Table of Contents
| CONTENTS |
|---------------------------------|-------|
| FOREWORD                        | v     |
| ACKNOWLEDGMENTS                 | vi    |
| PLENARY                         |       |
| Translocation as a population restoration technique for northern bobwhites: a review and synthesis | 1 |
| A focused habitat approach for northern bobwhite restoration in Kentucky | 17 |
| John J. Morgan, John M. Yeiser, Danna L. Baxley, Gary Sprandel, Ben A. Robinson, and Keith Wethington |
| Progress of the National Bobwhite Conservation Initiative | 27 |
| Donald F. McKenzie, John J. Morgan, and Thomas V. Dailey |
| The initial stages of implementing the Western Quail Management Plan | 28 |
| Casey J. Cardinal and Rey A. Sanchez |
| Population response of three quail species to habitat restoration in South Texas | 29 |
| Eric D. Grahmann, Fidel Hernández, Leonard A. Brennan, Timothy E. Fulbright, Carter Crouch, Michael W. Hehman, David Heft, Robert Perez, and Fred C. Bryant |
| Response of northern bobwhites to habitat improvement on private lands in the Rolling Plains of Texas | 31 |
| C. Brad Dabbert and Robin Verble-Pearson |
| Monitoring northern bobwhite populations reduces uncertainty about management effectiveness: a paradigm of empiricism and hope | 33 |
| Fall quail densities on public lands in Missouri: A decade of monitoring | 35 |
| Beth A. Emmerich and Thomas V. Dailey |
| Effects of broad-scale conservation on northern bobwhite populations in agricultural landscapes | 36 |
| John M. Yeiser, John J. Morgan, Danna L. Baxley, Richard B. Chandler, and James A. Martin |
| BOBWHITE RESTORATION-APPROACHES AND THEORY |       |
| Molecular ecology of New World quails: messages for managers | 37 |
| Damon Williford, Randy W. DeYoung, and Leonard A. Brennan |
| Strategic habitat conservation for declining grassland wildlife populations in the oaks and prairies joint venture | 57 |
| James Giocomo, Jonathan Hayes, Kenneth Gee, Jeff Raasch, and Robert Perez |
| Temporal and spatial assessment of usable space and cover type interspersion for northern bobwhites on private farmlands in southwestern Ohio | 65 |
| Robert J. Gates, Mark J. Wiley, Adam K. Janke, and Marjorie R. Liberati |
| Temperature assessment on a reclaimed surface mine during northern bobwhite breeding season: considerations for habitat management | 88 |
| Donald M. Yow, Jeremy P. Orange, John J. Morgan, Gary Sprandel, Danna L. Baxley, and Eric Williams |
| Vegetation and arthropod responses to brush reduction by grubbing and stacking | 96 |
| Predicting northern bobwhite habitat in semiarid rangeland using LANDSAT imagery | 107 |
| Jeffrey G. Whitt and Kelly S. Reyna |
The role of joint ventures in northern bobwhite conservation

Stephen J. DeMaso

Long-term population stability in the greater Red Hills region amidst range-wide declines: a case for integrated management

Theron M. Terhune II, D. Clay Sisson, William E. Palmer, and Shane D. Wellendorf

An evaluation of northern bobwhite conservation research: a call for large-scale studies

Lex J. Gomez and Kelly S. Reyna

Effects of tanglehead expansion on bobwhite habitat use in South Texas

John T. Edwards, Fidel Hernández, David B. Wester, Leonard A. Brennan, Chad J. Parent, and Fred C. Bryant

Habitat space used by northern bobwhites and Texas tortoises on South Texas rangelands

Ross O. Couvillon, Leonard A. Brennan, Fidel Hernández, Bart M. Ballard, and Thomas V. Dailey

National bobwhite conservation initiative focus area monitoring in the 2C focus area, Missouri

Beth A. Emmerich, W.T. White, and E. Lee Metcalf

Response of northern bobwhite to longleaf pine ecosystem enhancement through the State Wildlife Grant Program

Adam B. Butler, John P. Gruchy, Richard G. Hamrick, and Matt Elliott

Uncertainty and the entanglement of habitat loss and fragmentation effects in the management of northern bobwhite

Mason H. Cline, Richard Chandler, Clinton T. Moore, and James A. Martin

The law of interspersion and the principle of edge: old arguments and a new synthesis

Mark D. McConnell, L. Wes Burger, and James A. Martin

Automated identification and mapping of woody habitat using digital ortho imagery

M. Keith Wethington

How many are there? Estimating the North American northern bobwhite population size for conservation planning purposes

James Giocomo, William Vermillion, Stephen DeMaso, and Arvind Panjabi

A method for setting northern bobwhite population and habitat objectives for large landscape partnerships

James Giocomo, William Vermillion, Stephen DeMaso, Barry Wilson, Jon Hayes, Kenneth Gee, Jesús Franco, Aimee Roberson, Robert Perez, Jeff Raasch, Bill Bartush, and Benjamin Kahler

Data-driven planning for the conservation of grassland birds in the Central Hardwoods Bird Conservation Region

Cara J. Joos, Jane A. Fitzgerald, Christopher M. Lituma, James J. Giocomo, and Larry Heggemann

Landscape-scale geospatial assessment of open pine and natural grassland condition for northern bobwhite in the Gulf Coastal Plains and Ozarks

Toby Gray, Kristine Evans, and Todd Jones-Furrand

Impacts of habitat fragmentation on northern bobwhites in the Gulf Coast Prairie Landscape Conservation Cooperative


Utility of fine resolution land cover data for modeling northern bobwhite abundance in the oaks and prairies of Oklahoma

Nicolas Jaffe, Timothy O’Connell, and James Giocomo

Evaluating temporal differences in land cover: implications for managing bobwhite at the landscape scale in Virginia

Scott D. Klopf, Daniel A. Cross, Kevin McGuckin, Jay E. Howell, and K. Marc Puckett

Response of grassland birds to agricultural intensity at different spatial scales in Texas

Anna Matthews, M. Clay Green, and James Giocomo

Partnersing for quail in South Carolina: a cooperative approach making a difference

Gary M. Peters, Michael W. Hook, Mark S. Garner, Jeffrey M. Magniez, Charles W. McKinney, and Jordan S. Nanney
Connecting land ethics and entrepreneurship through experiential learning in a bobwhite centric outdoor education program

Greta M. Bowling, Ashleigh P. Tynes, and Kelly S. Reyna

BOBWHITE TRANSLOCATION

Contributions of translocation to northern bobwhite population recovery

D. Clay Sisson, Theron M. Terhune II, William E. Palmer, and Reggie E. Thackston

Experiences in northern bobwhite propagation and translocation in Ohio, 1978–2012

Mark J. Wiley and Nathaniel J. Stricker

The effect of age-at-release on survival of adoptive parent-reared bobwhite chicks

Kyle D. Lunsford, Theron M. Terhune II, and James A. Martin

Testing northern bobwhite reintroduction techniques in the northern edge of their range

William Macaluso, Christopher K. Williams, and Theron M. Terhune

Parent-reared bobwhite survival in the Texas Rolling Plains

Mark A. Thomas and C. Brad Dabbert

Summer survival of translocated northern bobwhite in the New Jersey Pine Barrens: Preliminary results

Philip M. Coppola, Kaili R. Stevens, Christopher K. Williams, Theron M. Terhune, John P. Parke, and John Cecil

Winter survival and habitat selection by translocated northern bobwhite in the New Jersey Pine Barrens: preliminary results

Kaili R. Stevens, Philip M. Coppola, Christopher K. Williams, Theron M. Terhune, John P. Parke, and John Cecil

BOBWHITE POPULATION ECOLOGY AND BEHAVIOR

Effects of supplemental feeding on breeding season home ranges and resource selection of northern bobwhites

Shane D. Wellendorf, William E. Palmer, and Allen M. Bostick III

Do movement patterns and habitat use differ between optimal- and suboptimal-sized northern bobwhite coveys?

Christopher K. Williams, Roger D. Applegate, and Anthony R. Ives

Foraging behavior of northern bobwhites in relation to resource availability


Northern bobwhite home range sizes and movements in South Texas

Katherine S. Miller, Fidel Hernández, Leonard A. Brennan, Randy W. DeYoung, and X. Ben Wu

Northern bobwhite nest site selection in field borders

Danielle J. Berger, Jessica N. Piispanen, Tim F. Ginnett, and Jason D. Riddle

Breeding season survival and nesting of northern bobwhite on native prairie versus traditionally managed conservation areas in southwestern Missouri

Thomas R. Thompson, Frank L. Loncarich, and R. Kyle Hedges

Evaluating two trap-and-release methods for bobwhites

Theron M. Terhune II

Estimates of northern bobwhite neonate survival

Theron M. Terhune II, Richard B. Chandler, and James A. Martin

Patch size and nest density influence nest survival

Victoria Simonsen and Joseph J. Fontaine

Effects of growing season fire on northern bobwhite nest site selection and survival

Sarah B. Rosche, Christopher E. Moorman, Christopher S. Deperno, and Jeffrey G. Jones

Influence of northern bobwhite nest site selection on nest survival in an agricultural landscape

Andy D. Richardson, Christopher E. Moorman, Craig A. Harper, Mark D. Jones, and Benjy M. Strope
Triple brood production by northern bobwhites ................................................................. 238
  D. Clay Sisson

An analysis of the interactions between weather and land use on midwestern gamebird populations using historical data—a preliminary report ........................................... 239
  Amanda R. Lipinski and Joseph J. Fontaine

Evaluation of land restoration practices on northern bobwhite productivity in North-central Texas—Preliminary results ................................................................. 240
  Danielle Belleny, Heather Mathewson, Jeff Breeden, John Tomeček, T. Wayne Schwertner, and Jim Giocomo

BOBWHITE POPULATION ESTIMATION
Statistical population reconstruction using wings from harvested northern bobwhites can inform management ................................................................. 241
  Theron M. Terhune II, Kristen M. Malone, D. Clay Sisson, and James A. Martin

Use of spring whistle counts to predict northern bobwhite relative abundance ................................................................. 248
  D. Clay Sisson and Theron M. Terhune II

Retention and efficacy of citizen scientist volunteers of the Texas quail index ................................................................. 254
  Kelly S. Reyna and Dale Rollins

Comparison of dog surveys and fall covey surveys in estimating fall population trends of northern bobwhite ................................................................. 261
  Evan P. Tanner, R. Dwayne Elmore, David K. Dahlgren, Craig A. Davis, and Samuel D. Fuhlendorf

The efficacy of GoPro cameras to account for northern bobwhites flushed, but undetected during aerial surveys ................................................................. 262
  Andrea Bruno, Leonard A. Brennan, Andrew N. Tri, and Habin Su

Distance sampling to assess post-grazing northern bobwhite recovery in South Texas ................................................................. 263
  Rachel A. Smith, Leonard A. Brennan, Fidel Hernández, and Humberto L. Perotto-Baldovieso

BOBWHITE HUNTING
Hunter-covey interactions using pointing bird dogs ................................................................. 264
  Theron M. Terhune II, Diana J. McGrath, Seth Wood, and James A. Martin

Factors influencing northern bobwhite hunter success on a public wildlife management area in Kentucky ................................................................. 265
  Jarred M. Brooke, John J. Morgan, Danna L. Baxley, Craig A. Harper, and Patrick D. Keyser

Evaluating hunting success of pen-reared and wild northern bobwhite in a reclaimed Kentucky mineland ................................................................. 273
  Jeremy P. Orange, John M. Yeiser, Danna L. Baxley, John J. Morgan, and Ben A. Robinson

Refining the hunting zone of hunter-covey interface models ................................................................. 280
  James A. Martin, Diana J. McGrath, William S. Wood, and Theron M. Terhune II

Evaluating the impacts of hunting paths on northern bobwhite survival, economic costs, and hunter satisfaction ................................................................. 281
  W. Seth Wood, Theron M. Terhune II, and James A. Martin

Effect of field trials on northern bobwhite survival and hunt quality on Dixie Plantation ................................................................. 282
  D. Clay Sisson and Theron M. Terhune II

BOBWHITE PHYSIOLOGY AND GENETICS
Genetic diversity and relatedness within and among northern bobwhite coveys in South Texas ................................................................. 287
  Katherine S. Miller, Leonard A. Brennan, Randy W. DeYoung, Fidel Hernández, and X. Ben Wu

Effect of temperature and wind on metabolism of northern bobwhite in winter ................................................................. 300
  L. Wes Burger, Jr., Thomas V. Dailey, Mark R. Ryan, and Eric Kurzejeski

Using first passage time analysis to identify foraging patterns of the northern bobwhite ................................................................. 308
  Diana J. McGrath, Theron M. Terhune II, and James A. Martin

Comparing the accuracy of egg candling and egg flotation to estimate the hatching date of northern bobwhite clutches ................................................................. 309
  Byron R. Buckley, Alicia K. Andes, and C. Brad Dabbert
Genetic structure of northern bobwhite in the Rolling Plains

Peter E. Schlichting, Melanie Murphy, Byron Buckley, and C. Brad Dabbert

BOBWHITE MORTALITY FACTORS—DISEASE, PESTICIDES AND PREDACTION

Geographic survey of Oxyspirura petrowi among wild northern bobwhites in the United States

Bradley Kubečka, Andrea Bruno, and Dale Rollins


Roger D. Applegate, Richard W. Gerhold Jr., Heather Fenton, and John R. Fischer

A brief history of insecticides and quail

Amanda Gobeli, Caitlin Thompson, and Kelly S. Reyna

Use of Extinguish Plus™ to reduce red imported fire ants and increase northern bobwhite abundance

James W. Caldwell, Nova J. Silvy, Roel R. Lopez, Fred E. Smeins, Michael E. Morrow, Brian L. Pierce, and Israel D. Parker

Impacts of red imported fire ants on northern bobwhite nest survival

Angelina M. Haines, D. Clay Sisson, Robert A. Gitzen, Christopher A. Lepczyk, William E. Palmer, and Theron M. Terhune II

Landscape features affecting northern bobwhite predator-specific nest failures in southeastern USA

Susan N. Ellis-Felege, Shannon E. Albeke, Nathan P. Nibbelink, Michael J. Conroy, D. Clay Sisson, William E. Palmer, and John P. Carroll

Habitat, climate, and raptors as factors in the northern bobwhite decline: a multi-scale analysis

John T. Edwards, Fidel Hernández, David B. Wester, Leonard A. Brennan, Chad J. Parent, and Robert M. Perez

Effect of meso-mammal nest predator activity on northern bobwhite nest success

Alexander L. Jackson, William E. Palmer, D. Clay Sisson, Theron M. Terhune II, and James A. Martin

WESTERN QUAIL ECOLOGY AND MANAGEMENT

Evaluation of population indices and estimators for scaled quail in the Rolling Plains of Texas

Bradley W. Kubečka, John Edwards, Fidel Hernández, and Dale Rollins

Population trends and a revised management plan for quail in California

Katherine S. Miller, Matt G. Meshriy, and Scott S. Gardner

Ranges and movements of Montezuma quail in southeast Arizona

Pedro M. Chavarria, Nova J. Silvy, Roel R. Lopez, Donald S. Davis, and Angel Montoya

Survival demographics of Montezuma quail in southeast Arizona

Pedro M. Chavarria, Nova J. Silvy, Roel R. Lopez, Donald S. Davis, and Angel Montoya

A presence–absence survey to monitor Montezuma quail in western Texas

Cristela Gonzalez Sanders, Fidel Hernández, Leonard A. Brennan, Louis A. Harveson, Andrew N. Tri, and Robert M. Perez

Changes in habitat use of Montezuma quail in response to tree canopy reduction in the Capitan Mountains of New Mexico

Ryan S. Luna, Elizabeth A. Oaster, Karlee D. Cork, and Ryan O’Shaughnessy

Effects of source population and release strategy on survival and dispersal of translocated scaled quail in the Rolling Plains of Texas—A preliminary report

Rebekah E. Ruzicka and Dale Rollins

Efficacy of a soft release strategy for translocating scaled quail in the Rolling Plains of Texas

Rebekah E. Ruzicka, Kara B. Campbell, Michelle C. Downey, Dale Rollins, Bradley K. Kubecka, Matthew Poole, and Donald C. Ruthven

Survival and nesting ecology of scaled quail in the Trans-Pecos, Texas

Carlos E. Gonzalez Gonzalez, Louis A. Harveson, and Ryan S. Luna
Conservation status of the masked bobwhite in Sonora, Mexico

*David García-Solórzano, Edgardo López-González, and Carlos González-Rebeles Islas*

401

The saga of the masked bobwhite: lessons learned and unlearned

*David E. Brown and Kevin B. Clark*

404

Breeding season space use and habitat selection of adult female scaled and Gambel’s quail in West Texas

*Richard A. Temple, Jr., Louis A. Harveson, and Ryan S. Luna*

416

CLOSING REMARKS

The importance of regional and landscape context and climate change to northern bobwhite management

*Frank R. Thompson III*

424

LIST OF REVIEWERS

432