

TWS 23rd Annual Conference

Raleigh, NC | October 15-19, 2016

Contributed Posters

Monday, October 17th, 9:00 am – 6:00 pm

Status of Landbirds on Tinian, Commonwealth of the Northern Mariana Islands

Rick Spaulding¹, Richard J. Camp², Paul C. Banko³, Angela D. Anders⁴, ¹Cardno, Bainbridge Island, WA, ²Hawaii Cooperative Studies Unit, University of Hawaii, Hilo, HI, ³USGS, Pacific Islands Ecosystem Research Center, Hawaii National Park, HI, ⁴Naval Facilities Engineering Command, Pacific, Joint Base Pearl Harbor-Hickam, HI, Contact: rick.spaulding@cardno-gs.com

Longleaf Pine-Grassland Bird Occupancy and Its Relationship to Fire Management and Vegetation Structure on the Carolina Sandhills National Wildlife Refuge

Nancy Jordan¹, Jim Cox², Whitney Walle³, Sarah Haney⁴, Ceeanna Zulla⁵, ¹U.S. Fish and Wildlife Service, Carolina Sandhills NWR, McBee, SC, ²Tall Timbers Research Station, Tallahassee, FL, ³Murray State University, Murray, KY, ⁴Dr. J. H. Carter and Associates, Inc., Southern Pines, NC, ⁵Student Conservation Association, Arlington, VA, Contact: nancy_jordan@fws.gov

An Evaluation of Landowner Incentive Programs on Northern Bobwhite Survival, Productivity, and Land Use in North-Central Texas

Danielle Belleny, Jeff Breeden, Heather Mathewson, John Tomecek, Jim Giocomo, Tarleton State University, Stephenville, TX, Contact: danielle.belleny@go.tarleton.edu

Modeling Potential Habitat for Pheasant Population Restoration in Pennsylvania

Lacey T. Williamson, Duane R. Diefenbach, W. David Walter, Pennsylvania State University, University Park, PA, Contact: lkw5184@psu.edu

Mosaic's Florida Burrowing Owl Translocation Project

Justin R. Styer, Mosaic Fertilizer, LLC., Lithia, FL, Contact: justin.styer@mosaicco.com

A Bioenergetic Model to Evaluate Management Strategies for Wintering Waterfowl at Sequoyah NWR

Dustin P. Taylor¹, **Paige Schmidt**², William P. Johnson³, ¹U.S. Fish and Wildlife Service, Tule Lake, CA, ²U.S. Fish and Wildlife Service, Tulsa, OK, ³U.S. Fish and Wildlife Service, Canyon, TX, Contact: paige_schmidt@fws.gov

Improving Survey Methods to Better Detect Rare Grassland Birds in South Dakota

Kassondra J. Hendricks¹, Kristel Bakker², Charles Dieter¹, ¹South Dakota State University, Brookings, SD, ²Dakota State University, Madison, SD, Contact: kassondra.hendricks@sdstate.edu

Using Wind Farm Operations and Incidental Finds to Inform Eagle Collision Risk Model

Margaret G. Rheude¹, Leslie New², ¹US Fish and Wildlife Service, Bloomington, MN, ²Washington State University, Vancouver, Vancouver, WA, Contact: margaret_rheude@fws.gov

The Effect of Release Age on the Survival of Northern Bobwhite Parent-Reared Chicks

Kyle D. Lunsford¹, Theron M. Terhune II², James A. Martin³, ¹University of Georgia, Hope Mills, NC, ²Tall Timbers Research Station and Land Conservancy, Tallahassee, FL, ³University of Georgia, Athens, GA, Contact: kdl80837@uga.edu

Estimating Behavioral Multipliers to Resting Metabolic Rate in American Black Duck and Lesser Scaup

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Jake W. McPherson¹, Christopher Williams¹, Alicia Wells-Berlin², John Coluccy³, ¹University of Delaware, Newark, DE, ²USGS Patuxent Wildlife Research Center, Laurel, MD, ³Ducks Unlimited, Inc., Ann Arbor, MI, Contact: jmcpherson@ducks.org

Building a Predictive Model of Submerged Aquatic Vegetation for Atlantic Brant in the Mid-Atlantic Chase Colmorgen, Christopher K. Williams, University of Delaware, Newark, DE, Contact: chaseco@udel.edu

Nest Site Selection Response of Veery to Audio Cues of Broad-Winged Hawk
Elizabeth A. Farley-Dawson, Kenneth A. Schmidt, Texas Tech University, Lubbock, TX, Contact: elizabeth.farley-dawson@ttu.edu

Investigating Migration and Divergence in Mountain Plover Using Genomic Methods
Sara J. Oyler-McCance, Robert S. Cornman, Jennifer A. Fike, US Geological Survey, Fort Collins, CO, Contact: soyler@usgs.gov

Impacts of Shale Gas Development on Breeding Birds in the Eastern United States
Maureen R. McClung, Kevin J. Kracjir, Annie Meek, Matthew D. Moran, Hendrix College, Conway, AR, Contact: mcclung@hendrix.edu

Ecoregion Connectivity in Atlantic Seabirds
Patrick G.R. Jodice¹, Autumn-Lynn Harrison², William Mackin³, Yvan Satge⁴, Robert Ronconi⁵, Juliet Lamb⁴, ¹USGS SC Cooperative Fish & Wildlife Research Unit, Clemson, SC, ²Simthsonian Institute, Washington, D.C., DC, ³Guilford College, Greensboro, NC, ⁴Clemson University, Clemson, SC, ⁵Acadia University, Halifax, NS, Canada. Contact: pjodice@clemson.edu

Could Prey Perception of Prey-Switching Explain the Urban Nest Predator Paradox?
Kristen M. Malone, Kathryn E. Sieving, University of Florida, Gainesville, FL, Contact: kristen.malone@ufl.edu

Fear and Loathing in Genus Canis: Cascading Effects of Wolf versus Coyote Competition
David G. Flagel¹, Gary E. Belovsky², Michael J. Cramer¹, Dean E. Beyer, Jr.³, Katie E. Robertson⁴, ¹University of Notre Dame Environmental Research Center, Notre Dame, IN, ²University of Notre Dame, Notre Dame, IN, ³Michigan Dept. of Natural Resources, Marquette, MI, ⁴Ohio State University, Columbus, OH, Contact: dflagel@nd.edu

Population Size and Habitat of Indian Gazelle in Nizampur Area, District Nowshehra
Saif Ullah, PMAS-Arid Agriculture University, Rawalpindi, Pakistan. Contact: saifikhanz111@gmail.com

Microhabitat Conditions Rather Than Landscape Patterns Affect Post-Dispersal Seed Removal in Burned and Unburned Lodgepole Pine Forests
Catherine` F. Frock¹, Monica G. Turner², ¹University of Florida, Gainesville, FL, ²University of Wisconsin-Madison, Madison, WI, Contact: cffrock@ufl.edu

A Step Selection Function for White-Tailed Deer Dispersal in an Agricultural Landscape
Matthew T. Springer, Clayton K. Nielsen, Eric M. Schaubert, Cooperative Wildlife Research Laboratory SIUC, Carbondale, IL, Contact: mattspringer@uky.edu

Evaluating Seasonal and Geographic Variation in the Diet of the North American River Otter in Indiana

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Sabrina M. Schuler, Renee Wickliffe, Sarah Meronk, Casey C. Day, Patrick A. Zollner, Purdue University, West Lafayette, IN, Contact: sschule@purdue.edu

Winter Scavenging of Ungulate Carrion by Bald Eagles, Common Ravens and Coyotes in Northern Arizona

Teryl G. Grubb, **Roy G. Lopez**, Rocky Mountain Research Station, Flagstaff, AZ, Contact: rglopez@fs.fed.us

Effect of Climate Condition on Winter Habitat Selection of Sika Deer in Kushiro-Shitsugen National Park, Japan

Yoshihiro Inatomi¹, Hiroyuki Uno¹, Yuich Osa¹, Mayumi Ueno¹, Hino Takafumi², Tsuyoshi Yoshida², Takunari Murai³, Yasuyuki Tachiki⁴, Rika Akamatsu³, ¹Hokkaido Research Organization, Sapporo, Japan; ²Rakuno Gakuen University, Ebetsu, Japan; ³EnVision Conservation Office, Sapporo, Japan; ⁴Universiti Malaysia Sabah, Sabah, Malaysia. Contact: inatomi@hro.or.jp

Large Carnivore Overabundance and Novel Mammal Community Structure in a Human Dominated Ecosystem

Mark Chynoweth¹, Emrah Çoban², Çağan Şekercioğlu¹, ¹University of Utah, Salt Lake City, UT, ²KuzeyDoğa Society, Kars, Turkey. Contact: chynoweth.mark@gmail.com

The Relationships between Vegetation Phenology and Body Condition in Mule Deer

Mindy B. Rice¹, Kate R. Searle², Charles R. Anderson¹, Chad Bishop¹, N. T. Hobbs³, ¹Colorado Parks and Wildlife, Fort Collins, CO, ²NERC Centre for Ecology and Hydrology, Penicuik, United Kingdom; ³Department of Ecosystem Science and Sustainability, Colorado State University, Fort Collins, CO, Contact: mindy.rice@state.co.us

Summer Habitat Occupancy of Sciurid Populations Using Camera Traps

L. Aylett Lipford¹, Corinne A. Diggins¹, W. Mark Ford², ¹Virginia Tech, Blacksburg, VA, ²USGS Virginia Cooperative Fish and Wildlife Research Unit, Blacksburg, VA, Contact: aylettva@vt.edu

Population Management of Sika Deer with Consideration for Conservation of Red-Crowned Crane in Kushiro-Shitsugen National Park, Japan.

Hiroyuki Uno¹, Yuichi Osa¹, Yoshihiro Inatomi¹, Mayumi Ueno¹, Hiroyo Uehara², Takafumi Hino², Tsuyoshi Yoshida², ¹Institute of Environmental Sciences, HRO, Sapporo, Japan; ²Rakuno Gakuen University, Ebetsu, Japan. Contact: uno@hro.or.jp

Factors Affecting Lodge Site Selection by Colonizing Beavers in the Chequamegon-Nicolet National Forest, Wisconsin

Daniel M. Wolcott¹, Christine A. Ribic², Deahn M. Donner³, David J. Rugg⁴, Albert J. Beck¹, Sue Reinecke⁵, Dan Eklund⁵, ¹Wisconsin Cooperative Wildlife Research Unit, University of Wisconsin-Madison, Madison, WI, ²US Geological Survey, Wisconsin Cooperative Wildlife Research Unit, University of Wisconsin-Madison, Madison, WI, ³USDA Forest Service, Northern Research Station, Institute for Applied Ecosystem Studies, Rhinelander, WI, ⁴USDA Forest Service, Northern Research Station, Madison, WI, ⁵US Forest Service, Chequamegon-Nicolet National Forest, Park Falls, WI, Contact: dwolcott@wisc.edu

Urbanization Effects on Bats across Multiple North Carolina Cities within the Nabat Sampling Framework

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Han Li¹, Matina Kalcounis-Rueppell¹, Katherine Caldwell², ¹University of North Carolina Greensboro, Greensboro, NC, ²North Carolina Wildlife Resources Commission, Asheville, NC, Contact: h_li6@uncg.edu

Large and Meso-Mammal Camera Survey of Fort Pickett, Virginia
Nicholas Kalen, Virginia Tech, Blacksburg, VA, Contact: nkalen@vt.edu

Dine and Dash: the Effect of Apex Predators on Cheetah Handling Time
Anne Hilborn, Virginia Tech, Blacksburg, VA, Contact: ahilborn@vt.edu

Spatial Ranges of Male Dama Gazelles in West Texas
Susan M. Cooper¹, Elizabeth C. Mungall², ¹Texas A&M AgriLife Research, Uvalde, TX, ²Second Ark Foundation, Ingram, TX, Contact: s-cooper@tamu.edu

Spatiotemporal Interactions of Florida Panthers and Their Primary Prey
Daniel A. Crawford¹, Michael J. Cherry², Brian D. Kelly¹, Richard B. Chandler¹, Karl V. Miller¹, Elina Garrison³, David Onorato⁴, L. Mike Conner², David Shindle⁵, ¹University of Georgia, Athens, GA, ²Joseph Jones Ecological Research Center, Newton, GA, ³Florida Fish and Wildlife Conservation Commission, Gainesville, FL, ⁴Florida Fish and Wildlife Conservation Commission, Naples, FL, ⁵U.S. Fish and Wildlife Service, Naples, FL, Contact: bigdmail@uga.edu

Activity and Movements of Habituated and Supplemented Wild Black Bears Compared to of Non-Habituated Bears
Roger A. Powell¹, Lynn L. Rogers², Susan A. Mansfield², ¹North Carolina State University, Raleigh, NC, ²Wildlife Research Institute, Ely, MN, Contact: newf@ncsu.edu

Differential Seed Preferences of Chipmunks: a Novel Statistical Approach to Cafeteria Trials
Amy Johnson¹, **Michael J. Cramer**¹, David Flagel¹, Samantha Driscoll², ¹University of Notre Dame, Notre Dame, IN, ²Syracuse University, Syracuse, NY, Contact: mcramer@nd.edu

Foraging Behavior and Social Interactions of White-Tailed Deer at a Concentrated Food Resource
David B. Stone¹, Michael J. Cherry², Bradley S. Cohen¹, James A. Martin¹, Karl V. Miller¹, ¹University of Georgia, Athens, GA, ²Joseph W. Jones Ecological Research Center, Newton, GA, Contact: dbstone@uga.edu

Trans-Pecos Pronghorn Translocation Efforts, a Summary of Survival
Whitney J. Gann¹, Nan Nourn-Danh¹, Shawn Gray², ¹Borderlands Research Institute-Sul Ross State University, Alpine, TX, ²Texas Parks and Wildlife Department, Alpine, TX, Contact: whitney142@hotmail.com

Summer Occupancy of White-Tailed Deer on Southern Appalachian Grassy Balds
Summer D. Higdon¹, Corinne A. Diggins², W. Mark Ford³, ¹University of Missouri, Columbia, MO, ²Virginia Tech, Blacksburg, VA, ³U.S. Geological Survey, Virginia Cooperative Fish and Wildlife Research Unit, Blacksburg, VA, Contact: sdhigdon@ncsu.edu

Landscape Genetics of Muskrat Populations in North Dakota

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Samuel Hervey¹, Shay Erickson¹, Susan Ellis-Felege¹, Stephanie Tucker², Brian Darby¹, ¹University of North Dakota, Grand Forks, ND, ²North Dakota Game and Fish, Bismarck, ND, Contact: samuel.hervey@und.edu

Behavioral Phenotypes, Female Reproductive Success, and Juvenile Habitat Selection: Insights from a Semi-Fossorial, Social Rodent

Allyssa L. Kilanowski¹, John L. Koprowski², ¹University of Kentucky, Lexington, KY, ²University of Arizona, Tucson, AZ, Contact: allyssa.kilanowski@gmail.com

Baseline Population Estimates and Microclimate Data for Newly Established Overwintering Brazilian Free-Tailed Bat Colonies in Central Texas

Sara P. Weaver¹, Thomas R. Simpson¹, John T. Baccus², Floyd W. Weckerly¹, ¹Texas State University, San Marcos, San Marcos, TX, ²Texas Tech University, Lubbock, TX, Contact: sw1251@txstate.edu

The Influence of Northern River Otter Latrine Presence upon Carnivore Species Richness and Activity Patterns

Rebekah A. Lumkes, Sarah Meronk, Natalie Euler, Casey C. Day, Patrick A. Zollner, Purdue University, West Lafayette, IN, Contact: rlumkes@purdue.edu

Distribution of Female Wolverines Relative to Spring Snow Cover in Alberta

Robert B. Anderson¹, Shevenell M. Webb¹, Doug L. Manzer¹, Matthew A. Scrafford², Mark S. Boyce², ¹Alberta Conservation Association, Crowsnest Pass, AB, Canada; ²University of Alberta, Edmonton, AB, Canada. Contact: robert.anderson@ab-conservation.com

Beavers Are Teenagers Too: Insights into Behaviour Following Rehabilitation and Release

Glynnis A. Hood, University of Alberta, Camrose, AB, Canada. Contact: ghood@ualberta.ca

Energetics of Roost Selection in Reproductive Silver-Haired Bats

Shelby Bohn, University of Regina, Regina, SK, Canada. Contact: shelbyjbohn@gmail.com

Activity Patterns of Florida Panther and Their Prey: Restoring the Landscape of Fear

Elina Garrison¹, Daniel A. Crawford², Brian D. Kelly², Michael J. Cherry³, David B. Shindle⁴, Daniel U. Greene⁵, Erin H. Leone¹, Richard B. Chandler², L. Mike Connor⁶, Karl V. Miller², Cory R. Morea¹, ¹Florida Fish and Wildlife Cons. Comm., Gainesville, FL, ²University of Georgia, Athens, GA, ³Joseph W. Jones Ecological Research Center, Newton, GA, ⁴U.S. Fish and Wildlife Service, Immokalee, FL, ⁵University of Florida, Gainesville, FL, ⁶Joseph W. Jones Ecological Research Center, Newton, FL, Contact: Elina.Garrison@MyFWC.com

Effects of Thermal Environment on the Growth and Health of White-Tailed Deer Fawns during Summer

Nicole Alonso, Texas A&M University - Kingsville, Kingsville, TX, TX, Contact: nicolealonso92@gmail.com

Clarifying the Historical Range to Aid Recovery of the Highly Endangered Mexican Wolf

James Heffelfinger¹, Ron Nowak², David Paetkau³, ¹Arizona Game and Fish Department, Tucson, AZ, ²None, Falls Church, VA, ³Wildlife Genetics International, Nelson, BC, Canada. Contact: jim.heffelfinger@arizona.edu

Low-Impact Restoration of San Diego Fairy Shrimp Vernal Pool Habitat on Marine Corps Air Station Miramar

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Richard Stolpe¹, Clint Scheuerman¹, Melissa Tu², ¹Cardno, Solana Beach, CA, ²Atkins, San Diego, CA, Contact: richard.stolpe@cardno-gs.com

Fire Effects on Xeric Pine Ecosystems and Related Bird Communities in the Northern Lake States

Lindsey M. Shartell¹, Shelby A. Weiss², R. Gregory Corace, III³, ¹Minnesota Department of Natural Resources, Grand Rapids, MN, ²The Ohio State University, Columbus, OH, ³USFWS-Seney National Wildlife Refuge, Seney, MI, Contact: Lindsey.Shartell@state.mn.us

40 Years of Vegetation Changes in an Old-Growth Forest Inform Predictions of Current Bird and Amphibian Populations

David Brown, Brad Ruhfel, Stephen Richter, Eastern Kentucky University, Richmond, KY, Contact: david.brown@eku.edu

Coastal Habitat Restoration on Edwin B. Forsythe National Wildlife Refuge: Living with Climate Change

Sieges Mason, Paul Castelli, Amy Drohan, Rebecca Reeves, Marc Virgilio, Vinny Turner, Virginia Rettig, Bill Crouch, US Fish and Wildlife Service, Oceanville, NJ, Contact: msieges@udel.edu

Bat Foraging Activity at Remnant Oak Trees in California Central Coast Vineyards

Ann Y. Polyakov¹, Ted Weller², Bill Tietje¹, ¹UC Berkeley, San Francisco, CA, ²Pacific Southwest Research Station, Arcata, CA, Contact: anne.y.polyakov@gmail.com

Variation of Morphotypes with Dendrobatid Frog of Panama (*Oophaga Pumilio*)

dustin howland, Sonoma State, Rohnert Park, CA, Contact: dwh99@humboldt.edu

Evaluating Released Ranched American Alligator Survival in Coastal Louisiana

Kristy Capelle, Michael Kaller, Louisiana State University Agricultural Center, Baton Rouge, LA, Contact: kdurha4@lsu.edu

Taking the Throne: Bringing Kingsnakes to the Forefront of Conservation

Sloane E. Wiggers, Kimberly M. Andrews, Jekyll Island State Park Authority Georgia Sea Turtle Center, Jekyll Island, GA, Contact: swigger@g.clemson.edu

Citizen Science: Working Outside the Box (Turtle)

Ashley A. LaVere¹, **Anna Gray Smith**¹, Ann Berry Somers², Catherine E. Matthews³, ¹The Box Turtle Connection Project, UNC Greensboro, Greensboro, NC, ²Biology Department, UNC Greensboro, Greensboro, NC, ³Teacher Education & Higher Education, UNC Greensboro, Greensboro, NC, Contact: agsmith5@uncg.edu

Monitoring Painted Turtle Movements in Clay County, Minnesota, with a New Style of Trap

Donna M. Bruns Stockrahm, Jessica M. Lindstrom, Scott T. Buchholz, Sarah S. Sanderson, Jessica L. Loeffler, Elisabeth C. Teige, Marissa M. Reeves, Eberardo C. Barragan, Jordan H. White, Minnesota State University Moorhead, Moorhead, MN, Contact: stockram@mnstate.edu

Locating and Tracking Green Salamander in Northern Alabama

Rebecca John, Robert Gitzen, Auburn University, Auburn, AL, Contact: rrj0007@auburn.edu

In the Shadows of a Brownfield at the Dawn of Gig City: the Spatial Ecology of the Eastern Box Turtle in an Urban and Fragmented Landscape of Southeast Tennessee

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Mark Dillard, Jeremy Hooper, Team Salamander, Thomas P. Wilson, University of Tennessee at Chattanooga, Chattanooga, TN, Contact: thomas-wilson@utc.edu

Prevalence of Chytrid Fungus in Two Species of Ranid Frogs on a Former United States Department of Defense Installation in Southeastern Tennessee: Directions for the Future

Thomas P. Wilson¹, Jose Barbosa¹, Ethan Carver¹, Brad Reynolds¹, Penni Jo Wilson², Team Salamander¹, Tabitha M. Wilson³, ¹University of Tennessee at Chattanooga, Chattanooga, TN, ²Cleveland State Community College, Cleveland, TN, ³Chattanooga High School & Center for Creative Arts, Chattanooga, TN, Contact: thomas-wilson@utc.edu

A Survey and Analysis Design for Wood Turtle Abundance Monitoring Programs in the Upper Midwest

Donald J. Brown¹, Madaline M. Cochrane², Ron A. Moen², ¹West Virginia University, Morgantown, WV, ²Natural Resources Research Institute, Duluth, MN, Contact: donald.brown1@mail.wvu.edu

Contributed Posters

Wednesday, October 19th, 9:00 am – 5:00 pm

A Comparison of Design-Based Vs. Hierarchical Models for Aerial Transect Surveys

Mark C. Otto¹, John R. Sauer², ¹FWS, Laurel, MD, ²USGS, Laurel, MD, Contact: Mark_Otto@fws.gov

Micro- and Macrohabitat Characteristics of Eastern Small-Footed Bats in Virginia Small-Footed Bats in Virginia

John K. Huth¹, Alexander Silvis¹, W. Mark Ford², Paul. R. Moosman, Jr.³, ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²U.S. Geological Survey, Virginia Cooperative Fish and Wildlife Research Unit, Blacksburg, VA, ³Virginia Military Institute, Lexington, VA, Contact: jhuth@vt.edu

Optimization of Multi-Scale Resistance Surfaces to Describe the Landscape Genetics of a Threatened Mole Salamander

Kristopher J. Winiarski¹, William E. Peterman², Andrew Whiteley³, Kevin McGarigal¹, ¹University of Massachusetts, Amherst, MA, ²Ohio State University, Columbus, OH, ³University of Montana, Missoula, MT, Contact: Withakri@gmail.com

Validation and Discrimination of Species Distribution, Habitat Selection, and Step-Selection Models

John R. Fieberg¹, James D. Forester¹, Douglas H. Johnson², Jason Matthiopoulos³, Garrett M. Street⁴, ¹University of Minnesota, St. Paul, MN, ²U.S. Geological Survey, St. Paul, MN, ³University of Glasgow, Glasgow, United Kingdom; ⁴Mississippi State, Starkville, MS, Contact: jfieberg@umn.edu

Predicting Road Mortality Hotspots in Northeastern North Carolina

Christine M. Proctor¹, Marcella J. Kelly¹, Michael R. Vaughan¹, Anne Burroughs², ¹Virginia Tech, Blacksburg, VA, ²Dewberry, Raleigh, NC, Contact: cproctor@vt.edu

A Non-Lethal Strategy for Controlling Eastern Gray Squirrel Populations in Urban Areas

Kristina M. Dunn, Wayne Y. Chao, William Bridges, Christi Yoder, Sandra Gray, J. Drew Lanham, Greg Yarrow, Clemson University, Clemson, SC, Contact: kmdunn@g.clemson.edu

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Assessing the Reliability of DNA Barcoding to Monitor Pollinator Diversity during Prairie Restoration in Northwestern Minnesota

Sara J. Anderson, Marissa M. Reeves, Stacy E. Peterson, Minnesota State University Moorhead, Moorhead, MN, Contact: anderson@mnstate.edu

Mosaic Fertilizer's Wildlife Translocations and Partnerships: Essential Tools for Conserving the Florida Scrub-Jay and Gopher Tortoise in Central Florida

Sandra Patrick, Mosaic Fertilizer, LLC, Lithia, FL, Contact: sandra.patrick@mosaicco.com

Bats in the Belfry - Statewide Permits for Federally Listed Bats

Paola Bernazzani, ICF, Chagrin Falls, OH, Contact: paola.bernazzani@icfi.com

The South Atlantic Conservation Blueprint

Amy Keister, Louise Vaughn, Hilary Morris, South Atlantic Landscape Conservation Cooperative, Raleigh, NC, Contact: amy_keister@fws.gov

Bushy-Tailed Woodrats, Northern Flying Squirrels, and Forest Structure in the Eastern Cascades of Washington and Oregon.

Peter Singleton, USFS, Wenatchee, WA, Contact: psingleton@fs.fed.us

Impacts of Fire on Bat Occupancy in Shenandoah National Park

Lauren V. Austin¹, Alexander Silvis¹, Michael S. Muthersbaugh¹, W. Mark Ford², ¹Virginia Tech, Blacksburg, VA, ²U.S. Geological Survey, Virginia Cooperative Fish and Wildlife Research Unit, Blacksburg, VA, Contact: laustin3@vt.edu

Human Activity and White-Tailed Deer Road Crossing: Are They Connected?

Eugene Potapov, Ryan Landels, Michael Rodgers, Edward Higgins, Fredrik Bryntesson, Bryn Athyn College, Bryn Athyn, PA, Contact: eugene.potapov@brynathyn.edu

Factors Influencing Scholarly Performance by Fisheries and Wildlife Faculty

Robert K. Swihart, Mekala Sundaram, Kenneth F. Kellner, Tomas O. Hook, J. Andrew DeWoody, Purdue University, West Lafayette, IN, Contact: rswihart@purdue.edu

Place Attachment Influences on Boating Access Site Selection

Faren R. Wolter, Virginia Tech, Blacksburg, VA, Contact: fwolter@vt.edu

Lead in Hunting Ammunition: Where Is There Un/Common Ground Between Hunters and General Public in Oregon?

Dana Sanchez, Oregon State University, Corvallis, OR, Contact: dana.sanchez@oregonstate.edu

How Teacher Beliefs around Climate Change Influence Student Understanding

Amy C. Bradshaw, Nils Peterson, Kathryn Stevenson, Danielle Frank, Rachel Szczytko, North Carolina State University, Raleigh, NC, Contact: acbradsh@ncsu.edu

Seabird Colony Decline, Nesting Performance, Human Harvest, and Invasive Predators in the Southern Grenadine Islands

Wayne Smart¹, Natalia Collier², **Virginie Rolland**¹, ¹Arkansas State University, State University, AR, ²Environmental Protection in the Caribbean, Green Cove Springs, FL, Contact: vrolland@astate.edu

Evaluating the Georgia Master Naturalist Program

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Lauren N. Hildreth, University of Georgia, Athens, GA, Contact: lbnhildreth@gmail.com

Attacks by Asiatic Black Bears in District Mansehra, Pakistan: 2001-2015

Muhammad Awais, PMAS-Arid Agriculture University, Rawalpindi, Pakistan. Contact: awais.zoology.hu@gmail.com

Impact of Invasive Asian Carp on the North American River Otter Diet

Sarah E. Meronk, Casey A. Day, Elizabeth A. Flaherty, Patrick A. Zollner, Purdue University, West Lafayette, IN, Contact: smeronk16@gmail.com

What Governs Responses of Animals to Plant Invasions?

Andrea Litt, Montana State University, Bozeman, MT, Contact: andrea.litt@montana.edu

Finding the Last One: Use of Detector Dogs in the Final Stages of the Chesapeake Bay Nutria Eradication Project

Margaret A. Pepper¹, Jonathan A. McKnight², Stephen R. Kendrot³, ¹USDA - Wildlife Services, Cambridge, MD, ²Maryland Wildlife and Heritage Service, Annapolis, MD, ³USDA - Wildlife Services, Riverdale, MD, Contact: Margaret.A.Pepper@aphis.usda.gov

Cat Tracker: Mapping the Ecological Impact of Free-Ranging Cats through Citizen Science

Troi Perkins¹, Holly Menninger¹, Rob Dunn¹, Roland Kays², ¹North Carolina State University, Raleigh, NC, ²North Carolina Museum of Natural Sciences, Raleigh, NC, Contact: typerkin@ncsu.edu

The Role of Domestic Cats in the Admission of Injured Wildlife at Rehabilitation and Rescue Centers across North America 2011-2015

Kerrie Anne Loyd¹, Sonia M. Hernandez², Dave McRuer³, ¹Arizona State University, Lake Havasu City, AZ, ²University of Georgia, Athens, GA, ³The Wildlife Center of Virginia, Waynesboro, VA, Contact: k.loyd@asu.edu

Monitoring the Effects of Hurricane Sandy on American Black Duck Carrying Capacity

Brenna Towery¹, Chris Williams¹, Paul Castelli², Susan Guiteras³, Heidi Hanlon⁴, ¹University of Delaware, Newark, DE, ²U.S. Fish and Wildlife Service, Manahawkin, NJ, ³U.S. Fish and Wildlife Service, Smyrna, DE, ⁴U.S. Fish and Wildlife Service, South Dennis, NJ, Contact: brennatowery@gmail.com

Helicopter Surveys for White-Tailed Deer: Temporal Trends in Counts and Stabilization Rates in Sex Ratios

Matthew Schnupp¹, Aaron Foley², David Hewitt², Randy DeYoung², ¹King Ranch, Inc., Kingsville, TX, ²CKWRI-TAMUK, Kingsville, TX, Contact: MSchnupp@king-ranch.com

Using UAS to Immobilise Animals (DIWA)

Roman Eyholzer, DIWA, Fribourg, Switzerland. Contact: info@diwa.tech

Combining Live and Camera Trapping Techniques for Assessing Small Mammal Populations and Behavior

Joseph E. Colbert¹, Kimberly Andrews¹, Steven Castleberry², Scott Coleman³, Christopher L. Jenkins⁴, Jacob Thompson⁵, ¹University of Georgia Odum School of Ecology, Athens, GA, ²University of Georgia Warnell School of Forestry, Athens, GA, ³Little Saint Simons Island Ecological Management, Little Saint Simons Island, GA, ⁴Oriante Society, Athens, GA, ⁵Georgia Department of Natural Resources Coastal Resources Division, Brunswick, GA, Contact: jocolb83@yahoo.com

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Extending Hexsim to Simulate River Networks

Allen Brookes, USEPA, Corvallis, OR, Contact: brookes.allen@epa.gov

An Open-Source Hardware GPS Data Logger for Wildlife Radio-Telemetry Studies: a Case Study Using Eastern Box Turtles

Patrick Cain¹, Matthew Cross², ¹Indiana State University, Terre Haute, IN, ²Bowling Green State University, Bowling Green, OH, Contact: pcain1@sycamores.indstate.edu

BatMe: Monitoring Distribution and Trends of Bats in Maine Using Outreach-Based Citizen Science

Sabrina Morano¹, Erik Blomberg¹, Cory Mosby², ¹University of Maine, Orono, ME, ²Department of Inland Fisheries and Wildlife, Bangor, ME, Contact: sabrina.morano@maine.edu

Urban Conservation: the Northeastern Coyote as a Flagship Species

Mark Weckel¹, Anastasia Wincorn², ¹American Museum of Natural History, New York City, NY, ²Gotham Coyote Project, New York City, NY, Contact: mweckel@amnh.org

Educated Feral Hogs and Uneducated Landowners: Reversing the Trend

Rebecca J. McPeake, University of Arkansas, Little Rock, AR, Contact: rmcppeake@uaex.edu

Optimizing Bait Delivery for Striped Skunks

Nikki J. Crider, Shylo Johnson, Amy Gilbert, USDA National Wildlife Research Center, Fort Collins, CO, Contact: nikki.j.crider@aphis.usda.gov

The Effects of a Cull as a Localized Management Tool on White-Tailed Deer Density across Brookhaven National Laboratory

Ryan M. Southard, NCSU/BNL, Raleigh, NC, Contact: ryan.southard91@gmail.com

Designing Optimal Control Strategy for Eastern Gray Squirrels as an Introduced Problem Species.

Jonathan C. Reynolds, Mike J. Short, Tom A. Porteus, Game & Wildlife Conservation Trust, Fordingbridge, United Kingdom. Contact: jreynolds@gwct.org.uk

Fumigation of Burrowing Rodents with Carbon Monoxide: a Comparison to Alternative Fumigation Options

Roger A. Baldwin¹, Ryan Meinerz¹, Steve B. Orloff², ¹University of California, Davis, CA, ²University of California Cooperative Extension, Yreka, CA, Contact: rabaldwin@ucdavis.edu

Identification and Estimation of Damage Caused by Feral Hogs in Corn Fields Using Change Detection and an Unmanned Aerial System

Sathishkumar Samiappan¹, Alex Crain², Lee Hathcock¹, Fred L. Cunningham², Robert Moorhead¹, ¹Mississippi State University, Starkville, MS, ²USDA/APHIS/WS National Wildlife Research Center, Mississippi State, MS, Contact: sathish@gri.msstate.edu

Site Specific Management of Nuisance Geese on School Properties: a Case Study from New York State

Lynn Braband, Cornell University, Rochester, NY, Contact: lab45@cornell.edu

Environmental Fate of Radiocesium in Aquatic and Semi-Aquatic Food Webs on the Savannah River Site

James C. Leaphart¹, Albert L. Bryan², James C. Beasley¹, ¹University of Georgia, Athens, GA, ²University of Georgia's Savannah River Ecology Laboratory, Aiken, SC, Contact: leaphart@uga.edu

TWS 23rd Annual Conference

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Polar Bears as a Sentinel for Emerging Wildlife Zoonoses: Past and Present Occurrence of *Brucella* spp., *Coxiella burnetii*, and *Toxoplasma gondii* in the Southern Beaufort Sea Population

Todd Atwood¹, Colleen Duncan², Kelly Patyk³, Jack Rhyan⁴, Pauline Nol⁴, Matt McCollum⁴, ¹USGS Alaska Science Center, Anchorage, AK, ²Colorado State University, Fort Collins, CO, ³USDA- Veterinary Services, Fort Collins, CO, ⁴USDA- National Wildlife Research Center, Fort Collins, CO, Contact: tatwood@usgs.gov

Black Bears as Novel Vectors/Reservoirs for Potential Human and Animal Pathogens

Cameron Parsons¹, Sophia Kathariou¹, Jeffrey Niedermeyer¹, Phillip Brown¹, Nicholas Gould¹, Chris DePerno¹, Bernardo Mesa², Marcella Kelly², Mike Hooker³, Michael Chamberlain³, ¹North Carolina State University, Raleigh, NC, ²Virginia Tech, Blacksburg, VA, ³University of Georgia, Athens, GA, Contact: ctparson@ncsu.edu

The Northeast Wildlife Disease Cooperative

Julie C. Ellis¹, Walter O. Cottrell¹, Nicholas Robinson¹, Salvatore Frasca Jr², Rachel Burns², Krysten L. Schuler³, Inga Sidor⁴, Anne Lichtenwalner⁵, Angelique Leone⁶, Shannon Swist⁶, Amar Patil⁶, Lisa A. Murphy⁷, ¹Cummings School of Veterinary Medicine at Tufts Univ, North Grafton, MA, ²Connecticut Veterinary Medical Diagnostic Laboratory University of Connecticut, Storrs, CT, ³Cornell University, Ithaca, NY, ⁴New Hampshire Veterinary Diagnostic Laboratory, Univ. of New Hampshire, Durham, NH, ⁵University of Maine, Animal Health Diagnostic Laboratory, Orono, ME, ⁶State of New Jersey Department of Agriculture, Animal Health Diagnostic Laboratory, Trenton, NJ, ⁷University of Pennsylvania, School of Veterinary Medicine, PADLS New Bolton Center, Kennett Square, PA, Contact: julie.ellis@tufts.edu

Influence of Urbanization on Endoparasite Prevalence in Kangaroo Rats

Gizelle Hurtado¹, Ghislaine Mayer², Karen Mabry¹, ¹New Mexico State University, Las Cruces, NM, ²Manhattan College, Riverdale, NY, Contact: ghurtadoscience@gmail.com

Amphibian Chytrid Fungus: Potential Pathogen Establishment in a Highly-Protected Landscape

Charles W. Robinson¹, Stacy McNulty¹, Valorie Titus², ¹SUNY ESF, Syracuse, NY, ²Green Mountain College, Poulteny, VT, Contact: cwrobins8@gmail.com

Neonicotinoids: an Emerging Threat to Wetland-Dependent Wildlife?

Travis J. Schepker¹, Elisabeth Webb², Ted LaGrange³, Donald Tillitt⁴, ¹University of Missouri, Columbia, MO, ²U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit, University of Missouri, Columbia, MO, ³Nebraska Game and Parks Commission, Lincoln, NE, ⁴U.S. Geological Survey, Columbia Environmental Research Center, Columbia, MO, Contact: tjsrz8@mail.missouri.edu

Highly Pathogenic Avian Influenza in Wild Birds: Looking for Pathogens in Wildlife at a National-Scale

Sarah Bevins¹, Ryan Miller², Marta Remmenga², Dan Walsh³, Lori Gustafson², Lindsey Garber², Maria Antognoli², Tom Deliberto¹, ¹USDA WS National Wildlife Research Center, Fort Collins, CO, ²USDA VS Center for Epidemiology and Animal Health, Fort Collins, CO, ³USDOI USGS National Wildlife Health Center, Madison, WI, Contact: sarah.n.bevins@aphis.usda.gov

Potential of Fish Eating Birds to Spread Virulent *Aeromonas hydrophila*

Fred L. Cunningham¹, Madison M. Jubirt², Katie C. Hanson¹, Lorelei Ford², Paul B. Fioranelli¹, Larry A. Hanson², ¹USDA/APHIS/WS/NWRC, Mississippi State, MS, ²Mississippi State University-College of Veterinary Medicine, Mississippi State, MS, Contact: Fred.L.Cunningham@aphis.usda.gov

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Lyme Disease Prevalence and Small Mammal Abundances on Fort Drum Military Installation, New York

Samantha Fino¹, John Edwards¹, Sheldon Owen¹, Jeffrey Wimsatt¹, Raymond Rainbolt², ¹West Virginia University, Morgantown, WV, ²US Army, Fort Drum, Natural Resources Branch, Jefferson County, NY, Contact: srfino@mix.wvu.edu

Choose to Be Great! Improving Student Retention and Graduation Rates! The Power of Academic Counseling and Advising Strategies for Students in Wildlife Science Programs

Jodie Kenney, Auburn University, AUBURN, AL, Contact: jkenney@auburn.edu

Video Enhances Outreach on Native Bees and Wildlife Habitat

Nancy L. Adamson, Xerces Society & USDA NRCS ENTSC, Greensboro, NC, Contact: nancy@xerces.org