, T. C. Glenn, C. J. Nairn, W. E. Palmer, and J. P. Carroll. *In prep*. Microsatellite loci from the Virginia opossum (*Didelphis virginiana*) and raccoon (*Procyon lotor*).
3. **Terhune, T. M.**, D. C. Sisson, H. L. Stribling, and J. F. Sholar. *In prep*. Demographic response of northern bobwhite following an intensive mid- and over-story hardwood reduction. *Wildlife Biology*.
4. H. L. Stribling, **T. M. Terhune**, D. C. Sisson, and Daymond W. Hughes. *In prep*. Evaluation of pre-season release techniques for pen-reared bobwhite quail.

Non-refereed Publications

1. **Terhune, T. M.** 2003. Wild Quail Relocation. Albany Area Quail Management Project Newsletter, Vol. 10.
2. **Terhune, T. M.** 2004. Wild Quail Relocation. Albany Area Quail Management Project Newsletter, Vol. 11.
3. **Terhune, T. M.** 2004. Relocating Northern Bobwhite Quail Prior to Breeding Season. *Wildlife Trends*, Vol. 4, Issue 4.

4. **Terhune, T. M.** 2005. Part 1: Life on a Quail Plantation during Fall and Winter: Preparing for next years birds. *Wildlife Trends*, Vol. 5, Issue 1.
5. **Terhune, T. M.** 2005. Part 2: Life on a Quail Plantation during Spring and Summer: The other time of year! *Wildlife Trends*, Vol. 5, Issue 2.
6. **Terhune, T. M.** and J. Davison. 2005. Nesting Ecology of the Northern Bobwhite: Persistence pays off! *Wildlife Trends*, Vol. 5, Issue 4.
7. **Terhune, T. M.**, B. C. Faricloth, and J. P. Carroll 2006. Avian Influenza: A synopsis and implications for gamebirds. *Wildlife Trends*, Vol. 6, Issue 1.
8. **Terhune, T. M.**, B. McGowan, and G. Phillips. 2006. Timber Management: Producing Quality Bobwhite Habitat and Profitable Forestry. *Wildlife Trends*, Vol. 6, Issue 2.
9. **Terhune, T. M.**, J. P. Carroll, W. E. Palmer, and D. C Sisson. 2006. Translocating Wild Northern Bobwhite Quail prior to breeding season: Another tool for managing fragmented landscapes. *Quail Unlimited*, Vol 27, Issue 5.
10. **Terhune, T. M.**, B. Faircloth, and J. Paramore. 2006. Changing predator dynamics and implications for bobwhites. Part 1: Changing times and changing paradigms: a brief history of bobwhite predator populations. *Wildlife Trends*, Vol. 6, Issue 4.
11. **Terhune, T. M.**, B. Faircloth, and J. Paramore. 2006. Changing predator dynamics and implications for bobwhites. Part 2: Life history traits of bobwhite predators: Fact of Fiction?. *Wildlife Trends*, Vol. 6, Issue 5.
12. **Terhune, T. M.**, B. Faircloth, and J. Paramore. 2006. Changing predator dynamics and implications for bobwhites. Part 3: Factors affecting predator management success and bobwhite abundance: Size does matter! *Wildlife Trends*, Vol. 6, Issue 6.
13. J. Paramore, B. Faircloth, and **Terhune, T. M.**. 2007. Changing predator dynamics and implications for bobwhites. Part 4: putting knowledge to practice - "lessons learned the hard way." *Wildlife Trends*, Vol. 7, Issue 1.
14. Mitchell, S. and **T. M. Terhune**. 2007. Stump Removal: Dig or Grind? *Wildlife Trends*. *In Press*.
15. **Terhune, T. M.** 2007. The Importance of a Wildlife Management Plan, Part 1: Why do you need a management plan? Part 2: Integrating a GIS into your management plan. *Wildlife Trends*. *In Press*.

Editorial Service

1. *In Preparation*. Proceedings, Gamebird 2006: A Joint Conference of Quail VI and Perdix XII. 2006. Edited by Sandy B. Cederbaum, Brant C. Faircloth, Theron M. Terhune, and JohnP. Carroll.

Other Professional Service

Refereeing

- Proceedings, Gamebird 2006: The Sixth National Quail Symposium & Perdix XII
- Wildlife Trends

Gamebird 2006, Proceedings

- Abstract collection, preparation, and typesetting (\LaTeX)
- Arrangements Committee Member
- Field Guide for the S. Georgia and N. Florida Field Trip
- Presentation collection and networking
- Review Committee Member

Presentations

Professional

1. **Terhune, T. M.*** 2002. Integrating Remote Sensing with GIS: Home Range Analysis of Northern Bobwhite Quail Broods. Auburn University, 2 December, Auburn, AL, USA.
2. **Terhune, T. M.*** 2003. Converting AUTOCAD Data to an ArcGIS Coverage. Auburn University, 16 November, Auburn, AL, USA.
3. **Terhune, T. M.*** 2003. The Efficacy of Relocating Wild Northern Bobwhite. Auburn University, 5 December, Auburn, AL, USA.
4. **Terhune, T. M.** and D. C. Sisson* 2004. The Albany Quail Project: Past, Present and Future. Auburn University, 18 November, Auburn, AL., USA.
5. Faircloth, B. C.*, T. Valentine, **T. Terhune**, S. H. Eo, J. P. Carroll, and W. E. Palmer. 2004. Use of Genetic Information in Conservation: Applying Results to Management. International Galliformes Symposium, 4-11 April, Dehra Dun, Uttar Pradesh, India. [*Abstract*]
6. **Terhune, T. M.**, B. C. Faircloth*, M. J. Conroy, D. C. Sisson, W. E. Palmer, H. L. Stribling. *Invited-2006*. Censor periods in survival analyses investigated among Northern Bobwhite. Joint Gamebird Conference: Quail VI and Perdix XII, 31 May - 4 June, Athens, GA, USA. [*Abstract*]
7. **Terhune, T. M.***, D. C. Sisson, J. B. Grand, H. L. Stribling. *Invited-2006*. Factors influencing survival of radio-tagged and banded Northern Bobwhites in Georgia. Joint Gamebird Conference: Quail VI and Perdix XII, 31 May - 4 June, Athens, GA, USA. [*Abstract*]
8. **Terhune, T. M.***, D. C. Sisson, S. Mitchell, H. L. Stribling. 2006. Northern bobwhite demographic and population response to an intensive habitat modification of an agricultural landscape. Joint Gamebird Conference: Quail VI and Perdix XII, 31 May - 4 June, Athens, GA, USA. [*Abstract*]

9. **Terhune, T. M.***, D. C. Sisson, H. L. Stribling. 2006. The efficacy of relocating wild northern bobwhites prior to breeding season. The Wildlife Society Conference, 23-27 September, Anchorage, AK, USA. [*Abstract*]
10. Palmer, W. E., **T. M. Terhune***, S. D. Wellendorf, D. C. Sisson, H. L. Stribling. 2006. Effects of radio-transmitters on northern bobwhite survival. The Wildlife Society Conference, 23-27 September, Anchorage, AK, USA. [*Abstract*]
11. Faircloth, B. C.*, **T. M. Terhune**, S. H. Eo, and J. P. Carroll. 2006. Genetic techniques and the Study of Neotropical Quails: From Sample Collection to Data Analysis. Neotropical Quail: Status, Conservation, and Research, 8 October, Veracruz, Mexico [Invited].

*denotes presenting author

Poster

1. **Terhune, T. M.**, D. C. Sisson, W. E. Palmer, H. L. Stribling, B. C. Faircloth, J. P. Carroll. 2005. Northern Bobwhite: translocation and genetics. Southeast Quail Study Group, 14-17 August, Land between the Lakes, KY. [*Abstract*]
2. **Terhune, T. M.**, R. G. Hamrick, D. C. Sisson, H. L. Stribling. 2006. Summer male call index relative to nesting activity and autumn density of the northern bobwhite. Gamebird Conference, 31 May - 4 June, Athens, GA, USA. [*Abstract*]
3. **Terhune, T. M.**, D. C. Sisson, W. E. Palmer, H. L. Stribling, B. C. Faircloth, J. P. Carroll. 2006. The effects of translocation on Northern Bobwhite population genetics and demographics. Joint Gamebird Conference: Quail VI and Perdix XII, 31 May - 4 June, Athens, GA, USA. [*Abstract*]
4. Carroll, J. P., **T. M. Terhune**, D. C. Sisson, W. E. Palmer, H. L. Stribling, B. C. Faircloth. *Submitted-2006*. Effects of translocation on avian population genetics and demographics within a fragmented landscape. The Wildlife Society Conference, 23-27 September, Anchorage, AK, USA. [*Abstract*]
5. Faircloth, B. C., **T. M. Terhune**, M. J. Conroy, D. C. Sisson, W. E. Palmer, H. L. Stribling. 2006. Censor periods in survival analyses. The Wildlife Society Conference, 23-27 September, Anchorage, AK, USA. [*Abstract*]

Outreach & Service

1. **Terhune, T. M.** 2005. Northern Bobwhite: Management, relocation and the Alabama Quail Project. Alabama Quail Hunters Association, 8 March, Birmingham, AL., USA.
2. **Terhune, T. M.** 2005. Northern Bobwhite Management and Translocation. Quail Unlimited: Augusta Chapter, 18 May, University of Georgia, Athens, GA., USA.
3. **Terhune, T. M.** 2005. Northern Bobwhite: Translocation and Genetics. Quail Unlimited National Convention, 28-30 July, Atlanta, GA., USA.
4. **Terhune, T. M.** 2005. Albany Quail Project: An Update. Quail Unlimited National Convention, 28-30 July, Atlanta, GA., USA.
5. **Terhune, T. M.** 2005. Northern Bobwhite: Nesting Ecology. South Carolina Quail Plantation and Quail Hunters Association, 11 August, Dorchester, S.C., USA.

Professional Associations

The Wildlife Society

- National Division
 - Member (1999, 2004-present)
- AU Student Chapter
 - Member (1999)

The American Ornithologist's Union

- Member (2004-present)

IUCN-SSC Partridge, Quail, and Francolin Specialist Group

- Member (2006-present)

Additional Skills

Lab Techniques

- DNA extraction techniques from non-invasive/low-quantity/low-quality templates
- Polymerase Chain Reaction techniques (3-primer PCR, touchdown PCR)
- Fragment size determination/DNA sequencing
- Sequence and fragment analysis

Field-research Techniques and Management

- Radio-location (homing, triangulation)
- Radio-telemetry studies of association/social interaction
- Analysis of radio-telemetry data
- Bird capture, banding, and band-resighting (Passerineformes/Galliformes)
- Predator control (Live-traps, leg-hold traps)
- Land and resource management (Land clearing, food plots, prescribed burning, shrub planting, timber management)
- Heavy equipment operation (Brown tree cutter, front-end loaders, forklift, grain drills [John Deere, Truax, Tye], harrow, rollerchopper, tractors)
- Welding (Arc welder, wire welder, cutting torch)

Computer-related

- Operating systems (Apple OS, Windows [2000, XP])
- Database management and programming/shell scripting (MySQL, Python)
- Geographic Information Systems [GIS] (ArcView 3.x, ArcGIS 8.x and 9.x, ERDAS, GRASS, Pathfinder Pro, Ranges V)
- Global Positioning Systems [GPS] (Garmin III and V, Trimble GeoExplorer, Topcon)
- Statistical software (Compos Analysis [ver. 5.1, 6.2], Contrast, MARK, MatLab [minimal], R, Resource Selection, SAS)

- Office-,Presentation-related (Wordperfect, Microsoft Office[Excel, Frontpage, Publisher, Powerpoint, Word])
- Graphics-, Typography-related (Adobe, L^AT_EX)
- Web-management (XHTML and HTML [moderate], Frontpage)
 - <http://www.quailmanagement.com/>
 - <http://gamebird.forestry.uga.edu/research/Members/theron>

Hobbies & Interests

- Backpacking, Hiking, and camping
- Bird watching
- Canoeing and white-water kayaking
- Cycling and Mountain-bike riding
- Fly-fishing, fly-tying, and fly-rod building
- Traditional bowhunting and arrow making
- Upland game bird hunting & deer hunting