



February 21-23, 2018 Tulsa, OK Hyatt Regency Hotel

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Hosted by the Oklahoma Chapters of The Wildlife Society, American Fisheries Society, Society for Range Management, Invasive Plant Council, and Prescribed Fire Council.

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Natural Resource Ecology & Management

Bollenbach Endowed Chair in Wildlife Management Groendyke Endowed Chair for Wildlife Conservation

"THE EARTH IS WHAT WE ALL HAVE IN COMMON." — Wendell Berry



Meeting Schedule

Wednesday	2/21	
9:00am - 10:00am	OKNRC Registration	2nd Floor Foyer
10:00am - 12:00pm	Seminar A/V Setup	Rooms C & D
1:30pm - 4:30pm	Prescribed Burning During the Growing Season	Room C
1:30pm - 5:00pm	Communications for Natural Resource Professionals	Room D
4:00pm - 6:00pm	A/V Set-up for Presenters	2nd Floor Foyer
4:00pm - 6:30pm	OKNRC Registration	2nd Floor Foyer
6:30pm - 9:00pm	Student/Professional Mixer	2nd Floor Foyer
Thursday	2/22	
7:30am - 11:40am	Registration	2nd Floor Foyer
8:00am - 5:00pm	Poster Session	2nd Floor Foyer
8:30am - 11:05am	Plenary Session	Room D
11:05am - 11:20am	Break	
11:20am - 12:20pm	Fisheries	Room B
11:20am - 12:20pm	Habitat Restoration	Room C
11:20am - 12:20pm	Invertebrates	Room D

l 2:20pm - 2:00pm	Lunch	
2:00pm - 3:00pm	Birds	Room B
2:00pm - 3:00pm	Invertebrates	Room C
2:00pm - 3:00pm	Fisheries	Room D
2:00pm - 5:00pm	Registration	2nd Floor Foyer
3:00pm - 3:20pm	Break	
3:20pm - 5:00pm	Birds	Room A
3:20pm - 5:00pm	Fisheries	Room B
3:20pm - 5:00pm	Forest Dynamics	Room C
3:20pm - 5:00pm	Mammals	Room D
5:00pm - 6:00pm	Business Meetings	TWS - Room A AFS - Room B SRM - Room D
6:00pm	Mixer	Tulsa Ballroom
6:30pm - 9:00pm	Dinner, Awards, and Auction	Tulsa Ballroom
Friday	2/23	
7:30am - 9:00am	Registration	2nd Floor Foyer
7:30am - 9:00am 8:00am - 9:40am		
	Registration Amphibians and	Foyer
8:00am - 9:40am	Registration Amphibians and Reptiles	Foyer Room C
8:00am - 9:40am 8:00am - 9:20am	Registration Amphibians and Reptiles Conservation Programs	Foyer Room C Room D
8:00am - 9:40am 8:00am - 9:20am 8:00am - 10:00am	Registration Amphibians and Reptiles Conservation Programs Invasive Species	Foyer Room C Room D Room A
8:00am - 9:40am 8:00am - 9:20am 8:00am - 10:00am 8:00am - 10:00am	Registration Amphibians and Reptiles Conservation Programs Invasive Species Fisheries	Foyer Room C Room D Room A
8:00am - 9:40am 8:00am - 9:20am 8:00am - 10:00am 8:00am - 10:00am 10:00am - 10:20am	Registration Amphibians and Reptiles Conservation Programs Invasive Species Fisheries Break	Foyer Room C Room D Room A Room B
8:00am - 9:40am 8:00am - 9:20am 8:00am - 10:00am 8:00am - 10:00am 10:00am - 10:20am 10:20am - 11:00am	Registration Amphibians and Reptiles Conservation Programs Invasive Species Fisheries Break Invasive Species	Foyer Room C Room D Room A Room B Room A

Plenary Speakers

Michael Sorice: Designing Programs to Increase Engagement of Private Landowners

Michael G. Sorice is an associate professor in the Department of Forest Resources & Environmental Conservation at Virginia Tech University. He received his Ph.D. from Texas A&M University in the Department of Wildlife & Fisheries Sciences and his M.S. from Texas A&M in the Department of Recreation, Parks, & Tourism Sciences. Dr. Sorice and his graduate students have focused their research on human behavior as it relates to environmental stewardship, with an emphasis on the role of natural resource users in protecting biodiversity and imperiled ecosystems. Dr. Sorice investigates research topics including outdoor recreation, nature-based tourism, ecosystem-based management, endangered species, and private lands conservations. Dr. Sorice has authored or co-authored 32 publications on many of these topics.

Mike Fuhr: The Challenges to Collaboration in Conservation

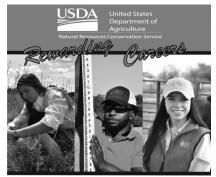
Mike Fuhr is the Oklahoma State Director of The Nature Conservancy. Mr. Fuhr has a B.S. in biology and a M.S. in fisheries ecology. His career with The Nature Conservancy began in 1998 as a land protection specialist with the Arkansas Chapter. In 2005, Mr. Fuhr accepted his current as state director. Through Mr. Fuhr's leadership and collaborative efforts, Oklahoma TNC now protects and conserves nearly 100,000 acres among 13 preserves in the state. Mr. Fuhr has also represented TNC state boards and commissions such as the Oklahoma Scenic Rivers Commission and Oklahoma Water Resources Research Institute Advisory Board. Beyond his efforts as State Director, Mr. Fuhr is also well known for his talent in nature photography.

Christian Hagen: The 3-T's of Lesser Prairie-Chicken Conservation: And Where to Go From Here?

Christian Hagen is an Associate Professor-Senior Researcher at Oregon State University and has served as Science Advisor to NRCS Lesser Prairie-Chicken Initiative since 2011. Dr. Hagen received his Ph.D. in Systematics and Ecology from Kansas State University and his M.S. from University of Manitoba. Dr. Hagen has been involved in the research, monitoring, and management of prairie grouse since mid-1990s. His expertise focuses on the demography and habitat use of lesser prairiechickens and greater sage-grouse, and in particular, how these species respond to landscape-scale management and conservation. Dr. Hagen has also served as the Sage Grouse Coordinator to the Oregon Department of Fish and Wildlife from 2004–2011. He has published 40 peer-reviewed articles in scholarly journals and regularly presents at national meetings.

Ashley Tanner: Meatballs, Black Panthers, and Eminent Domain: Lessons in Natural Resource Communication

Ashley Tanner recently joined WEST, Inc. (Environmental and Statistical Consultants) as the Deputy Science Coordinator for the Middle Rio Grande Endangered Species Collaborative Program in the Albuquerque, New Mexico office. She grew up in Pennsylvania, where she developed a love for the outdoors on the Allegheny River. She received her bachelors in Animal Biotechnology and Conservation from Delaware Valley University in Doylestown, Pennsylvania. While pursuing her bachelor's she spent her summers working as a natural resource instructor in Vermont, as a river management intern in Alaska, and as a white-tailed deer technician in Tennessee. She continued her education at the University of Tennessee, where she studied northern bobwhite habitat selection on a reclaimed surface mine and received her Master's degree in Wildlife Science. She then moved to Oklahoma to pursue her Ph.D. in Rangeland Ecology and Management. Her dissertation focused on the effects of anthropogenic development on lesser prairie-chicken habitat selection and movement.



•Agronomy • Range Management • Engineering • Soil Science • Environmental Conservation nrcscareers@ok.usda.gov



Oral Presentations

Wednesday

2/21

	Room C				
	Moderator: Russell Stevens, Noble Research Institute				
Session	Prescribed Burning During the Growing Season Late autumn through late winter is often regarded as the "burn season" by many prescribed fire practitioners because warm season herbaceous vegetation is dormant. However, herbaceous vegetation will also burn during the growing season. Fire prac- titioners willing to burn during the growing season effectively extend their "burn season" to year-round. Typically, in the south- ern Great Plains there are many more days available for burning during the growing season, an important consideration for those wishing to accomplish several burns in one year. Presenters in this workshop will discuss the application and effects of growing season prescribed fire and it's benefits to land managers.				
1:30	Mechanics of burning during the growing season K. Gee				
1:50	Plant community response to growing season burns J. Weir				
2:10	Forb diversity and season of burn L. Goodman				
2:30	Effects of growing season burns on forage quality of browse plants: A case study W. Moseley				
2:50	Break				
3:05	Effects of growing season burning on soil health J. Goodwin				
3:25	Landowner testimonial C. Coffey				
3:45	Landowner testimonial C. Bunch				
4:05	Q&A panel discussion				
4:30	Adjourn				

Wednesday

2/21

	Room D Instructors: Jason Schooley, Cliff Sager, Daniel Shoup
Session	Communications for Natural Resource Professionals As natural resource professionals, we must effectively communi- cate in a number of arenas (i.e., talking with stakeholders, discuss- ing proposed management changes with other managers, present- ing research project results in journals or scientific meetings, etc.). Unfortunately, most of us were educated with a primary focus on scientific learning and only minimal training on effective communi- cation was covered. This work shop will focus on techniques that improve effective speaking, PowerPoint presentations, and writing with a focus on the broad range of audiences with which natural resource professionals often need to communicate. The goal is to provide very practical "do's and don'ts" that can improve the clarity and persuasiveness of our communications.
1:30	
5:00	Adjourn
Thursday	2/22
	Room D Moderators: Craig Davis and Sam Fuhlendorf, OSU
Collaborativ	ession lensions in Natural Resources for ve Conservation by Groendyke and Bollenbach Endowed Chairs*
8:30	Welcome and Introduction Craig Davis
8:35	Human Dimensions in Natural Resources Michael Sorice
9:35	The Challenges to Collaboration in Conservation Mike Fuhr
10:05	The 3-T's of Lesser Prairie-Chicken Conservation: And Where to Go From Here? Christian Hagen

10:35 Meatballs, Black Panthers, and Eminent Domain: Lessons in Natural Resource Communication Ashley Tanner

II:05 Break				
Session	Session Fisheries Hab Rest		Invertebrates	
Room	В	С	D	
Moderator	Sherylann Densow ODWC	Rob Cook Noble Research Institute	Shannon Brewer	
11:20	An in-depth look at crappie population dynamics in an aging Ozark reservoir B. Johnston, R. Ryswyk, C. Sager, R, Snow, D Shoup	The impact of traditional manage- ment techniques on a dominant native wetland plant K. Golden*, C. Davis, S. Fuhlendorf	Examination of carcass preferenc- es by the endan- gered American burying beetle G. McNichols*, A. Smith	
11:40	Integrating results from a BACI analysis and multi-lake diet study to evaluate the utility of stunted crappie control by introduced saugeye D. Shoup, D. Carl, R. Ryswyk, C. Sager, R. Snow	Mapping annual forest cover in sub-humid and semi-arid regions through analysis of Landsat and PALSAR imagery Y. Qin, X. Xiao, J. Wang, J. Dong, K. Ewing, B. Hoagland	Seasonal and lon- gitudinal variability of benthic mac- roinvertebrates in a southeastern Oklahoma cold water tailrace M. Reed*, W. Hoback, J. Long	
12:00	Direct consumptive effects of saugeye on white crappie population growth and size structure D. Carl**, R. Ryswyk, C. Sager, R. Snow	A desktop protocol for identifying and marketing potential wetland restoration opportunities D. Dvorett, B. Tramell, S. Gallaway	A new technique for determining crayfish population demographics J. Mouser*, J. Glover, S. Brewer	

12:20

Lunch

Session	Birds	Invertebrates	Fisheries
Room	В	С	D
Moderator	Russ Horton, ODWC	Mark Howery, ODWC	Matthew Skoog, ODWC
2:00	Influence of avian life history strategies on building collision risk: Lessons for Oklahoma from a continental study J. Elmore*, B. Cosentino, S. Hager, S. Loss	The potential effects of wind energy development on terrestrial invertebrates S. Elzay*, L. Tronstad, M. Dillon	Taking the guess- work out of pad- dlefish restoration stocking: Methods for analyzing and predicting resto- ration stocking success A. Geik, J. Schooley
2:20	Wildlife in urban areas: nocturnal lights affect bird-window collisions C. Riding*, S. Loss	Comparing the effects of broad-spectrum and narrow-spectrum insecticides on bees in winter canola fields A. Knoch*, K. Baum	A multi-scale eval- uation of darter community habitat associations to aid conservation of species of conser- vation concern C. Holley, J. Long, M. Papes
2:40	Grassland birds exhibit variable responses to energy development in a grassland managed for heterogeneity D. Londe*, S. Fuhlendorf, D. Elmore, C. Davis	Local- and landscape- scale factors influenc- ing tick populations and the role of birds in carrying ticks across an urbanization gradient in Oklahoma City M. Roselli*, S. Loss, B. Noden	Multi-scale influences of habitat on age-0 smallmouth bass abundance in the Ozark Highlands A. Miller**, S. Brewer

3:00

Break



Session	Birds	Fisheries	Forest Dynamics	Mammals
Room	А	В	С	D
Moderator	Mike Porter, Noble Research Institute	Curtis Tackett, ODWC	Brandon Reavis, NRCS	Will Moseley, Noble Research Institute
3:20	Songbird responses to drought conditions with temporal scale considerations S. Cady*, T. O'Connell	Population dy- namics of blue suckers in Red River, Oklahoma J. Dyer**, S. Brewer	What do stake- holders think about better management of Cross-Timbers? M. Starr*, O. Joshi	Spatial evalua- tion of activity patterns along the Grand Lake shoreline by gray bats (Myotis grisescens) and northern long-eared Bats (Myotis septentri- ondlis) K. Martin, C. Zimmerman
3:40	Red-cockaded woodpecker habitat selection in the Ouachita Mountains of Oklahoma and Arkansas M. Fullerton*, J. Walters, R. Will, S. Loss	Longitudinal trends in prey use and con- dition of age-0 shovelnose sturgeon in an altered river system A. Gonzalez, J. Long	Detecting historic distur- bance regimes in an oak-hick- ory forest at Hottonia Bottoms Nature Preserve J. Cheek*, C. King	Demographic trends of a reestablished American black bear (Ursus americanus) population under harvest pressures in southeastern Oklahoma E. Perez*, S. Fairbanks, M. Pfander
4:00	Post-fledging movements of bald eagle from nests in Oklahoma R. Horton, J. Cooper,T. Grubb, M. Braham, T. Miller, T. Katzner	Seining detec- tion probability of small-bodied fishes in Great Plains sand-bed rivers R. Mollenhauer, S. Brewer	Effects of man- agement and human activity on space use and movement of wild turkey A. Rakowski*, D. Elmore, C. Davis, S. Fuhlendorf	Seasonal vari- ations in site occupancy and detectability of mesocarni- vores, estimated using system- atically baited camera traps in south-central Oklahoma D. Premathilake* V. Jackson

4:20	Northern saw- whet owl (Ae- golius acadicus) fall migratory movements in Oklahoma A. Ramirez*, M. Revels	Determining the temperature selection pat- terns of native stream fishes in an Ozark stream S. Wolf**, R. Mollenhauer, S. Fuhlendorf, S. Brewer	Point of no return: Experi- mental deter- mination of the lethal hydraulic threshold during drought for loblolly pine W. Hammond*, K.Yu, L. Wilson, R. Will, W. Anderegg, H. Adams	Resource selec- tion and home range analysis of the Ameri- can black bear in the Ozark mountains of east-central Oklahoma E. Lustig ^{**} , S. Fairbanks, S. Lyda
4:40		A genetic status assessment of the Neosho smallmouth bass: Hybridiza- tion, diversity, and population structure A. Taylor, J. Long, M. Schwemm, S. Brewer	The role of stand density in tree mortal- ity of Quercus associated with water stress and <i>Biscogniauxia</i> <i>atropunctata</i> A. Freeman, H. Adams	Dispersal of small mammals among islands of the delta island complex in the Sequoyah National Wildlife Refuge - Vian, OK J. Green, J. Currie, M. Shaughnessy Jr.
5:00 - 6:00	Busi	iness Meetings (se	e page 4 for locati	ons)
6:00	Mixer (Tulsa Ballroom)			
6:30	Dinner, Awards and Auction (Tulsa Ballroom)			



Friday	2/2	23		
Session	Invasive Species	Fisheries	Amphibians and Reptiles	Conservation Programs
Room	А	В	С	D
Moderator	Karen Hickman, OSU	Eric Suttles, ODWC	Allan Janus, ODWC	Kenneth Gee, Oaks and Prairie Joint Venture
8:00	Wild pig (Sus scrofa) impacts in pecan operations K. Boyer****, S. Fairbanks, S. Webb, J. Gaskamp, C. Rohla	Relationships between hydrol- ogy and year- class strength and growth of freshwater drum (Aplodi- notus grunniens) from lotic and lentic ecosystems J. Dattilo, S. Brewer, D. Shoup	Assessment of seasonal varia- tion in amphib- ian infectious diseases in cen- tral Oklahoma S. Smith, J. Watters, C. Siler	The state of the sportsman: Status and trends of Oklahoma's hunters, anglers and wildlife- viewers C. Jager
8:20	The effect of cattle digestion and rumination on Sericea lespedeza seed germination N. Craun***, E. Duell, C. Sher- rill, C. Haviland, R. Reuter, L. Goodman	Status of lotic fish commu- nities in two drainages with an emphasis on SGCN, sport fish, and invasive species A. Rodger, T. Starks, D. King, M. Skoog	Results of a statewide assessment of amphibian in- fectious disease on Oklahoma public lands J. Watters, C. Siler	Increasing rec- reational access: The Oklahoma Land Access Program J. Tibbits, K. Joyner, H. Lockard

8:40	Lespedeza cuneata versus native legumes: Implications for ecosystem services J. Kaplan***, K. Baum	Assessing temporal shifts in lotic fish community structure in the upper Red River basin, Oklahoma T. Starks, A. Rodger, D. King, M. Skoog	Sequoyah Na- tional Wildlife Refuge - Vian,	Habitat resto- ration synergy: Oaks And Prairies Joint Venture efforts aided By USDA Regional Con- servation Part- nership Program In Oklahoma And Texas G. Miller, J. Gio- como, K. Gee, M. Griffin, H. Davis, S. Riley
9:00	Invasive species as gateway ecol- ogy: A personal case study J. Tuck***, L. Castle	The effects of turbidity on habitat use by bluegill under the threat of predation by largemouth bass S. Molse, D. Shoup	Statewide Action Plan to Save the Monarchs K. Hawk, R. Moranz	Reservoir fisheries habitat restoration is too big a job for any one agency to tackle: Partnering and the friends of reservoirs role in its promotion J. Boxrucker
9:20	Reductions in soil organic carbon and mi- crobial biomass by non-native invasive grass, <i>Bothriochloa</i> <i>bladhii</i> , may in- hibit restoration success L. Wilson***, G. Wilson, K. Hickman	Habitat use and movements of shovelnose sturgeon in the Arkansas River, Oklahoma J. Johnston	Monarch butter- fly habitat: What is it? How do we manage it? What don't we know? R. Moranz, M. Sams	

OKLAHOMA BIOLOGICAL SURVEY



10:00		Break	
Session	Invasive Species	Fisheries	Conservation Programs
Room	A	В	D
Moderator	Karen Hickman, OSU	Matt Mauck, ODWC	Larry Wiemer, ODWC
10:20	Status of aquatic inva- sive plants in Oklaho- ma's lakes:Year two of a four year survey P. Crawford	Using soil tempera- ture to predict water temperature S. O'Donnell	The Center for Wildlife Forensic Science and Con- servation Studies at the University of central Oklaho- ma: An interdisci- plinary approach to collaborations in natural resource research and practice C. King, W. Lord
10:40	Dynamics of Juniperus virginiana encroach- ment in the Cross Timbers forest of north-central Oklahoma R. Will, D. Hoff, C. Zou, N. Lillie	sibility, sustainability, usage, angler opin- ion and alternative options of the winter trout fishery at Lake	Stormwater managers protect Oklahoma's natural resources J. Hill

11:00	OKIPC Business Meeting	Evaluation of the usage, feasibility, sus- tainability and angler opinion of a seasonal winter trout fishery in southeast Oklahoma at Robbers Cave State Park J. Hollie, D. Bogner, D. Groom	Urban watershed characterization B. Lewis
11:20	OKIPC Business Meeting	Angler participa- tion and opinions at two Close to Home Fishing Program sites in the Oklahoma City metropolis. A review of creel survey and trail camera data K.Thomas	Low impact devel- opment – incor- porating green infrastructure S.VanLoo
11:40	OKIPC Business Meeting		Announcing the Tar Creek Trustee Council - Programmatic Restoration Plan and Environmental Assessment S. Dunn
12.00		میں دار ۸	o. D dilli

12:00

Adjourn





Poster Presentations

Thursday

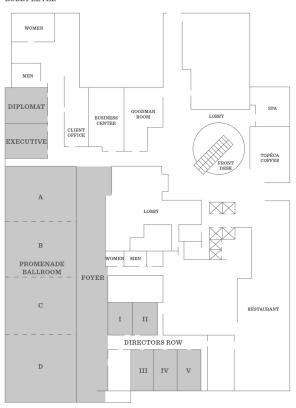
2/22

Second Floor Foyer			
Author(s)	Title		
A. Ciarlante, R. Loraamm	Wind energy and wildlife management with a focus on prairie chickens		
C. Meek, R. Will, A. Mag- gard, D. Wilson, J. Vogel	Effects of throughfall reduction and fertilization on the growth of mid rotation loblolly pine stands in south- eastern Oklahoma		
F. Ramirez Saenz, J. Vadjunec, T. Fagin	Drought and gender vulnerability in Cimarron County, OK		
K. Khand, S. Taghvaeian, L. Hasssan-Esfahani	Mapping annual riparian water use based on the single-satellite-scene approach		
L. Wilson, W. Hammond, K. Yu, R. Will, W. Anderegg, H. Adams	Point of no return: Non-structural carbohydrates at the lethal hydraulic threshold of loblolly pine		
M. Griffin, H. Davis, J. Giocomo, K. Gee, S. Riley, T. O'Connell	Monitoring grassland bird decline for strategic conservation:The Oaks and Prairies Joint Venture		
R. Farriester	Mycological survey of Boehler Seeps, OK		
K. Branham, S. Fairbanks, V. Jackson, S.Alvarez-Briglie	Establishing a Reliable Population Survey for Bobcats in the State of Oklahoma		

*Students competing for the TWS Student Presentation Award **Students competing for the AFS Student Presentation Award ***Students competing for the OKIPC Student Presentation Award

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SECOND FLOOR LOBBY LEVEL





2018 OKNRC Planning Committee

Steven Smith Prescribed Fire Council

Priscilla Crawford Invasive Plant Council

Kristen Gillman The Wildlife Society

Craig Davis The Wildlife Society

Ken Cunningham American Fisheries Society

Matt Mauck

American Fisheries Society

Josh Richardson The Wildlife Society

Blayr Gourley Society for Range Management

Colin Walden Society for Range Management

Brandon Reavis Society for Range Management

P. J. Martin Society for Range Management

Oklahoma State Chapter of the National Wild Turkey Federation



When the National Wild Turkey Federation was founded in 1973, there were about 1.5 million wild turkeys in North America. After decades of work, that number hit an historic high of almost 7 million turkeys. To succeed, the NWTF stood behind science-based conservation and hunters' rights. Thanks to the efforts of dedicated volunteers, professional staff and committed partners, the NWTF has facilitated the investment of 5488 million in wildlife conservation and the preservation of North America's hunting heritage. The NWTF has improved more than 17 million acres of wildlife habitat and introduce 100,000 people to the outdoors each year. The NWTF Save the Habitat. Save the Hunt. Initiative is a charge that mobilizes science, fundraising and devoted volunters to raise \$12 billion to conserve and enhance more than 4 million acres of essential wildlife habitat, recruit at least 1.5 million hunters and open access to \$00,000 acres for hunting. The WWTF is well on its way to meet or exceed these goals. For more information, wist NWTF.org.