



MISSISSIPPI STATE
UNIVERSITY™

center for resolving
HUMAN-WILDLIFE
CONFLICTS

annual report 2013

about the center

Worldwide, human-wildlife conflicts cause billions in economic losses and are a substantive source of environmental damage that impairs ecological function of natural and managed systems.

Mitigation of these conflicts requires science-based research, technical expertise, and global collaboration well suited with the mission and resources of a land-grant University. Also critical is a citizenry who is well-informed on the social, economic, and health impacts of invasive and/or exotic plant and animal species, which can be accomplished with comprehensive outreach activities. The **Center for Resolving Human Wildlife Conflicts** is a research and outreach program of the Forest and Wildlife Research Center and the Extension Service at Mississippi State University. Mississippi State University is the only land-grant-based center in the United States devoted solely to facilitating human-wildlife coexistence through sound research and education of the citizenry. The mission

of the center is to conduct research, provide educational outreach to various publics, and promote undergraduate and graduate education concerning the resolution of human-wildlife and human-plant conflicts. Wildlife, in our context, includes fish.

The current human population worldwide is estimated at a staggering 7.1 billion individuals and increasing. With this burgeoning human population comes an increase in human-wildlife conflicts, broadly defined as any action by humans or wildlife which adversely affects the other. The types of conflicts are wide-ranging and varied, from wildlife-vehicle collisions and human safety issues to invasive species and zoonotic diseases. Though good estimates of the economic losses resulting from human-wildlife conflicts are lacking, certainly those losses represent many billions of dollars annually.

“...devoted solely to facilitating human-wildlife coexistence through sound research and education of the citizenry.”



The **Center for Resolving Human-wildlife Conflicts** has just completed its first full year as a Center, and our achievements have been diverse and considerable. We co-hosted a legislative summit on wild hogs, facilitating the transfer of critical information on the environmental and economic impacts of wild hogs to Mississippi state legislators, state agency officials, and a broad array of non-government entities. This Summit was a great success, with over 100 legislators and biologists attending, thereby gaining key knowledge and understanding on legislative needs regarding effective control of this pest. Legislators have already asked for a follow-up Summit in 2014. We have initiated five research projects ranging from use of alternative land use practices around airports to reduce wildlife collisions with aircraft to testing repellents for brown tree snake control to youth conservation education. Our research

has resulted in the publication of more than 20 scientific and extension/outreach publications. We have provided numerous workshops and media segments that have made considerable inroads toward empowering landowners in controlling invasive species to relaying this information to the public. Most exciting is that the Center has been asked to host the 2015 Eastern Black Bear Workshop. We also started planning the 2014 Wild Pig Conference which will be held at Auburn University. Additionally, activities in the K-12 classroom have been numerous. Lastly, we continue to expand our website at **www.humanwildlifeconflicts.msstate.edu** to provide additional information on our efforts toward resolving human-wildlife conflicts. We look forward to building on these accomplishments during 2014.



project spotlight

Habitat Management to Deter Wildlife at Airports

Wildlife Aviation Strikes

We developed a large-scale, long-term experiment that addressed wildlife habitat, biomass production, economic benefits, and aviation risk for two alternate uses (hay and biofuel) of two primary herbaceous types: upland switchgrass and a warm season native plant mix. Field eligibility criteria, planting mixtures, and establishment practices were consistent with Conservation Reserve Program requirements and practice standards so that recommendations based on these experiments will provide guidance for possible large-scale implementation on lands on and near airports. Overall, use of

switchgrass

by birds

hazardous

to aircraft

was less

than

hazardous

bird use of

warm season

native plant mix.

We are currently

establishing a large-scale experiment to test switchgrass use at six locations throughout the eastern United States.



Funding source - Habitat Management to Deter Wildlife at Airports

Belant, J. 2014. ACRP Synthesis Project 11-03/Topic S10-10, Habitat Management to Deter Wildlife at Airports. **National Academy of Sciences**, \$40,000.



project spotlight

Invasive Species

Development of Irritants to Drive Brown Treesnakes out of Cargo

We worked to develop an effective means of eliciting exit of snakes from cargo refugia. Unintentional travel in cargo is the greatest threat this invasive species poses to other jurisdictions in the Pacific region. A senior research associate conducted laboratory research at the USDA/APHIS/National Wildlife Research Center in Fort Collins, CO, and field trials in Guam to evaluate the efficacy of a series of chemicals as well as streams of heated air for eliciting exit of these snakes from test refugia. Chemicals failed to elicit snake exit from refugia, but streams of heated air were highly effective and this method is undergoing further trials.



Arrived in Guam accidentally in imported cargo. Preys on native lizards and birds and causes frequent power outages by climbing on electrical wires (Photo by Gordon Rodda, U.S. Geological Survey, Bugwood.org).

Funding sources - Invasive Species

Belant, J. 2013. Development of Irritants to Drive Brown Tree Snakes Out of Cargo. **USDA/APHIS/NWRC**. \$106,761.
Belant, J., J.A. Martin, and G. Wang. 2013. Wildlife Aviation Strikes. **USDA/APHIS/Wildlife Services**. \$154,000.



project spotlight

Ecosystem Restoration

Double-Crested Cormorant

Damage to vegetation by double-crested cormorant breeding colonies can have long-lasting effects on island ecosystems. We investigated how excluding cormorants and other waterbirds like pelicans and gulls from areas of vegetation effected vegetation growth and survival of potential restoration plants. We found that exclusion of nesting cormorants allows vegetation growth and survival on breeding islands in Lake Michigan. We also found that soil remediation may be necessary for restoration

of plant communities on some breeding islands where soil chemistry has been significantly affected by years of concentrated nesting by colonial waterbirds.

Funding sources - Ecosystem Restoration

Belant, J. 2014. Nesting Double Crested Cormorant Impacts of Vegetation. **USDA/APHIS/NWRC**. \$41,500.

Belant, J. 2014. Double Crested Cormorant Foraging Impacts. **USDA/APHIS/NWRC**. \$33,000.





project spotlight

Wildlife Management

Legislative Wild Hog Summit

The expansion of the range of wild hogs in Mississippi is one of the most serious issues facing the state. Wild hogs are expanding across the Mississippi landscape at a rate of about ½ million acres per year. Wild hogs are the most injurious of Mississippi's exotic, invasive species, as they carry many diseases transmittable to humans, livestock, and pets, compete with native wildlife, spoil water supplies, damage public and private property, consume agricultural crops, and disrupt ecosystem function. Consequently, to brief Mississippi Legislators on the seriousness of the issue and prepare them for the 2014 legislative session, the Center hosted a Legislative Wild Hog Summit on September 9, 2013 at the Mississippi Capitol Building.

The over-arching goal of the Summit was to provide attendees with key information about the wild hog issue, how other states have dealt with the problem, and how Mississippi can be proactive in dealing with this issue before it's too late. The Summit was co-hosted by Senator Giles Ward, Representative Scott Bounds, and Mississippi State University's Center for Resolving Human-wildlife Conflicts. Two nationally recognized experts on wild hogs were invited to the Summit to speak on the issue. Wildlife Mississippi/Mississippi River Trust and Delta Wildlife, Inc. each sponsored the expenses of these experts. The MS Forestry Association, Mississippi Wildlife Federation and the Mississippi Farm Bureau cosponsored lunches for all attendees.

Funding sources - Legislative Wild Hog Summit

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Delta Wildlife**. \$1,000.

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Wildlife Mississippi**. \$1,000.

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Mississippi Wildlife Federation**. \$250.

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Mississippi Forestry Association**. \$250.

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Mississippi Farm Bureau**. \$250.

Leopold, B. 2013. Support for Wild Hog Legislative Summit. **Mississippi Chapter of The Wildlife Society**. \$950.

The two external experts discussed 1) what has worked legislatively, 2) what has not worked legislatively, 3) obstacles in dealing with wild hog control, and 4) dealing with those obstacles. An expert from the MSU Vet School discussed the human and domestic livestock health threats from wild hogs.

The Mississippi Chapter of The Wildlife Society, the MSU Extension Service, the MSU Forest and Wildlife Research Center, and the MS Agricultural and Forestry Experiment Station provided funds to publish a 14-page, pocket-sized booklet to distribute to attendees. The booklet clearly outlined the issues regarding wild hogs, and will be useful to inform and convince others about

the profound and terrible threat we are facing and the need for immediate action.

Almost 100 individuals attended the Summit. Although no good estimates of wild hog damage currently exist for the state of Mississippi, the damage is certainly in the tens of millions. During 2014 and 2015 we will be conducting surveys and landowner interviews to estimate the economic damage caused by hogs to row crop agriculture and forest lands throughout Mississippi. We think results from this can be used as justification for the need of further control and education.



project spotlight

Wildlife Management

Wild Hogs

Wild hog populations are expanding at an alarming rate throughout the United States. More than 42 states are estimated to now have hog populations and the agricultural and ecological damage is significant. We conduct wild hog damage management educational workshops to help landowners, wildlife biologists, foresters and other natural resource professionals understand the dangers associated with wild hog populations and teach them various control techniques to minimize or eliminate damage. Further, to complement the existing hog management educational products (website, publication) we will be developing short podcast-length videos that teach the fundamentals of hog trapping. We will demonstrate all important

details from site selection, bait selection, triggers, trap doors, and construction. We will also be developing a hog management curriculum for Extension agents.

Funding sources - Wildlife Management

Leopold, B., and B. Strickland. 2013. Extension Seed Grant Award for Wildlife Damage Management Educational Programming. **MSU Extension Service**. \$48,478.

Strickland, B. 2013. Extension Seed Grant Award for Wildlife Management Videography. **MSU Extension Service**. \$50,000.

Tegt, J., and B. Strickland. 2013. Wild hog damage estimation. **Land, Water, and Timber Board of Mississippi**. \$264,272.





project spotlight

Youth Conservation Education

The Center for Resolving Human-Wildlife Conflicts recognizes the need to educate youth on the present and future issues involving coexistence with wildlife. We offer a multifaceted, multi-level youth conservation education program. The variety of programming provides experiential, science-based environmental education opportunities to youth and youth-serving adults. Summer day camps for middle school students allow older youth hands-on experience in wildlife, fish, and forest conservation and management. In-school and after school programs delivered by professionally trained science instructors provide over 2500 elementary students from all backgrounds with real-world conservation science education during school hours while meeting state and national science curricular standards. Additionally, Extension employees, teachers, and

youth leaders can participate in training programs designed around environmental topics relevant to conservation and environmental science. Finally, our staff produces educational curricula, web-based material, radio programs, and informational newsletters to educate youth as well as the general public.

Funding Source - Youth Conservation Education
Tegt, J., L. Burger. 2013.
Expansion of Youth Conservation Education. **MSU Extension Service.** \$50,000





sponsors and partners

Delta Wildlife

Land, Water and Timber Board of Mississippi
Mississippi Agricultural and Forestry Experiment Station
Michigan Department of Natural Resources
Mississippi Department of Wildlife, Fisheries and Parks
Mississippi Farm Bureau
Mississippi Forestry Association
Mississippi State University Extension Service
Mississippi State University Forest and Wildlife Research
Center
Mississippi Wildlife Federation
National Academy of Sciences
Oklahoma State University Extension Service
ProCat International
Sierra to Sea
The Wildlife Society, Mississippi Chapter
USDA/APHIS/Wildlife Services/National Wildlife Research
Center
Wildlife Mississippi

Recognition

Mississippi Department of Wildlife, Fisheries and Parks.
September 17, 2013. Letter of appreciation from Executive
Director Polles for planning and facilitating of Mississippi
Legislative Wild Hog Summit.

Mississippi House of Representatives. September 16,
2013. Letter of appreciation from Chairman of the Wildlife,
Fisheries and Parks Committee, Scott Bounds for planning
and facilitating of Mississippi Legislative Wild Hog
Summit.





publications, presentations & media

(center authors in bold)

Extension/Outreach Publications

- Breazeale, L., **B.K. Strickland**. 2013. December Seminar Targets Wild Hog Damage, Control.
- Breazeale, L., **B.K. Strickland**, **W.W. Hamrick**, J. Cumbee. 2013. Deer Hunters Need Wild Hog Awareness.
- Clark, J.T., **B.K. Strickland**. 2013. Hog Wild: Booming Wild Hog Population Threatens Health, Ecosystem. The Dispatch 11 Feb 2013.
- Hamrick, W.W.** and **B.K. Strickland**. 2013. Wild Pig Damage. Mississippi State University Extension Service publication: in press.
- Hamrick, W.W.**, **B.K. Strickland** and S. Jack. 2013. Wild Pigs and Disease. Mississippi State University Extension Service publication: in press.
- Hamrick, W.W.** and **B.K. Strickland**. 2013. Trapping Wild Pigs. Mississippi State University Extension Service publication: in press.

Leopold, B.D., **B.K. Strickland**. 2013. Mississippi's Alien Invasion. Tree Talk (Fall 2013): 10-11, 36-37.

Strickland, B.K., **J. Tegt**, **W.W. Hamrick**, **B.D. Leopold**, **J. Belant**. 2013. Wild Hogs in Mississippi: Emerging Issues and Potential Threats. Center for Resolving Human-Wildlife Conflicts. Mississippi State, MS.

Strickland, B.K., **J. Tegt**, T. Campbell, R.H. Barrett. (In Preparation). Wild Pigs, Prevention and Control of Wildlife Damage.

Research Publications

Belant, J.L., T.L. DeVault, and B.F. Blackwell. 2013. Conclusions and Future Directions. Pages 167-170 in DeVault, T.L., B.F. Blackwell, and J.L. Belant, editors. Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management. Johns Hopkins University Press, Baltimore, Maryland, USA.



Wild hogs cost an estimated \$1.5 billion per year in control costs and property damage.

- Belant, J.L.**, B.E. Washburn, and T.L. DeVault. 2013. Understanding Animal Movements at and Near Airports. Pages 129–138 in DeVault, T.L., B.F. Blackwell, and J.L. Belant, editors. *Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, Maryland, USA.
- Belant, J. L.**, and C. R. Ayers. 2014. *Habitat Management to Deter Wildlife at Airports*. National Academy of Sciences, Transportation Research Board, Washington, D.C.
- Biondi, K.M., **J.L. Belant**, T.L. DeVault, J.A. Martin, and G. Wang. 2013. Bat Incidents with U.S. civil Aircraft. *Acta Chiropterologica*. 15:185-192.
- Biondi, K.M., **J.L. Belant**, T.L. DeVault, J.A. Martin, and G. Wang. 2014. Integrating Mammalian Hazards with Management at U.S. Civil Airports: A Case Study. *Human-Wildlife Interactions* 8:in press.

- Blackwell, B.F., T.W. Seamans, P.M. Schmidt, T.L. DeVault, **J.L. Belant**, M.J. Whittingham, J.A. Martin, and E. Fernandez. 2013. A Framework for Airport Grasslands and Birds amidst Conflicting Priorities. *Ibis* 155:189-193.
- DeVault, T.L., P.M. Schmidt, F.E. Pogmore, J. Gobeille, **J.L. Belant**, and T.W. Seamans. 2014. Influence of Egg Oiling On Colony Fidelity of Ring-Billed Gulls. *Human-Wildlife Interactions* 8:in press.
- DeVault, T.L., T.W. Seamans, J.A. Schmidt, **J.L. Belant**, B.F. Blackwell, N. Mooers, L.A. Tyson, and L. Van Pelt. 2014. Bird Use of Solar Photovoltaic Installations at US Airports: Implications for Aviation Safety. *Landscape and Urban Planning* 128:in press.
- DeVault, T.L., B.F. Blackwell, and **J.L. Belant**, editors. 2013. *Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, Maryland, USA.



publications, presentations & media

(center authors in bold)

DeVault, T.L., B.F. Blackwell, and **J.L. Belant**. 2013. Preface- Managing Wildlife Hazards in Airport Environments. Pages ix–xi in DeVault, T.L., B.F. Blackwell, and J.L. Belant, editors. *Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, Maryland, USA.

DeVault, T.L., B.F. Blackwell, **J.L. Belant**, and M.J. Begier. 2014. *Wildlife at Airports*. Pages xx-xx in S.E. Hygnstrom, R.M. Timm, P.D. Curtis, D.L. Nolte, M.E. Tobin, and K.C. VerCauteren, editors. *Prevention and Control of Wildlife Damage*. University of Nebraska Press, Lincoln, Nebraska, USA.

Drey, K.M., J.A. Martin, **J.L. Belant**, T.L. DeVault, and B.F. Blackwell. 2014. *Interactions between Wildlife and Civil Aircraft in Mississippi*. *Southeastern Naturalist* 13:in press.

DeVault, T.L., M.J. Begier, **J.L. Belant**, B.F. Blackwell, R.A. Dolbeer, J.A. Martin, T.W. Seamans, B.E. Washburn, and J.R. Weller. 2013. *Rethinking Airport Land-Cover Paradigms: Agriculture, Grass, and Wildlife Hazards*. *Human-Wildlife Interactions* 7:10-15.

Martin, J.A., **J.L. Belant**, and T.L. DeVault. 2013. *Bird Harassment, Repellent, and Deterrent Techniques for Use On and Near Airports*. *Human-Wildlife Conflicts Monograph* 2:1-48.

Martin, J.A., T.J. Conkling, **J.L. Belant**, K.M. Biondi, B.F. Blackwell, T.L. DeVault, E. Fernández-Juricic, P.M. Schmidt, and T.W. Seamans. 2013. *Wildlife Conservation and Alternate Land Uses at Airports*. Pages 117–125 in DeVault, T.L., B.F. Blackwell, and J.L. Belant, editors. *Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, Maryland, USA.



Damage to vegetation by cormorant breeding colonies can have long-lasting effects on island ecosystems.

Seamans, T.W., J.A. Martin, and **J.L. Belant**. 2013. Tactile and Auditory Repellents to Reduce Wildlife Hazards To Aircraft. Pages 37–46 in DeVault, T.L., B.F. Blackwell, and J.L. Belant, editors. *Wildlife in Airport Environments: Preventing Animal-Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, Maryland, USA.

Sharma, H.P., **J.L. Belant**, and J. Swenson. 2014. Effects of Livestock Grazing On Red Panda Habitat Use. *Oryx* 48:in press.

Wegan, M.T., D.R. Etter, **J.L. Belant**, D.E. Beyer, Jr., N.J. Svoboda, and T.R. Petroelje. 2014. A Cable Neck-Restraint to Live-Capture Coyotes. *Wildlife Society Bulletin* 37:in press.

Extension/Outreach Presentations

Hamrick, W.W. 2013. Wild Pig Damage and Control. Marshall County Forestry & Cattleman Association. 5/9/2013. Holly Springs, MS.

Hamrick, W.W. 2013. Wild Pig Damage and Control. Lincoln County Forestry Association Field Day. 5/18/2013. Brookhaven, MS.

Hamrick, W.W. 2013. Wild Pig Damage and Control. Yalobusha County Forestry & Cattlemen's Association. 9/12/2013. Coffeetown, MS.

Hamrick, W.W. 2013. Wild Pig Damage and Control. Natural Resources Enterprises Landowner Workshop. 10/16/2013. Belzoni, MS.



publications, presentations & media

(center authors in bold)

Invited Extension/Outreach Presentations

Leopold, B.D. 2013. Wildlife Management - Wild Hogs.

Mississippi Farm Bureau Federation-Young Farmers and Ranchers. Mississippi State, MS. August 16, 2013. (Invited)

Leopold, B.D. 2013. The National Wild Hog Issue: Impacts to our Big Game and Their Hunters. Boone and Crockett Club Annual Meeting. Denver, CO. December 6, 2013. Plenary. (Invited)

Leopold, B.D. 2013. Trends in sightings of puma in Oktibeha County- Implications. Pleasant Acres Homeowners Association. Starkville, MS. March, 2013.

Strickland, B.K., W.W. Hamrick, J. Tegt. 2013. Wild Hog Management in the U.S.: An Integrated Approach. International Union of Game Biologists. 8/27/2013 - 8/29/2013. Brussels, BELGIUM.

Strickland, B.K., W.W. Hamrick, J. Tegt, K. Godwin, S.

Alls, R. Flynt, J. Cumbee. 2013. Wild Pig Control in MS: An Update. Mississippi Chapter of The Wildlife Society. 9/26/2013 - 9/27/2013. Jackson, MS.

Strickland, B.K. 2013. White-tailed Deer and Wild Hog Damage Management. MAFES Supervisory Conference. 7/16/2013 - 7/17/2013. Pearl, MS.

Strickland, B.K. 2013. The Problem with Pigs. Meeting of the MDWFP Commissioners. 7/17/2013 - 7/17/2013. Jackson, MS.

Strickland, B.K. 2013. Wild Hog Management. Mississippi Chapter of the American Society of Agronomy. 11/14/2013 - 11/14/2013. Grenada, MS.

Strickland, B.K. 2013. Wild Hog Management. Oktibbeha County Cattlemen's Association and NRCS Meeting. 9/5/2012 - 9/5/2013. Starkville, MS.



An average of 20 wildlife strikes were reported daily from 2004-2008.

(photo by Adam Samu, Airportal Hungary)

- Strickland, B.K.** 2013. Wild Hog History, Ecology, Biology & Management. Anderson Tully Annual Hunting Lease Meeting. 8/15/2013 - 8/15/2013. Vicksburg, MS.
- Strickland, B.K.** 2013. The Problem with Pigs. Mississippi Resource Conservation & Development. 6/7/2013 - 6/7/2013. Tupelo, MS.
- Strickland, B.K.** 2013. Wild Pig Management Seminar. 1/10/2013 - 1/10/2013. Quitman, MS.
- Strickland, B.K.** 2013. Soybean-Deer Damage Research Update. Mississippi Soybean Promotion Board Annual Meeting with Researchers. 8/6/2013 - 8/6/2013. West Point, MS.
- Strickland, B.K.** 2013. The Problem with Pigs. Mississippi Farm Bureau Pork Commodity Board. 6/21/2013 - 6/21/2013. Starkville, MS.
- Strickland, B.K.** 2013. Wild Hog Management. Mississippi Integrated Pest Management Workshop. 2/12/2013 - 2/12/2013. Raymond, MS.

Research Presentations

- Conkling, T.J., J.A. Martin, **J.L. Belant**, and T.L. DeVault. 2013. Factors Affecting Animal Non-Identification Rates in Aviation Strike Reporting. International Conference on Ecology and Transportation, Scottsdale, AZ.
- Conkling, T.J., J.A. Martin, **J.L. Belant**, and T.L. DeVault. 2013. Factors Affecting Bird Non-Identification Rates in Aviation Strike Reporting. American Ornithologists' Union/Cooper Ornithological Society Annual Conference, Chicago, IL.
- DeVault, T.L. T.W. Seamans, J.A. Schmidt, **J.L. Belant**, B.F. Blackwell, N. Mooers, L.A. Tyson, and L. van Pelt. 2013. Bird Use of Solar Photovoltaic Installations at U.S. Airports: Implications for Airport Safety. 15th Wildlife Damage Management Conference, Clemson, SC.



publications, presentations & media

(center authors in bold)

DeVault, T.L., **J.L. Belant**, B.F. Blackwell, M.J. Begier, and B.E. Washburn. 2013. U.S. Department of Defense, Environmental Security Technology Certification Program, Arlington, VA.

DeVault, T.L., M.J. Begier, **J.L. Belant**, B.F. Blackwell, R.A. Dolbeer, J.A. Martin, T.W. Seamans, and B.E. Washburn. 2013. Rethinking Airport Land-Cover Paradigms: Agriculture, Grass, and Wildlife Hazards. 22nd National Aviation Environmental Management Conference, Cleveland, OH.

González-Maya, J.F., **J.L. Belant**, H. Zarza-Villanueva, and R. Tavares. 2013. ¿ La Perturbación Humana Reduce la Idoneidad de Un Corredor Para el Jaguar y el Puma? Evidencia del Corredor Biológico Osa, Costa Rica. XVII Congreso Sociedad Mesoamericana para la Biología y la Conservación. La Habana, Cuba.

Petroelje, T.R., **J.L. Belant**, D.E. Beyer, Jr., and N.J. Svoboda. 2013. Facultative Scavenging of Cattle by Wolves. Wolf Steward's Conference, Silver City, MI.

Petroelje, T.R., **J.L. Belant**, D.E. Beyer, Jr., and N.J. Svoboda. 2013. Facultative Scavenging of Cattle by Wolves. International Wolf Symposium, Duluth, MN.

Simek, S.L., **J.L. Belant**, Z. Fan, B.W. Young, **B.D. Leopold**, J.P. Fleming, and B.W. Waller. 2013. Source Populations and Roads Influence American Black Bear Recolonization. 22nd International Association for Bear Research and Management, Provo, UT.

Workshops

Avery, J.L., **B.K. Strickland**, **J. Tegt**, **B.D. Leopold**. 2013. Workshop. Bird Depredation on Catfish Farms: Summit and Roundtable. 4/3/2013. Stoneville, MS.



Deer-vehicle collisions cost over \$4 billion in vehicle damage annually.

Hamrick, W.W. and B.K. Strickland. 2013. Workshop. Trapping Wild Pigs. 2013 MS Chapter of the Wildlife Society. 9/28/2013. Jackson, MS.

Hamrick, W.W., B.K. Strickland, K. Godwin, S. Alls, R. Flynt, J. Cumbee. 2013. Workshop. Wild Hog Damage Management. 5/23/2013. Natchez, MS.

Hamrick, W.W., B.K. Strickland, K. Godwin, S. Alls, R. Flynt, J. Cumbee. 2013. Workshop. Wild Hog Damage Management. 9/18/2013. Meridian, MS.

Hamrick, W.W., B.K. Strickland, K. Godwin, S. Alls, R. Flynt, J. Cumbee. 2013. Workshop. Wild Hog Damage Management. 12/5/2013. Pontotoc, MS.

Hamrick W. W. 2013. In-service Training for Mississippi Department of Wildlife, Fisheries and Parks Conservation Officers. Wild Pig Biology, Ecology & Management in MS. May 27, June 3, 10 2013. Participants: 120. Offerings: 3.

Strickland, B.K. 2013. In-service Training for Mississippi Department of Wildlife, Fisheries and Parks Conservation Officers. Wild Pig Biology, Ecology & Management in MS. May 6, 13, 20, 2013. Participants: 120. Offerings: 3.

Strickland, B.K., W.W. Hamrick, D. Elmore. 2013. Workshop. Wild Hog Management Workshop. 2/15/13. Pawhuska, OK.

Tegt, J.L., S.W. Jack. 2013. Workshop. Wildlife Immobilization and Disease: 2013 MS Chapter of the Wildlife Society. 9/28/2013. Participants: 25. Jackson, MS.

Web

Hamrick, W.W, B.K. Strickland, J. Tegt. 2013. www.wildpiginfo.com

Tegt, J., W.W. Hamrick, B.K. Strickland, J.L. Belant, B.D. Leopold. 2013. www.humanwildlifeconflicts.msstate.edu



publications, presentations & media

(center authors in bold)

Radio

Strickland, B. K. MPB Radio - Creature Comforts - Wild Hogs - Aug. 22.

Strickland, B. K. MSU Extension Service Farm and Family Radio. Wild Hog Management - Jul. 29.

Strickland, B. K. WTVA TV - Wild Hog Management - Jul. 24.

Tegt, J. 2013. MSU Extension Service Farm and Family Radio.

- What you should know about bats - Jan. 8.
- Controlling mice in the winter - Jan. 14.
- Controlling and removing skunk - Jan. 22.
- History and management of the beaver-Jan. 29.
- Black bird management and behavior-Feb. 5.
- Facts and Myths about Coyotes in MS-Feb. 12.
- New Center for Resolving HWC-Mar. 19.
- Factors affecting the catfish industry-Mar. 25.
- Starkville Science Club-Apr. 1.

Tegt, J. 2013. MSU Extension Service Farm & Family Radio.

- Managing moles, voles, and shrews-Apr. 8.
- Avoiding wildlife vehicle collisions-May 6.
- Managing opossum in the garden-May14.
- Managing squirrels on your property-May 21.
- Controlling fire ants-May 27.
- Controlling and managing cottontail rabbits-Jun. 3.
- Snake activity in spring/summer-Jun. 17.
- Boater safety and education-Jul. 1.
- Safely enjoying the outdoors-Jul. 8.
- Alligators in MS-Jul. 15.
- Armadillo damage control-Aug. 5.
- Tree stand placement and safety-Aug. 27.
- Humanely managing feral cats-Oct. 1.

Tegt, J. 2013. WCBI TV Out of the Woods.

- Wild Pigs-Jan. 30.
- Starkville Science Club-Feb. 15.
- Bobcats and Coyotes-Jul. 15.



personnel



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Assistant to the Executive Director and Director



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Jerry Belant
Director



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MISSISSIPPI STATE UNIVERSITYTM

Center for Resolving Human-Wildlife Conflicts

a research and outreach program of the

MSU Extension Service

and the

MSU Forest and Wildlife Research Center

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