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HOSTED BY

**Nebraska Midwest Fish & Wildlife
Conference Foundation**



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WELCOME TO NEBRASKA!

Good Life. Great Opportunity.

The Nebraska Game and Parks Commission, the University of Nebraska-Lincoln, and the Nebraska Cooperative Fish & Wildlife Research Unit welcome you to Lincoln for the **77th Midwest Fish and Wildlife Conference**. Our conference theme, ***Private Landscapes, Public Responsibilities***, reflects the intimate connectivity between the natural resources we are charged to conserve and the private lands upon which most of them occur in the Midwest. We hope that this conference will highlight new trends and challenges, as well as convey new approaches and opportunities to the management and conservation of these natural resources and further stimulate participants to meet the natural resource challenges facing us all.

We have developed an exemplary slate of Plenary and Ignite session speakers that will set the stage for the conference. We have nearly 300 oral presentations, 9 Symposia, 8 workshops, and over 100 posters that will provide important information for conference attendees. It is our hope that you will hear many useful ideas during our program sessions and have profitable interactions with your peers, both of which will help you address your ongoing resource issues back home!

We are glad that you choose to be a part of the 77th Midwest Fish and Wildlife Conference. Welcome to Lincoln, Nebraska!



MARK PORATH

Conference Chair

Aquatic Habitat Program Manager

Nebraska Game and Parks Commission

Fisheries Division



RICHARD HOLLAND

Program Co-Chair

Assistant Division Administrator

Nebraska Game and Parks Commission

Fisheries Division



LARKIN POWELL

Program Co-Chair

Professor, School of Natural Resources

University of Nebraska-Lincoln

ACKNOWLEDGMENTS

77TH MIDWEST FISH & WILDLIFE CONFERENCE COMMITTEES

Please look for the host staff who will be wearing bright yellow lanyards.
They are here to answer any questions and help make your conference experience great.

STEERING COMMITTEE	
MARK PORATH Nebraska Game & Parks Commission, Conference Chair	LARKIN POWELL University of Nebraska-Lincoln School of Natural Resources
TIM McCOY Nebraska Game & Parks Commission	RICHARD HOLLAND Nebraska Game & Parks Commission
JOHN CARROLL University of Nebraska-Lincoln School of Natural Resources	ALICIA HARDIN Nebraska Game & Parks Commission
CRAIG ALLEN USGS Cooperative Research Units	KEVIN POPE USGS Cooperative Research Units
PROGRAM COMMITTEE	
PROGRAM CO-CHAIR Richard Holland, Nebraska Game & Parks Commission	PROGRAM CO-CHAIR Larkin Powell, University of Nebraska-Lincoln School of Natural Resources
PLENARY CO-CHAIRS Craig Allen, USGS Cooperative Research Units Karie Decker, Nebraska Game & Parks Commission	SYMPOSIA SELECTION CO-CHAIRS Mark Pegg, University of Nebraska-Lincoln School of Natural Resources; TJ Fontaine, USGS Cooperative Research Units
IGNITE SESSION Larkin Powell, University of Nebraska-Lincoln School of Natural Resources	CONTRIBUTED PAPER/ POSTER SELECTION CO-CHAIRS Richard Holland, Nebraska Game & Parks Commission; Larkin Powell, University of Nebraska-Lincoln School of Natural Resources
LOCAL ARRANGEMENTS	
ARRANGEMENTS CO-CHAIR Kevin Pope, USGS Cooperative Research Units	ARRANGEMENTS CO-CHAIR Alicia Hardin, Nebraska Game & Parks Commission
STUDENT EVENTS Chris Chizinski and Drew Tyre, University of Nebraska-Lincoln School of Natural Resources	HOSPITALITY Scott Wessel, Brad Eifert, and Tom Welstead, Nebraska Game & Parks Commission
SECURITY/TRANSPORTATION Craig Stover, Nebraska Game & Parks Commission	RAFFLE/AUCTION FUNDRAISING Laurel Badura, USFWS; Mike Archer, Nebraska Department of Environmental Quality; Jenny Prenosil, Pheasants Forever
TRADESHOW Jeff Hoffman, Nebraska Game & Parks Commission	AUDIO-VISUAL Toni Knust and Nathan Bereuter, Nebraska Game & Parks Commission
POSTER DISPLAYS Tony Barada, Nebraska Game & Parks Commission	LOCAL FLAVOR Lindsey Chizinski, Nebraska Game & Parks Commission
MEDIA & RELATIONS Christy Rasmussen, Jane Gustafson, Nebraska Game & Parks Commission; Shawna Richter-Ryerson, University of Nebraska-Lincoln School of Natural Resources	REGISTRATION Donna Waller and Leslie Hershberger, Nebraska Game & Parks Commission

GENERAL CONFERENCE INFORMATION

REGISTRATION & INFORMATION DESK

The Conference Registration Desk is located in the **Atrium** on the Lower Level and is your main source of conference information. Stop here for conference materials, check out the Message/Job Board for posted messages, schedule changes and job postings; and get information or assistance with conference functions. Hours of operation: *Sunday 7:00 AM - 7:00 PM, Monday 7:00 AM - 6:00 PM, Tuesday 7:00 AM - 6:00 PM, Wednesday 7:00 AM - 11:00 AM.*

EXHIBITORS

Exhibits will be on display in the **Lancaster Ballroom and Foyer** on the Lower Level. Exhibit Hall Hours: *Monday 7:00 AM - 5:00 PM, Tuesday 7:00 AM - 9:00 PM (Tradeshow & Poster Social, see details next page), Wednesday 7:00 AM - 10:20 AM.*

SPEAKER PREPARATION/PRESENTATION LOADING ROOM

ATTENTION PRESENTERS! The Speaker Preparation Room is **Boca Raton**, located on the Lobby Level. All presenters **MUST** arrive and check-in here to upload their presentation loading at least 24 hours before scheduled presentation time. You can also use this room to review your presentation. Refer to Conference Schedule for hours of operation.

PASSPORT VENTURE & BEST OF SHOW

Visit participating Venture Booths and get your Passport Venture Card stamped. Be sure to cast your vote for the “Best of Show” Exhibitor Contest. Select your favorite booth based on the following: overall visual appearance, products, effective messaging, and staff interaction/customer service. Drop your stamped Passport Venture Card off at the conference registration desk by 3:30 PM on Tuesday. Enter to win prizes! The drawings will take place at Tuesday evening’s Trade Show & Poster Social.

STUDENT RIBBON

In their registration packets, students will receive a colored ribbon to attach to their name tag. All meeting registrants are encouraged to engage students in conversations and professional activities in order to facilitate the networking process.

CELL PHONE ETIQUETTE

Please be considerate of presenters and turn your phones to vibrate or “do not disturb” mode while in sessions. THANK YOU!

REFRESHMENTS & MEALS

The Full Conference Registration and Student Registration fee includes access to the following social events and breaks: Welcome Reception on Sunday night; Student/Professional Mixer on Monday night; Trade Show & Poster Social on Tuesday night; Continental Breakfast Monday, Tuesday and Wednesday; and refreshment breaks daily. Lunches and Monday dinner will be on your own. A list of nearby lunch options is available in your welcome bag. Come see us for suggestions! Also see “Social Events” on next page for additional details.

LOCAL PARKING & TRANSPORTATION

One complimentary parking pass per guestroom will be provided for attendees staying at the host hotel; this pass can be used in the attached parking garage. For those staying elsewhere or with more than one vehicle per guestroom, the following parking garages are available (rates posted at each garage entrance): Cornhusker Square Garage (attached to Cornhusker) and Carriage Park Garage (attached by skywalk to the Cornhusker Square Garage). Both garages have a max daily price of \$11.25.

For those without a vehicle, there are a number of local transportation options. Uber and Lyft are both available in Lincoln. There is also a local bus service called StarTran; the #55 line, called the Star Shuttle, serves both the Marriott Cornhusker and the Courtyard Marriott, as well as the popular Haymarket district (stops may be up to one block away from your destination). The bus runs every 15 minutes from 6:15 AM to 8:45 PM M-F and the cost is \$0.25. For additional information on local parking garage locations or the Star Shuttle route, please visit the Travel Logistics page of the conference website, www.midwestfw.org.

SOCIAL EVENTS

WELCOME TO NEBRASKA SUPER BOWL PARTY

Sunday, February 5 • 5:00 PM - 10:00 PM • Grand Ballroom D/E/F

Welcome to Lincoln, Nebraska! Start off the conference by joining colleagues at the Welcome Reception and Super Bowl Party! Show your team spirit by wearing your favorite team or alma mater's jersey and enjoying "tailgate" style hors d'oeuvres and complimentary keg beer (while supplies last). A cash bar will also be available. The NFL Super Bowl Broadcast will be shown on a big screen for all to enjoy. The fun-filled evening is the perfect way to jump start a week of networking, presentations, workshops, social events, and more!

WILD JOBS CAFÉ

Monday, February 6 & Tuesday, February 7 • Renaissance Room

Students – Be sure to stop by the Wild Jobs Café on Monday (anytime between 1:00 PM – 4:00 PM) and Tuesday (8:00 AM - 4:00 PM). Interact with potential employers, meet students and professionals within your area of interest, and get expert advice on interviewing and resume writing among other topics. Come often and stay as long as you'd like. Ongoing through the day on Monday and Tuesday, members of the Wild Jobs Cafe Subcommittee will be available for one-on-one discussions. Professionals – Be sure to stop by and share your expertise as well as job or graduate school opportunities!

MONDAY EVENING

Explore downtown Lincoln on Monday evening and experience a wide variety of restaurants in the Historic Haymarket District. The Haymarket is 7 blocks or 0.4 miles, a short walk or ride from the Cornhusker. Maps and local area information will be available at the Conference Registration Desk if you have questions or would like recommendations from the host team on where to dine. A shuttle will loop between the Cornhusker to the Haymarket from 6:00 - 10:00 PM.

STUDENT/PROFESSIONAL MIXER

Monday, February 6 • 6:30 PM - 7:30 PM • Renaissance Room

Come and join us for light hors d'oeuvres and conversation! This informal and casual event will provide a unique opportunity for students to meet, ask questions, and network with many fish and wildlife professionals from around the region. Professionals will be grouped by interest and employment type in a small room setting where students will meet professionals in a roundtable type rotation.

TRADE SHOW & POSTER SOCIAL

Tuesday, February 7 • 6:00 PM - 9:00 PM • Lancaster Ballroom and Foyer

Visit with exhibitors and authors of contributed posters. Don't miss out on the NEAFS/NETWS Chapter raffle! Win a muzzle loader or Orvis fly rod and many more natural resource prizes! Light hors d'oeuvres and keg beer (while supplies last), as well as a cash bar.

RESEARCH-IN-PROGRESS STUDENT POSTERS

Tuesday, February 7 • 6:00 PM - 9:00 PM • Olive Branch Room

A Student Research-in-Progress Poster session will be held in conjunction with the Poster Social, and will feature submissions from undergraduate, M.S., and Ph.D. students including: research that is in progress, or is a proposed research project (with a focus on study design), results from completed undergraduate research projects, or student chapter class or group research project. Attendees are strongly encouraged to visit with these students and provide feedback on their research. See complete listings of all posters on pages 33-41.

SCHEDULE AT-A-GLANCE

PLEASE NOTE: The conference schedule is available as a mobile app at sched.org which allows you to search within the schedule, and filter the schedule to show sessions occurring on a certain date or within a track.

Sunday, February 5

7:00 AM – 7:00 PM	Conference Registration Desk Open	Lower Atrium
8:00 AM – 12:00 PM	Workshop: Introduction to Data Basin and the Midwest Grassland Conservation Area	Olive Branch
8:00 AM – 1:00 PM	Workshop: Introduction to Fisheries Data Analysis with R	Yankee Hill I
8:00 AM – 5:00 PM	Workshop: Beginning Your Professional Journey {For Students!} <i>Sponsored by: U.S. Fish & Wildlife Service</i>	Garrat
9:00 AM – 4:00 PM	Workshop: Integrating Weather and Climate Information Into Management Decisions	Grand Ballroom B/C
9:00 AM – 4:00 PM	Workshop: Midwest Fish and Wildlife Leadership Series	Yankee Hill II
12:00 PM – 6:00 PM	Exhibitor Set-up	Lancaster Ballroom
12:00 PM – 6:00 PM	Speaker Ready Room {All presenters MUST arrive and check-in here to upload their presentation at least 24 hours before scheduled presentation time. You can also use this room to review your presentation.}	Boca Raton
1:00 PM – 5:00 PM	Workshop: Essentials of Survey Research on Hunters, Anglers, Trappers and Non-Consumptive Wildlife Enthusiasts	Olive Branch
2:30 PM – 4:30 PM	AFS NCD Walleye, Centrarchid, and Esocid Technical Committee Meeting	Hawthorne
3:00 PM – 4:30 PM	AFS NCD Ictalurid Technical Committee Meeting	Yankee Hill III
3:30 PM – 4:30 PM	AFS NCD Rivers and Streams Technical Committee Meeting	Arbor II
4:30 PM – 5:30 PM	AFS NCD Executive Committee Meeting	Yankee Hill III
5:00 PM – 10:00 PM	☆ Featured Event! WELCOME TO NEBRASKA SUPER BOWL PARTY <i>Sponsored by: Nebraska Game & Parks Commission, Nebraska Cooperative Fish & Wildlife Research Unit and University of Nebraska-Lincoln</i>	Grand Ballroom D/E/F

Monday, February 6

7:00 AM – 8:00 AM	Continental Breakfast with Exhibitors	Lancaster Ballroom
7:00 AM – 6:00 PM	Conference Registration Desk Open	Lower Atrium
7:00 AM – 6:00 PM	Speaker Ready Room	Boca Raton
8:00 AM – 12:00 PM	Plenary Session, Awards Presentation & Ignite Session	Grand Ballroom
10:00 AM – 10:20 AM	Refreshment Break with Exhibitors	Lancaster Ballroom

SCHEDULE AT-A-GLANCE

12:00 PM – 1:00 PM	AFS NCD Past-Presidents Luncheon (Invitation Only)	<i>Offsite: Yia Yia's Pizza Restaurant</i>
12:00 PM - 1:00 PM	Annual Meeting of the Reservoir Technical Committee	<i>Offsite: Yia Yia's Pizza Restaurant</i>
12:00 PM – 1:20 PM	Lunch Break on own	
12:00 PM – 3:00 PM	Nebraska Chapter of the Wildlife Society Annual Business Meeting	<i>Yankee Hill III</i>
1:00 PM – 4:00 PM	Wild Jobs Café	<i>Renaissance</i>
1:00 PM – 5:00 PM	Poster Set-up	<i>Lancaster Ballroom</i>
1:20 PM – 3:00 PM	Concurrent Technical Sessions and Symposia	<i>See grid on page 12 for overview</i>
3:00 PM – 3:20 PM	Refreshment Break with Exhibitors	<i>Lancaster Ballroom</i>
3:20 PM – 5:00 PM	Concurrent Technical Sessions and Symposia	<i>See grid on page 12 for overview</i>
5:00 PM – 6:30 PM	AFS NCD Business Meeting	<i>Arbor I/II</i>
5:00 PM – 6:30 PM	Annual Meeting of the North Central Section of the Wildlife Society	<i>Garrat</i>
6:30 PM – 7:30 PM	Student/Professional Mixer Come and join us for light hors d'oeuvres and conversation! The mixer will provide a unique opportunity for students to meet, ask questions, and closely network with many fish and wildlife professionals from around the region.	<i>Renaissance</i>
6:00 PM – 10:00 PM	Evening on Own Meet up with friends and colleagues and take time to explore downtown Lincoln and the Historic Haymarket District.	<i>Shuttle loops to and from hotel 6:00 - 10:00 PM</i>
7:00 PM – 9:00 PM	University of Wisconsin Friends and Alumni Reception	<i>Yankee Hill I/II</i>
7:00 PM – 10:00 PM	Nebraska Chapter of The Wildlife Society Social & Awards Ceremony	<i>Yankee Hill III</i>

Tuesday, February 7

7:00 AM – 6:00 PM	Conference Registration Desk Open	<i>Lower Atrium</i>
7:00 AM – 6:00 PM	Speaker Ready Room	<i>Boca Raton</i>
7:00 AM – 8:00 AM	Continental Breakfast with Exhibitors	<i>Lancaster Ballroom</i>
8:00 AM – 10:00 AM	Concurrent Technical Sessions and Symposia	<i>See grid on page 12 for overview</i>
8:00 AM – 4:00 PM	Wild Jobs Café	<i>Renaissance</i>
8:00 AM – 5:00 PM	Workshop: Great Plains Native Fish Conservation Areas Network	<i>Grand Ballroom F</i>
10:00 AM – 10:20 AM	Refreshment Break with Exhibitors	<i>Lancaster Ballroom</i>

SCHEDULE AT-A-GLANCE

10:20 AM – 12:00 PM	Concurrent Technical Sessions	See grid on page 12 for overview
12:00 PM – 1:20 PM	Lunch Break on own	
1:20 PM – 3:00 PM	Concurrent Technical Sessions and Symposia	See grid on page 12 for overview
3:00 PM – 3:20 PM	Refreshment Break with Exhibitors	Lancaster Ballroom
3:20 PM – 4:40 PM	Joint CESU Annual Meeting	Yankee Hill III
3:20 PM – 5:00 PM	Concurrent Technical Sessions and Symposia	See grid on page 12 for overview
5:00 PM – 6:00 PM	American Fisheries Society Nebraska Chapter Business Meeting	Grand Ballroom B
5:00 PM - 6:00 PM	Wildlife Acoustics Product Workshop Learn firsthand how to use the SM4, a programmable, weatherproof recorder capable of capturing months of acoustic data. RSVP at sales2017@wildlifeacoustics.com.	Garrat
5:00 PM – 7:00 PM	Playa Wetland Ecology Symposium Reception (Invitation Only)	Ivanhoe
5:30 PM – 7:00 PM	Michigan State University Fisheries & Wildlife Alumni and Friends Social	Renaissance
6:00 PM – 9:00 PM	Trade Show & Poster Social Dedicated time to visit with exhibitors and authors of contributed posters. Light hors d' oeuvres and complimentary beer (while supplies last) as well as a cash bar. <i>Sponsored by: National Shooting Sports Foundation and Bass Pro Shops</i>	Lancaster Ballroom & Olive Branch

Wednesday, February 8

7:00 AM – 8:00 AM	Continental Breakfast with Exhibitors	Lancaster Ballroom
7:00 AM – 11:00 AM	Conference Registration Desk Open	Lower Atrium
7:00 AM – 9:00 AM	Speaker Ready Room	Boca Raton
8:00 AM – 10:00 AM	Concurrent Technical Sessions and Symposia	See grid on page 12 for overview
10:00 AM – 10:20 AM	Refreshment Break with Exhibitors	Lancaster Ballroom
10:20 AM – 12:00 PM	Concurrent Technical Sessions and Symposia	See grid on page 12 for overview
10:20 AM – 1:00 PM	Exhibitor Teardown	Lancaster Ballroom
12:00 PM	Conference Adjourns	

PLENARY SESSION

PRIVATE LANDSCAPES, PUBLIC RESPONSIBILITIES

MONDAY, FEBRUARY 6 • 8:00 AM - 12:00 PM • GRAND BALLROOM

PLENARY SCHEDULE

8:00 AM - 8:15 AM	Welcome and Opening Remarks
8:15 AM - 8:50 AM	WHY WE NEED PUBLIC-PRIVATE COLLABORATIVES <i>John Organ, Ph.D., Chief, USGS Cooperative Fish and Wildlife Research Units</i>
8:50 AM - 9:25 AM	PEERING INTO THE FUTURE OF FISHERIES AND POSITIONING OURSELVES FOR SUCCESS <i>Doug Austen, Ph.D., Executive Director, American Fisheries Society</i>
9:25 AM - 10:00 AM	THE IMPORTANCE OF PUBLIC-PRIVATE PARTNERSHIPS FOR THE FUTURE OF CONSERVATION <i>Ken Williams, Ph.D., Executive Director, The Wildlife Society</i>
10:00 AM - 10:20 AM	Break
10:20 AM - 11:00 AM	Awards Presentation
11:00 AM - 12:00 PM	Ignite Session

WHY WE NEED PUBLIC-PRIVATE COLLABORATIVES

John F. Organ, Ph.D.

John is the Chief of the USGS Cooperative Fish and Wildlife Research Units. He was Chief of Wildlife and Sport Fish Restoration for the Northeast Region of the U.S. Fish and Wildlife Service from 2005 to 2014, and previously worked in the FWS's Ecological Services and National Wildlife Refuge programs. He is also an Adjunct Associate Professor of Wildlife Conservation at the University of Massachusetts, Amherst, Michigan State University, and Andres Bello University in Santiago, Chile. He is a Certified Wildlife Biologist and Past President and Fellow of The Wildlife Society. He is also a Professional Member of the Boone and Crockett Club and a Senior Specialist in the Fulbright Scholar Program. He serves on the Board of the National Conservation Leadership Institute and is the USGS representative to the interagency Wilderness Policy Council and ex-officio to the Wildlife and Hunting Heritage Conservation Council.



PEERING INTO THE FUTURE OF FISHERIES AND POSITIONING OURSELVES FOR SUCCESS

Douglas Austen, Ph.D.

Doug Austen has been Executive Director since 2013, but has been involved with AFS since the early 1980s as an undergraduate student at South Dakota State University. He served as president of the Illinois Chapter and North Central Division, wrote articles for several AFS journals and books, and also served as an associate editor for the North American Journal of Fisheries Management. Prior to AFS, Doug was the U.S. Fish and Wildlife Service national coordinator for Landscape Conservation Cooperatives, executive director of the Pennsylvania Fish and Boat Commission, and worked for 10 years each with the Illinois Department of Natural Resources and the Illinois Natural History Survey.



THE IMPORTANCE OF PUBLIC-PRIVATE PARTNERSHIPS FOR THE FUTURE OF CONSERVATION

Byron Kenneth Williams, Ph.D.

Ken is CEO of The Wildlife Society. He came to the Society from the U.S. Geological Survey, where he was co-Director of the Science and Decisions Center and Chief of the Cooperative Research Units. Previous positions include Executive Director of North American Waterfowl and Wetlands Office in the U.S. Fish and Wildlife Service, Leader of the Vermont Cooperative Fish and Wildlife Research Unit at the University of Vermont, and Chief of the Office of Migratory Bird Management, U.S. Fish and Wildlife Service. He has advanced degrees in both mathematics and statistics and a Ph.D. in natural resources ecology/management from Colorado State University. Dr. Williams has been deeply involved for many years in developing frameworks for the integration of natural resources science and management.



AWARDS PRESENTATION

10:20 AM - 11:00 AM

THE WILDLIFE SOCIETY AWARDS

Presented by: Chris Newbold, President, North Central Section of The Wildlife Society

- **Outstanding Wildlife Student Awards**
One undergraduate and one graduate student recognized for academic achievement, professional experience, and activities in The Wildlife Society.
- **Student Chapter of the Year Award**
An exemplary student chapter recognized for its contributions to The Wildlife Society's mission and goals.
- **Professional Award of Merit**
The North Central Section's most prestigious award. Recognizing outstanding professional accomplishments in wildlife conservation and leadership over a period of years in any area of wildlife work.

NORTH CENTRAL DIVISION - AMERICAN FISHERIES SOCIETY AWARDS

Presented by: Sandy Clark-Kolaks, President, North Central Division of the American Fisheries Society

- **Outstanding Chapter (Small & Large):** Two awards (small chapter, large chapter) will be given to the chapters that have carried out the most active programs of enhancing professionalism and fisheries science.
- **Best Chapter Communications:** One award will be given to the chapter that has developed the most efficient, useful, and attractive newsletter and website to disseminate information to its members.
- **Outstanding Student Subunit:** One award will be given to the North Central Division student subunit that has carried out the most active program in developing interest among undergraduate and graduate students in fisheries science and fulfilling the mission of the American Fisheries Society.
- **Meritorious Service:** This award recognizes extraordinary service to the American Fisheries Society (Chapter, Division, Section, or Parent Society level) by a North Central Division member
- **Recognition of Joan Duffy Award:** One award is given to a student from each North Central Division Chapter for travel assistance to the Midwest Fish & Wildlife Conference.

JANICE LEE FENSKE MEMORIAL AWARD

Presented by: Jim Schneider, Michigan State University

The Janice Lee Fenske Memorial Award was created in 2005 to recognize undergraduate and graduate students for their achievements in the field of fisheries or wildlife management. Each year, up to 25 Fenske Memorial Award finalists are selected based on their enthusiasm to protect fisheries and wildlife resources through management activities, selflessness and motivation to teach others, interest in professional involvement, integrity, positive attitude, and compassion. The outstanding students will be announced during this award ceremony.

IGNITE SESSION “Enlighten Us, But Make it Quick.”

11:00 AM - 12:00 PM

Back by popular demand! The Midwest Fish and Wildlife Conference is proud to present the 2nd annual Ignite Session as part of the Plenary Session on Monday, February 6th. Using 5-minute presentations with no more than 20 timed slides, our speakers will engage the audience on issues regarding the future of fisheries and wildlife conservation in the Midwest. We have selected speakers who can speak to personal, political, economic, policy, agency, and private landowner perspectives. Come join the conversation! Experience the passion of our speakers! Consider the future!

☆ **Shelly Kelly**, *Program Director, Sandhills Task Force*

☆ **Jennifer Terry**, *Environmental Advocacy Leader, Des Moines Water Works*

☆ **Mark Humpert**, *Director of Conservation Initiatives, Association of Fish and Wildlife Agencies*

☆ **Stanley Temple**, *Beers-Bascom Professor Emeritus in Conservation, University of Wisconsin*

☆ **Jessica Shoemaker**, *University of Nebraska Law School*



*Photo courtesy of NEBRASKAland Magazine/
Nebraska Game and Parks Commission*

TECHNICAL SESSIONS & SYMPOSIA GRID

Monday 1:20 PM - 5:00 PM

Yankee Hill I/II	Arbor I/II	Hawthorne	Grand Ballroom A	Grand Ballroom B	Grand Ballroom C	Grand Ballroom D	Grand Ballroom E	Grand Ballroom F
[S1] SPECIAL SYMPOSIUM: Leveraging What Works: Midwestern Reservoir Management and Assessment Strategies	[S2] SPECIAL SYMPOSIUM: Restoring Heritage and Expanding Horizon: Midwestern Agroecology and the Conservation of Grassland Birds	Wildlife Conservation of Mammals	[S3] SPECIAL SYMPOSIUM: Ecology of the Missouri National Recreational River	Upland Game Birds	Wetlands and Water Quality	Climate Change	[S4] SPECIAL SYMPOSIUM: Sustaining America's Diverse Fish and Wildlife Resources	Streams

Tuesday 8:00 AM - 12:00 PM

Yankee Hill I/II	Arbor I/II	Hawthorne	Grand Ballroom A	Grand Ballroom B	Grand Ballroom C	Grand Ballroom D	Grand Ballroom E	Grand Ballroom F
[S5] SPECIAL SYMPOSIUM: Playa Wetland Ecology	[S6] SPECIAL SYMPOSIUM: Impact of Prescribed and Wild Fires on the Great Plains		[S7] SPECIAL SYMPOSIUM: Uncommon Techniques with Predators and Prey	GENERAL FISHERIES: Age and Growth GENERAL FISHERIES: Population Dynamics	Missouri River and Platte River	Waterfowl	HUMAN DIMENSIONS: Fish	WORKSHOP: Great Plains Native Fish Conservation Areas Network

Tuesday 1:20 PM - 5:00 PM

Yankee Hill I/II	Arbor I/II	Hawthorne	Grand Ballroom A	Grand Ballroom B	Grand Ballroom C	Grand Ballroom D	Grand Ballroom E	Grand Ballroom F
[S5] Symposium continued Playa Wetland Ecology	Reptiles and Amphibians Wildlife Populations	Conservation and Grasslands Pollinators	[S8] SPECIAL SYMPOSIUM: Fate of Freshwater Mussels	GENERAL FISHERIES: Miscellaneous	Mississippi River and Others	Technical Approaches to Conservation	HUMAN DIMENSIONS: Wildlife	WORKSHOP: Great Plains Native Fish Conservation Areas Network

Wednesday 8:00 AM - 12:00 PM

Yankee Hill I/II	Arbor I/II	Hawthorne	Grand Ballroom A	Grand Ballroom B	Grand Ballroom C	Grand Ballroom D	Grand Ballroom E	Grand Ballroom F
	Bats	Wildlife Predators	Great Lakes	Grassland Birds	Ungulates	Acipencidae	[S9] SPECIAL SYMPOSIUM: Landscape Conservation Science and Management	Aquatic Invasive Species

The full schedule of Technical Sessions follows on pages 13-32. Sessions are organized by day and time. The presenting author is the first name listed or is indicated with an asterisk*. Full abstracts are located on the conference website. Check the conference registration desk onsite for last minute cancellations and changes to the technical schedule or visit www.midwestfw.org. REMINDER: The conference schedule is available on sched.org which allows you to search within the schedule.

TECHNICAL SESSIONS & SYMPOSIA - Monday

MONDAY TECHNICAL SESSIONS

1:20 PM - 5:00 PM

SPECIAL SYMPOSIUM [S1]

Leveraging What Works: Midwestern Reservoir Management and Assessment Strategies

Yankee Hill I/II

Moderator: Joseph Conroy, OHDNR & Rebecca Krogman, IADNR

- 1:20 PM **A Career in Reservoir Fisheries Management and the Need for an Increasing Focus on Habitat Restoration.** Jeff Boxrucker, Reservoir Fisheries Habitat Partnership.
- 2:00 PM **Lake Restorations in Iowa: What Happens When You Run out of Low-Hanging Fruit.** Rebecca M. Krogman, Iowa Department of Natural Resources.
- 2:20 PM **Low-dose Rotenone Applications to Improve Recreational Fisheries.** Tony J Barada, Jeff Jackson, Aaron Blank, Jordan Katt – Nebraska Game and Parks Commission.
- 2:40 PM **Examining Exploitation of Walleye in a Midwestern Reservoir Using a Tag Return Study.** Jason C. Doll, Ball State University; Andrew Bueltmann, Indiana Department of Natural Resources; Sandra Clark-Kolaks, Indiana Department of Natural Resources.
- 3:00 PM **BREAK**
- 3:20 PM **Proposed Standardized Sampling Approach for Juvenile Walleye (*Sander vitreus*) and White Bass (*Morone chrysops*) Using Gear- and Season-Specific Catch Rates.** Brett T. Miller, Department of Biology, University of Nebraska at Kearney; Casey W. Schoenebeck, Department of Biology, University of Nebraska at Kearney and Minnesota Department of Natural Resources, Glenwood Area Fisheries Office; Keith D. Koupal, Nebraska Game and Parks Commission, Fisheries Division.
- 3:40 PM **Managing Ohio's Reservoir Sport Fisheries: Lessons Learned from a Standardized Assessment Program.** Joseph D. Conroy, Kevin S. Page, Jeremy J. Pritt, Stephen M. Tyszko, Richard D. Zweifel – Ohio Department of Natural Resources, Division of Wildlife.
- 4:00 PM **A Mark-Recapture and Resampling Approach to Validate Standard Fisheries Assessment Methods.** Stephen M. Tyszko, Matt A. Hangsleben, Richard D. Zweifel, Jeremy J. Pritt, Joseph D. Conroy - Ohio Division of Wildlife.
- 4:20 PM **Using Standardized Data to Evaluate Fishery Regulations in Ohio Reservoirs.** Jeremy Pritt, Richard Zweifel, Joseph Conroy, Kevin Page, Stephen Tyszko – Ohio Division of Wildlife.

SPECIAL SYMPOSIUM [S2]

Restoring Heritage and Expanding Horizon: Midwestern Agroecology and the Conservation of Grassland Birds

Arbor I/II

Moderator: Kelly VanBeek, USFWS

- 1:20 PM **Grassland Bird Conservation and Working Lands: Creating Movement Along Multiple Pathways.** Tom Will, U.S. Fish & Wildlife Service; Kristen Nelson, University of Minnesota.
- 1:40 PM **The Bobolink Conservation Plan: A Model for Multi-Region Conservation Planning.** Kelly R. VanBeek, U.S. Fish & Wildlife Service; Rosalind B. Renfrew, Vermont Center for Ecostudies; Tom C. Will, U.S. Fish & Wildlife Service.
- 2:00 PM **Leveraging Market Forces for Grassland Conservation: Audubon's Conservation Ranching Program.** Brian Trusty, National Audubon Society Central Flyway; Marshall Johnson, Audubon Dakotas.
- 2:20 PM **Utilizing Social Science to Guide Bird Conservation Action on Private Lands.** Ashley Gramza, North American Bird Conservation Initiative Social Science Coordinator, Virginia Tech; Ashley Dayer, Virginia Tech.
- 2:40 PM **Farming for the Soil, Farming for Birds.** Loretta Jaus, Organic Valley dairy farmer, The Land Stewardship Project Board, and Minnesota Institute for Sustainable Agriculture Board; Martin Jaus, Organic Valley dairy farmer.
- 3:00 PM **BREAK**
- 3:20 PM **Bringing Food to the Table: Growing the Culture of Locally Grown in the Midwest.** Kristin Hall, Audubon Minnesota; Tom Will, U.S. Fish & Wildlife Service; Loretta Jaus, Organic Valley dairy farmer.
- 3:40 PM **Integrating Agriculture, Economics and Ecology in Dakota County, Minnesota.** Alan Singer, Dakota County Minnesota Land Conservation Manager.
- 4:00 PM **What Does Coffee Have to Do with Farmland Bird Conservation?** Tom Will, U.S. Fish & Wildlife Service.
- 4:20 PM **Symposium Closing Panel Discussion.**

The presenting author is the first name listed or is indicated with an asterisk.*

TECHNICAL SESSIONS & SYMPOSIA - Monday

Wildlife Conservation of Mammals

Hawthorne

Moderator: Katherine Crawley, NGPC

- 1:20 PM **Influence of Trap Modifications and Environmental Predictors on Capture Success of Southern Flying Squirrels.** Will T. Rechkemmer, Mary E. Scheihing, James S. Zweep, Sean E. Jenkins – Western Illinois University; Robert W. Klaver, U. S. Geological Survey; Shelli A. Dubay, University of Wisconsin-Stevens Point; Christopher N. Jacques, Western Illinois University.
- 1:40 PM **Home Range Use and Survival of Southern Flying Squirrels in Fragmented Landscapes.** Christopher N. Jacques, James S. Zweep, Will T. Rechkemmer, Mary E. Scheihing, Sean E. Jenkins – Western Illinois University; Robert W. Klaver, U. S. Geological Survey
- 2:00 PM **Evaluating Nest Site Selection of Southern Flying Squirrels in West-Central Illinois.** Christopher N. Jacques, James S. Zweep, Sean E. Jenkins - Western Illinois University.
- 2:20 PM **Survival of Gray and Fox Squirrels in Minnesota: A Case Study of the Effects of Hunting.** Ryan G. Tebo, Farmland Wildlife Populations and Research Group, Minnesota Department of Natural Resources.
- 2:40 PM **Dangerous Misperceptions: Eastern Cottontail Survival in an Agroecosystem.** Julia A. Nawrocki, Robert L. Schooley, Michael P. Ward – University of Illinois at Urbana-Champaign.
- 3:00 PM **BREAK**
- 3:20 PM **Twenty Years of Furbearer Trapping Data from the Upper Mississippi River National Wildlife & Fish Refuge.** Brian Stemper, Stephen Winter – U. S. Fish and Wildlife Service.
- 3:40 PM **Plant Diversity Affects Mammal Community Structure in Western North Dakota Grasslands.** Michael J. Shaughnessy Jr., Northeastern State University; Craig Whippo, Dickinson State University.
- 4:00 PM **Factors Correlated with Declining Antler Diameters of Yearling Deer in Michigan.** Gary J. Roloff, Michigan State University; Sean Sultaire, Michigan State University; Brent Rudolph, Michigan Department of Natural Resources; Rebecca Cain, Michigan State University.

The presenting author is the first name listed or is indicated with an asterisk.*

SPECIAL SYMPOSIUM [S3]: Ecology of the Missouri National Recreational River

Grand Ballroom A

Moderator: David Swanson, University of SD

- 1:20 PM **Introduction to the Ecology of the Missouri National Recreational River.** Lisa Yager, National Park Service, Missouri National Recreational River.
- 1:40 PM **Sixty Years of Geomorphic Change and Ecological Restoration Challenges on Two Unchanneled Reaches of the Missouri River.** Caroline M. Elliott, Robert B. Jacobson, Edward Bulliner – U.S. Geological Survey.
- 2:00 PM **Physical Changes in the MNRR 59-Mile District Between 1989 and 2016.** Brian Korman, National Park Service; Gerald Mestl, Nebraska Game and Parks Commission.
- 2:20 PM **Nutrients and Dissolved Oxygen Monitoring in the 59-mile Missouri National Recreational River Below Gavins Point Dam.** Brenda Densmore, Justin Krahulik – U.S Geological Survey.
- 2:40 PM **Habitat Evaluation of a Modeled Reach of the Missouri National Recreational River.** Gerald Mestl, Nebraska Game and Parks Commission; Caroline Elliott, U.S. Geological Survey; Jerrod Hall, Thad Huenemann, Kirk Steffensen – Nebraska Game and Parks Commission.
- 3:00 PM **BREAK**
- 3:20 PM **Contrasting Effects of Fish Predation on Benthic versus Emerging Insects in the MNRR.** Jeff Wesner, Jerry Warmbold – Department of Biology, University of South Dakota.
- 3:40 PM **Trajectories of Decline in Cottonwood Forests Along the Missouri River: Implications for Songbirds.** Mark D. Dixon, University of South Dakota; Christopher L. Merkord, South Dakota State University; David L. Swanson, University of South Dakota; W. Carter Johnson, South Dakota State University; Michael L. Scott, Utah State University.
- 4:00 PM **Bird-Habitat Relationships in Floodplain Forests Along the Middle Missouri River.** Christopher L. Merkord, South Dakota State University; Mark D. Dixon, University of South Dakota; David L. Swanson, University of South Dakota.
- 4:20 PM **Woodland Bird Use of Missouri National Recreational River Riparian and Farmstead Woodlot Habitats for Nesting and Migration.** David Swanson, Missouri River Institute - University of South Dakota.

TECHNICAL SESSIONS & SYMPOSIA - Monday

Upland Game Birds

Grand Ballroom B

Moderator: Mandy Lipinski, UNL

- 1:20 PM **Greater Prairie-Chicken (*Tympanuchus cupido pinnatus*) Boom Chorus Propagation Along a Nebraska Sandhills Wind Energy-Grassland Gradient.** Edward J. Raynor, Cara E. Whalen, Mary Bomberger-Brown, Larkin A. Powell – School of Natural Resources, University of Nebraska-Lincoln.
- 1:40 PM **Prairie Restoration and Translocation to Bolster Greater Prairie-Chicken Populations in Missouri Benefit Both Chickens and Other Species.** Andrew J. Gregory, School of Earth Environment and Society, Bowling Green State University; Thomas Thompson, Missouri Department of Conservation.
- 2:00 PM **Quantifying the Relationship Between Grasslands, Conservation Reserve Program (CRP) Enrollments and Greater Prairie-Chicken Populations (*Tympanuchus cupido pinnatus*) in Minnesota.** Kalysta I. Adkins, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology, University of Minnesota; Charlotte Roy, Minnesota Department of Natural Resources; David E. Andersen, U.S. Geological Survey, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology, University of Minnesota; Robert G. Wright, Minnesota Information Technology Services at Department of Natural Resources.
- 2:20 PM **Space, Place and Ring Necked Pheasant: Hot Spot Analysis of Distribution of Ring Necked Pheasant in Eastern South Dakota.** Sprih Harsh, South Dakota State University; Andrew J Gregory, Bowling Green State University; Travis Runia, South Dakota Game Fish and Parks.
- 2:40 PM **Selection and Demographic Consequences of Conservation Reserve Program Grasslands for Lesser Prairie-Chickens.** Daniel S. Sullins, John Kraft - Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; David A. Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; Brett K. Sandercock, Division of Biology, Kansas State University.
- 3:00 PM **BREAK**
- 3:20 PM **Influence of Raptor Abundance on Female Lesser Prairie-Chicken Habitat Selection.** Chelsea Sink, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; David Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit.

3:40 PM

Factors Influencing Ring-Necked Pheasant (*Phasianus colchicus*) Nest Survival in Southwest Nebraska. Adela C. Annis, U.S. Geological Survey Kansas Cooperative Fish & Wildlife Research Unit; Joseph J. Fontaine, U.S. Geological Survey Nebraska Cooperative Fish & Wildlife Research Unit

4:00 PM

Estimating the Survival of Unmarked Young from Repeated Counts: A Case Study with Ring-necked Pheasants. Timothy P. Lyons, Illinois Natural History Survey, Prairie Research Institute and Department of Natural Resources and Environmental Sciences University of Illinois at Urbana-Champaign; Kirk W. Stodola, Thomas J. Benson – Illinois Natural History Survey, Prairie Research Institute.

4:20 PM

Variations in Annual Ring-necked Pheasant Survival in Southwest Nebraska. Jenny R. Foggia, Nebraska Cooperative Fish and Wildlife Research Unit, University of Nebraska-Lincoln; Joseph J. Fontaine, U.S. Geological Survey Nebraska Cooperative Fish and Wildlife Research Unit, University of Nebraska-Lincoln.

4:40 PM

Fried Chicken: Identifying Areas of Thermal Refugia for Lesser Prairie-Chickens in a Changing Climate. Jonathan Lautenbach, Kansas State University; David Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit; Blake Grisham, Department of Natural Resources, Texas Tech University.

Wetlands and Water Quality

Grand Ballroom C

Moderator: Jeff Jackson, NGPC

1:20 PM

What Lies Beneath? Identifying the Most Efficient Method to Sample Fish and Amphibian Communities in Missouri Wetlands. Julia Guyton, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences; Elisabeth Webb, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences; Craig Paukert, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences; Frank Nelson, Missouri Department of Conservation, Big Rivers/Wetlands Field Station.

1:40 PM

Monitoring and Assessing Minnesota's Water Resources. Benjamin Lundeen, Scott Niemela - Minnesota Pollution Control Agency.

2:00 PM

Septic Seepage in Minnesota Lakes and Its Biological Effects on Resident Sunfish. Les Warren, Heiko Schoenfuss – St. Cloud State University; Chris Higgins, Meaghan Guyader – Colorado School of Mines.

TECHNICAL SESSIONS & SYMPOSIA - Monday

2:20 PM **Reproductive Health of Three Catostomidae Species in a Wastewater Treatment Effluent Impacted River.** Bethany Hoster, Karen Gaines, Eric Bollinger, Anabela Maia, Robert Colombo – Eastern Illinois University.

2:40 PM **Multi-Generational Exposure of Fathead Minnows to a Complex Urban Mixture of Contaminants of Emerging Concern.** Lina Wang, Utku Hasaby, Josh Robinson, Heiko Schoenfuss – St. Cloud State Aquatic Toxicology Laboratory.

3:00 PM **BREAK**

3:20 PM **Pollutants Stress in the Maumee River: Impacted Physiology and Reproduction in Fathead Minnows (*Pimephales promelas*) and Sunfish (*Lepomis spp.*).** Nicholas Cipoletti, Heiko Schoenfuss – St. Cloud State University.

3:40 PM **Quantifying Neonicotinoid Concentrations in Missouri Public Wetlands: The Relationship to Agricultural Land Use.** Kyle Kuechle, Missouri Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Missouri; Elisabeth B. Webb, U.S. Geological Survey Missouri Cooperative Fish and Wildlife Research Unit; Doreen Mengel, Missouri Department of Conservation, Resource Science Division; Anson Main, Missouri Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Missouri.

4:00 PM **Habitat Use and Pesticide Exposure in Northern Leopard Frogs in Conservation Reserve Enhancement Program Wetlands.** Jennifer Swanson, Iowa State University; Clay Pierce, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Research Unit, Iowa State University; Kelly Smalling, U.S. Geological Survey; Mark Vandever, U.S. Geological Survey; Erin Muths, U.S. Geological Survey, Amphibian Research and Monitoring Initiative.

4:20 PM **Factors Influencing Fish Mercury Concentrations Across Iowa Lakes.** Darcy Cashatt, Iowa Department of Natural Resources; Nathan Mills, Michael Weber – Iowa State University; Clay Pierce, Iowa Cooperative Fish and Wildlife Research Unit.

Climate Change

Grand Ballroom D

Moderator: Jeff Lusk, NGPC

1:20 PM **Stream Science to Action: A Decision-Support Tool for Salmonid Thermal Habitat Management Amidst Climate Change.** Andrew K. Carlson, Michigan State University, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife; T. Douglas Beard, Jr., National Climate Change and Wildlife Science Center, U.S. Geological Survey; Dana M. Infante, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife; William W. Taylor, Michigan State University, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife.

1:40 PM **Effects of Climate and Landscape on Water Supply to Beaver Ponds.** Carol A Johnston, South Dakota State University.

2:00 PM **An Analysis of the Interactions Between Weather and Land Use on Gallinaceous Bird Populations Using Historical Data.** Mandy Lipinski, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln; TJ Fontaine, USGS, Nebraska Cooperative Fish & Wildlife Research Unit.

2:20 PM **Combining Weather Data and Climate Projections: A Case Study with Lesser Prairie-Chickens.** Alixandra J. Godar, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; Cody P. Griffin, Emerging Pathogens Institute, University of Florida; Blake A. Grisham, Department of Natural Resources Management, Texas Tech University; David A. Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; Sarah R. Fritts, Department of Natural Resources Management, Texas Tech University; Beth E. Ross, U.S. Geological Survey South Carolina Cooperative Fish and Wildlife Research, Clemson University; Clint W. Boal, U.S. Geological Survey, Texas Cooperative Fish and Wildlife Research Unit, Texas Tech University; Christian A. Hagen, Department of Fisheries and Wildlife, Oregon State University; Michael A. Patten, University of Oklahoma; James C. Pitman, Western Association of Fish and Wildlife Agencies.

TECHNICAL SESSIONS & SYMPOSIA - Monday

2:40 PM **Effects of Climate Change on Groundwater, Surface Water, and Ecosystem Services in the Grand Kankakee River Watershed.** Tamatha A. Patterson, U.S. Geological Survey, Great Lakes Science Center; Alan F. Hamlet, Diogo Bolster, Chun-Mei Chiu, Kyuhyun Byun – Department of Civil & Environmental Engineering and Earth Science, University of Notre Dame; Ralph Grundel, Noel Pavlovic – U.S. Geological Survey, Great Lakes Science Center; Dave Lampe, USGS Kentucky-Indiana Water Science Center; Jessica Hellmann, Institute on the Environment and Department of Ecology, Evolution and Behavior, University of Minnesota.

3:00 PM **BREAK**

3:20 PM **Temporal Dynamics of Large Grazer Space Use in an Experimental Heterogeneous Landscape.** Edward J. Raynor, Anthony Joern – Division of Biology, Kansas State University; Adam Skibbe, Geographical and Sustainability Sciences, University of Iowa; Mark Sowers, Nicholas School of the Environment, Duke University; John M. Briggs, Division of Biology, Kansas State University; Angela N. Laws, Department of Biology, University of Houston; Douglas Goodin, Department of Geography, Kansas State University

3:40 PM **The Structure of Large Mammal Communities Facing Climate Change in Apostle Islands National Lakeshore, USA.** Michael Wheeler, Maximilian Allen, Regan Dohm, Bryn Evans, Emily Iehl, Marcus Mueller, Brittany Peterson, Timothy Van Deelen, Beth Wojcik – University of Wisconsin-Madison; Shawn Crimmins, University of Wisconsin-Stephens Point; Erik Olson, Northland College; Travis Bartnick, Kenneth Pemble, Julie Van Stappen – National Park Service.

4:00 PM **Floodplain Inundation Mapping Under Nonstationary Hydro-Climatic Conditions on the Lower Missouri River to Support Multi-Objective Management of Conservation Lands.** Garth A. Lindner, University of Missouri; Edward A. Bulliner, U.S. Geological Survey, Columbia Environmental Research Center; Kristen Bouska, U.S. Geological Survey, Upper Midwest Environmental Sciences Center; Craig Paukert, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit; Robert B. Jacobson, U.S. Geological Survey, Columbia Environmental Research Center.

SPECIAL SYMPOSIUM [S4]: Sustaining America's Diverse Fish and Wildlife Resources Grand Ballroom E

Moderator: Kristal Stoner, NGPC

1:20 PM **Advancing a 21st Century Funding Model for Fish and Wildlife Conservation.** Mark Humpert, Association of Fish and Wildlife Agencies.

1:40 PM **Engaging Corporations with Natural Resource Conservation.** Margaret O'Gorman, President, Wildlife Habitat Council.

2:20 PM **Federal Agency Perspective.** John F. Organ, Ph.D., CWB®, Chief, Cooperative Fish and Wildlife Research Units, U.S. Geological Survey.

2:40 PM **The Role of State Agencies in Natural Resource Governance and Keys to Success.** Patrick E. Lederle, Michigan Department of Natural Resources; Ann B. Forstchen, Florida Fish and Wildlife Conservation Commission; Daniel J. Decker, Cornell University; Christian A. Smith, Wildlife Management Institute; Darragh Hare, Cornell University.

3:00 PM **BREAK**

3:20 PM **Outdoor Recreation Industry.** Jennifer Mull, CEO of Backwoods Equipment, Inc., and President of the Outdoor Industry Association.

4:00 PM **Blue Ribbon Panel Relevancy/Transformation Working Group.** Steve Williams, President, Wildlife Management Institute.

4:20 PM **Symposium Closing Panel Discussion.** Kristal Stoner, Symposium Organizer; Wildlife Diversity Program Manager, Nebraska Game and Parks Commission; Mark Humpert, Association of Fish and Wildlife Agencies; Margaret O'Gorman, Wildlife Habitat Council; John F. Organ, Ph.D., U.S. Geological Survey; Patrick E. Lederle, Michigan Department of Natural Resources; Ann B. Forstchen, Florida Fish and Wildlife Conservation Commission; Daniel J. Decker, Cornell University; Christian A. Smith, Wildlife Management Institute; Darragh Hare, Cornell University; Jennifer Mull, Backwoods Equipment, Inc., and Outdoor Industry Association; Steve Williams, Wildlife Management Institute.

TECHNICAL SESSIONS & SYMPOSIA - Monday

Streams

Grand Ballroom F

Moderator: Marty Hamel, UNL

- 1:20 PM **Stream Fragmentation and Infrastructure Condition in the Great Plains.** Nathan Sleight, Thomas Neeson – University of Oklahoma Department of Geography and Environmental Sustainability.
- 1:40 PM **Using an Historical Perspective to Inform Conservation Goals for Prairie Streams.** Jeff Kopaska, Iowa Department of Natural Resources; Keith E. Schilling, Iowa Geological Survey, University of Iowa.
- 2:00 PM **Identification and Prioritization of Factors Limiting Reintroduced Plains Topminnow (*Fundulus sciadicus*) Populations in Nebraska Streams.** Joseph D. Thiessen, University of Nebraska Kearney; Keith D. Koupal, Nebraska Game and Parks Commission; Casey W. Schoenebeck Minnesota Department of Natural Resources; Julie J. Shaffer, University of Nebraska Kearney.
- 2:20 PM **Status and Habitat Use of the Topeka Shiner in the Boone River Watershed, Iowa.** Nicholas T. Simpson, Iowa State University; Clay L. Pierce, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Research Unit; Michael J. Weber, Iowa State University; Kevin J. Roe, Iowa State University.
- 2:40 PM **Habitat Associations of Topeka Shiners in Two Basins in Iowa and Minnesota.** Alexander P. Bybel, Kevin J. Roe – Iowa State University, Department of Natural Resource Ecology and Management; Clay L. Pierce, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Research Unit, Iowa State University; Michael J. Weber, Iowa State University, Department of Natural Resource Ecology and Management.

3:00 PM

BREAK

3:20 PM

Application of Off-Channel Mapping Methodology for Identifying and Rating Oxbow Habitats for Federally Endangered Topeka Shiners (*Notropis topeka*). Courtney L. Zambory, Iowa State University Department of Natural Resource Ecology and Management; Harvest Ellis, Iowa Flood Center; Clay L. Pierce, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Research Unit; Kevin J. Roe, Michael J. Weber – Iowa State University Department of Natural Resource Ecology and Management.

3:40 PM

Going Against the Flow: Modeling Coldwater Stream Temperatures from Above and Below. Andrew K. Carlson, Michigan State University, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife; Dana M. Infante, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife; William W. Taylor, Michigan State University, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife.

4:00 PM

Habitat Selection of Brook Trout (*Salvelinus fontinalis*) and Rainbow Trout (*Oncorhynchus mykiss*) in a Lake Michigan Tributary. Mitchell Nisbet, Dr. Daniel Hayes – Michigan State University.

4:20 PM

Assessing Macroinvertebrate Assemblages: Gauging the Importance of Microhabitat in Qualitative Sampling Through the Analysis of Five Commonly Sampled Microhabitat Types in an Effluent Dominated Stream. Samuel J. Gradle, Robert E. Colombo, Charles L. Pederson, and Jeffrey R. Laursen – Eastern Illinois University.

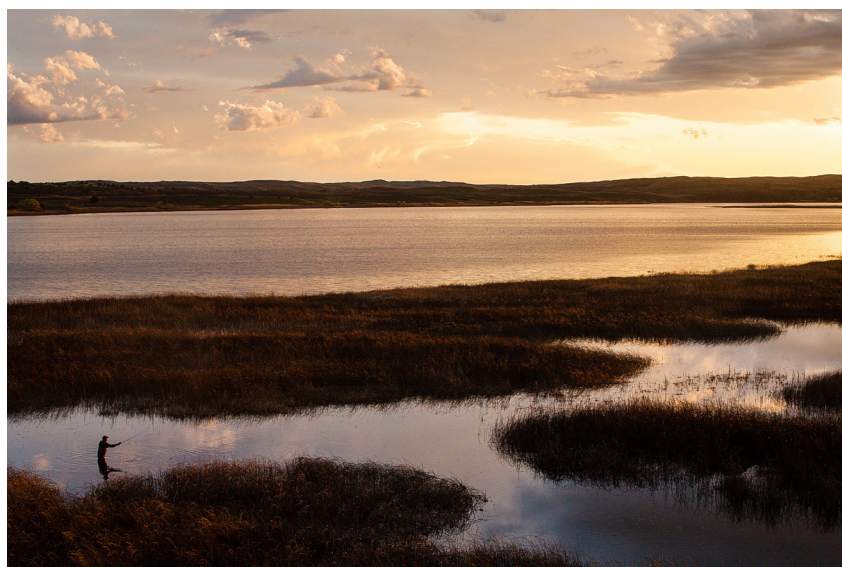


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TECHNICAL SESSIONS & SYMPOSIA - Tuesday

TUESDAY TECHNICAL SESSIONS 8:00 AM - 12:00 PM

SPECIAL SYMPOSIUM [S5]: Playa Wetland Ecology

Yankee Hill I/II

Moderator: Mark Vrtiska, NGPC

- 8:00 AM **Use of Network Analysis to Prioritize Conservation of Playa Wetlands Based on Landscape Connectivity.** David Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; Gene Albanese, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University
- 8:20 AM **How Playa Wetlands Influence Landscape Biodiversity: Small Depressions with Big Benefits.** Willow Malone, Kansas Cooperative Fish and Wildlife Research Unit, Division of Biology, Kansas State University; David A. Haukos, US Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Division of Biology, Kansas State University.
- 8:40 AM **Mapping Wetland Inundation Conditions in Spring Migratory Season for Playa Wetlands in Nebraska.** Zhenghong Tang, Ph.D., Associate Professor, Community and Regional Planning Program, University of Nebraska-Lincoln.
- 9:00 AM **Using a Landscape Design Approach to Develop an Implementation Plan to Conserve Playas.** Anne Bartuszevige, Alex Daniels, Kyle Taylor – Playa Lakes Joint Venture.
- 9:20 AM **Predictions of Future Ephemeral Springtime Waterbird Stopover Habitat Availability Under Global Change.** Daniel R. Uden, Nebraska Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Nebraska-Lincoln; Craig R. Allen, U.S. Geological Survey, Nebraska Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Nebraska-Lincoln; Andrew A. Bishop, Roger Grosse, Christopher F. Jorgensen – Rainwater Basin Joint Venture; Theodore G. LaGrange, Randy G. Stutheit, Mark P. Vrtiska – Nebraska Game and Parks Commission.
- 9:40 AM **BREAK**
- 10:20 AM **Is Food Availability a Limited Resource for Waterfowl During Spring Migration? An Energetic Assessment of Playas in Nebraska's Rainwater Basin.** Travis J Schepker, University of Missouri; Ted LaGrange, Nebraska Game and Parks Commission; Elisabeth Webb, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit.

10:40 AM **Anatid Forage Preferences, Habitat Use and Distribution Patterns During Spring Migration in the Rainwater Basin, Nebraska.** Jeff Drahota, Dustin Casady, Mery Casady – U.S. Fish & Wildlife Service.

11:00 AM **Modeling Nonbreeding Distributions of Wetland Birds in Response to Climate Change.** Gordon C. Reese, Susan K. Skagen – U.S. Geological Survey.

11:20 AM **A Multiscale Approach to Habitat Selection: Implications for Shorebird Conservation in the Southern Great Plains.** Craig A. Davis, Department of Natural Resource Ecology and Management, Oklahoma State University.

11:40 AM **Challenges for Shorebird Habitat Management in an Increasingly Dynamic Climate.** Caitlyn Gillespie, Klamath Bird Observatory; Joseph J. Fontaine, U.S. Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit.

SPECIAL SYMPOSIUM [S6]: Impact of Prescribed and Wild Fires on the Great Plains

Arbor I/II

Moderator: Gerry Steinauer, NGPC

8:00 AM **Patch Burn Grazing Research Conducted in Working Rangelands of Nebraska: Preliminary Results, Ongoing Analyses, and Lessons Learned.** Stephen Winter, U. S. Fish & Wildlife Service; Britt Smith, Texas Tech University; Samuel Fuhlendorf, Oklahoma State University.

8:20 AM **Secretive Marshbird Response to Wetland Plant Management in Prairie Pothole Minnesota.** Nina Hill, University of Minnesota, Minnesota Cooperative Fish and Wildlife Research Unit; Tom Cooper, U.S. Fish and Wildlife Service; Douglas H. Johnson, U.S. Geological Survey (emeritus); David E. Andersen, U.S. Geological Survey, Minnesota Cooperative Fish & Wildlife Research Unit

8:40 AM **Who is the Nebraska Prescribed Fire Council and What Do They Do?.** Alicia Hardin, Nebraska Game and Parks Commission; Scott Stout, Nebraska Prescribed Fire Council; Brian Teeter, Pheasants Forever/Nebraska Game and Parks Commission.

9:00 AM **Loess Canyon Rangeland Alliance.** Scott Stout, Loess Canyon Rangeland Alliance, Vice President & Landowner.

9:20 AM **Long-term Legacy Effects of a Mixed-severity Wildfire in Eastern Ponderosa Pine.** Caleb P. Roberts, Victoria M. Donovan – Department of Agronomy & Horticulture, University of Nebraska-Lincoln; Craig R. Allen, USGS Nebraska Wildlife Cooperative Research Unit; Larkin Powell, School of Natural Resources, University of Nebraska-Lincoln; Carissa Wonkka, Department of Agronomy

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

& Horticulture, University of Nebraska-Lincoln; David G. Angeler, Department of Aquatic Sciences and Assessment, Swedish University of Agricultural Sciences; David Wedin, School of Natural Resources, University of Nebraska-Lincoln; Dirac Twidwell, Department of Agronomy & Horticulture, University of Nebraska-Lincoln.

9:40 AM **A Vanishing Grassland Biome: Consequences and Innovative Solutions.** Dirac Twidwell, University of Nebraska.

10:00 AM **BREAK**

10:20 AM **Changing Wildfire Trajectories and Future Implications for Great Plains Ecosystems.** Victoria Donovan, Carissa Wonkka, Dirac Twidwell – University of Nebraska-Lincoln.

10:40 AM **Thermal Imaging of Fires to Better Understand Fire-Vegetation-Wildlife Interactions.** Christine Bielski, Dirac Twidwell – University of Nebraska-Lincoln.

11:00 AM **Laws Drive Biome-level Transformation of Grassland to Eastern Redcedar Forest.** Carissa L. Wonkka, Dirac Twidwell – University of Nebraska - Lincoln.

11:20 AM **Sandhills Task Force: Facilitating Private/Public Partnerships to Address Eastern Red Cedar Encroachment.** Shelly Kelly, Sandhills Task Force.

SPECIAL SYMPOSIUM [S7]: Uncommon Techniques with Predators and Prey Grand Ballroom A

Moderator: Scott Jackson, USGS

8:00 AM **Introduction to Symposium.** Kevin Keeler, U.S. Geological Survey.

8:20 AM **Factors Affecting Levels of Larval Lake Sturgeon (*Acipenser fulvescens*) Predation by Piscivorous Fishes in the Black River, MI.** Justin Waraniak, Michigan State University Department of Fisheries & Wildlife; Edward Baker, Michigan Department of Natural Resources; Kim Scribner, Michigan State University Department of Fisheries & Wildlife.

8:40 AM **Walleye in the Western Basin: What Diets Reveal About Foodweb Changes After Multiple Species Invasions of Western Lake Erie.** Dana Castle*, U.S. Geological Survey Great Lakes Science Center and University of Toledo, Department of Environmental Sciences; Ed Roseman, U.S. Geological Survey, Great Lakes Science Center; Kevin Keeler, U.S. Geological Survey Great Lakes Science Center and University of Toledo, Department of Environmental Sciences; Carson Prichard, U.S. Geological Survey Great Lakes Science Center and Central Michigan University, Department of Biology; Robert Hunter,

U.S. Geological Survey, Great Lakes Science Center and Michigan State University, Department of Fisheries and Wildlife; Chris Vandergoot, Ohio Department of Natural Resources; Mark Rogers, U.S. Geological Survey, Great Lakes Science Center, Lake Erie Biological Station; Kristen Hebebrand, University of Toledo Department of Environmental Sciences; Brian Schmidt, U.S. Geological Survey, Great Lakes Science Center; Christine Mayer, University of Toledo Department of Environmental Sciences; William Taylor, Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife, Michigan State University.

9:00 AM **An Empirical Test of Quantifying the Diets of Fish with Fatty Acid-Based Models.** Austin Happel, Illinois Natural History Survey; Jeremy Pike, The College at Brockport; Sergiusz Czesny, Illinois Natural History Survey; Jacques Rinchar, The College at Brockport.

9:20 AM **Tackling Tubenose Gobies (*Proterorhinus semilunaris*): Lessons Learned from Diets of the Other Great Lakes Goby.** Kevin Keeler, Cooperative Ecosystems Studies Unit University of Toledo; Jason Fischer, University of Toledo; Jason Ross, U.S. Fish & Wildlife Service; Jason Barnucz, Fisheries & Oceans Canada; Michael Thomas, Michigan Department of Natural Resources; Zachary Fyke, Michigan State University; Tim O'Brien, U.S. Geological Survey-Great Lakes Science Center, Edward Roseman, U.S. Geological Survey-Great Lakes Science Center.

9:40 AM **BREAK**

10:20 AM **Using Stable C and N Isotopes to Characterize Large-scale Spatial and Temporal Variation in the Diets of Lake Michigan Fishes.** Ben Turschak, Harvey Bootsma – University of Wisconsin-Milwaukee, School of Freshwater Sciences.

10:40 AM **Continued Utilization of Diporeia by Benthivores: A Diet Comparison of Lake Huron Deepwater Sculpin, 2003 to 2014.** Dustin A. Bowser, USGS Great Lakes Science Center; Patricia A. Thompson, Division of Forestry and Natural Resources, West Virginia University; Kevin M. Keeler, Cooperative Ecosystems Studies Unit, University of Toledo; Timothy P. O'Brien, Stephen Riley, Ed Roseman – USGS Great Lakes Science Center.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

General Fisheries: Age and Growth

Grand Ballroom B

Moderator: Keith Koupal, NGPC

- 8:00 AM **Population Dynamics and Precision of Age Structures of Black Crappie in North Cross Lake, Manitoba, CA.** McKenzie Hauger, University of Nebraska; Derek Kroeker, Manitoba Conservation; Kevin Pope, U.S. Geological Survey Cooperative Research Unit, University of Nebraska; Mark Pegg, University of Nebraska.
- 8:20 AM **Effect of Elevated Nutrients and Sediments on Growth of Juvenile Black and White Crappies.** David Bogner, University of Illinois; David H. Wahl, Illinois Natural History Survey.
- 8:40 AM **Development of a Standardized Protocol for Use of Fin Rays in Estimating Age of Muskellunge.** Derek P. Crane, Coastal Carolina University; Jeff L. Hansbarger, West Virginia Division of Natural Resources; Michael L. Hawkins, Coastal Carolina University; Dan A. Isermann, USGS, Wisconsin Cooperative Fishery Research Unit; Jeffrey M. Kampa, Wisconsin Department of Natural Resources; Kevin L. Kapuscinski, Lake Superior State University; Jonathan R. Meerbeek, Iowa Department of Natural Resources; Michael P. Rennicke, Timothy D. Simonson – Wisconsin Department of Natural Resources.
- 9:00 AM **Growth Potential and Genetic Diversity of Yellow Perch (*Perca flavescens*) in South Dakota.** Alex J. Rosburg, Department of Natural Resource Management, South Dakota State University; Brian G. Blackwell, South Dakota Game, Fish & Parks; Steven R. Chipps, U.S. Geological Survey, South Dakota State University Cooperative Fisheries Research Unit; Justin A VanDeHey, College of Natural Resources, University of Wisconsin Stevens Point; Wesley A. Larson, U.S. Geological Survey, Wisconsin Cooperative Fisheries Research Unit.
- 9:20 AM **An Evaluation of Channel Catfish X Blue Catfish Hybrids in Two Small Kansas Impoundments.** Ben C. Neely, Sean T. Lynott, Jeff D. Koch – Kansas Department of Wildlife, Parks, and Tourism.
- 9:40 AM **Quantification of Daily Otolith Increments in Young of Year Asian Carp.** Emily A. Szott, James T. Lamer – Department of Biological Sciences, Western Illinois University; James H. Larson, Brent Knights, Jon Vallazza – Upper Midwest Environmental Sciences Center, U.S. Geological Survey; Levi Solomon, Andrew Casper – Illinois River Biological Station, Illinois Natural History Survey; Rich Pendleton, Hudson River Estuary Program/Cornell University, New York State Department of Environmental Conservation; Jun Wang, Shanghai Ocean University.
- 10:00 AM **BREAK**

General Fisheries: Population Dynamics

Grand Ballroom B

Moderator: Keith Koupal, NGPC

- 10:20 AM **Development of a Fish-Based IBI for Lakes in Eastern South Dakota.** Daniel Nelson, Melissa Wuellner, Nels Troelstrup – South Dakota State University; Brian Blackwell, South Dakota Department of Game, Fish and Parks.
- 10:40 AM **Population Dynamics of Flathead Catfish in Lake Mitchell, South Dakota.** David Lucchesi, South Dakota Game, Fish & Parks; Matthew Wagner, Mississippi Department of Wildlife, Fisheries, & Parks; Tanner Stevens, Minnesota Department of Natural Resources; Brian Graeb, South Dakota State University.
- 11:00 AM **Effects of Competition, Predation, and Environment on Recruitment of a Pelagic Forage Fish, Lake Herring *Coregonus Artedi*, in a Missouri River Reservoir.** Nicholas Kludt, South Dakota State University; Mark Finsel, South Dakota Game, Fish and Parks; Eli Felts, South Dakota State University; Brian Graeb, South Dakota State University.
- 11:20 AM **Movement and Survival (initial and Short-term) of Stocked Yearling Muskellunge in Spirit Lake, Iowa.** Jonathan Meerbeek, DJ Vogeler - Iowa Department of Natural Resources.

Missouri River and Platte River

Grand Ballroom C

Moderator: Jerrod Hall, NGPC

- 8:00 AM **Trophic Dynamics of Flathead Catfish in the Lower Channelized Missouri River Bordering Nebraska.** Dylan Turner, Mark Pegg, Martin Hamel – University of Nebraska-Lincoln.
- 8:20 AM **Trends in Larval Fish Abundance in the Missouri River, Nebraska.** Ryan L. Ruskamp, Nebraska Game and Parks Commission; Mark A. Pegg, University of Nebraska, Lincoln; Gerald E. Mestl, Nebraska Game and Parks Commission.
- 8:40 AM **Macrobenthic Species Response to a Missouri River Top-Widening Project.** Thad Huenemann, Gerald Mestl – Nebraska Game and Parks Commission.
- 9:00 AM **Fish Community Response to a Restored Side Channel and Backwater Area on the Lower Platte River, Nebraska.** Caleb Uerling, Dr. Martin Hamel, Dr. Mark Pegg – University of Nebraska-Lincoln.
- 9:20 AM **Origin and Movement Patterns of Channel Catfish Within a Large-river Network: An Otolith Microchemistry Approach.** Jonathan Spurgeon, Mark Pegg – University of Nebraska-Lincoln; Norman Halden, University of Manitoba.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

9:40 AM **Movement of Spotted Bass and Shorthead Redhorse in the Highly Flow Regulated Lower Osage River, Missouri.** Elisa Baebler, Craig Paukert – Missouri Cooperative Fish and Wildlife Research Unit.

10:00 AM **BREAK**

10:20 AM **In Pursuit of a Silver Bullet: Does Standardized Sampling Need to Accommodate Seasonal and Regional Influences on Fish Richness Across Large Rivers of Missouri?** Corey Dunn, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, University of Missouri-Columbia; Craig Paukert, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, University of Missouri-Columbia.

10:40 AM **Latitudinal Trends in the Age and Growth of Freshwater Drum Along the Mississippi River.** Joshua Abner, Tyler Ham, Edward Sterling – Southeast Missouri State University; Quinton Phelps, Missouri Department of Conservation.

11:00 AM **Elucidating Mechanisms Structuring Crappie Recruitment in the Middle Mississippi River.** Tyler Ham, Southeast Missouri State University; Quinton Phelps, Missouri Department of Conservation.

11:20 AM **Influence of Hydrologic Conditions on the Short-term Growth of Minnesota River Fishes.** Cameron Brock, Shannon J. Fisher – Minnesota State University, Mankato.

11:40 AM **Biology and Potential Community Influences of Tadpole Madtoms and Stonecats in the Minnesota River.** Shannon J. Fisher, Cameron Brock – Minnesota State University, Mankato.

Waterfowl

Grand Ballroom D

Moderator: Will Inselman, NGPC

8:00 AM **Larval Trematode Communities in Pulmonate Snails Collected from Northern Minnesota.** Scott Malotka, Robert Sorensen – Minnesota State University, Mankato.

8:20 AM **True Metabolizable Energy of Submersed Aquatic Vegetation for Dabbling Ducks.** Sarah E. McClain, Western Illinois University, Illinois Natural History Survey; Heath M. Hagy, Illinois Natural History Survey; Christopher N. Jacques, Western Illinois University.

8:40 AM **Developing Plasma-Lipid Indices and Evaluating Triglyceride Catabolism Rates in Lesser Scaup (*Aythya affinis*).** Eric Smith, Western Illinois University; Chris Jacques, Western Illinois University; Mike Anteau, USGS Northern Prairie Wildlife

Research Center; Heath Hagy, Forbes Biological Station/Frank C. Bellrose Waterfowl Research Center.

9:00 AM **Selective Harvest: Evaluating Differences in Body Condition of Lesser Snow and Ross's Geese by Harvest Technique During the Light Goose Conservation Order.** Drew N. Fowler, Missouri Cooperative Fish and Wildlife Unit, Department of Fisheries and Wildlife, University of Missouri; Mark P. Vrtiska, Nebraska Game and Parks Commission; Elisabeth B. Webb, U.S. Geological Survey, Missouri Cooperative Fish and Wildlife Unit, Department of Fisheries and Wildlife, University of Missouri.

9:20 AM **Count Bias and Disturbance of Waterfowl During Aerial Surveys.** Andrew D. Gilbert, Western Illinois University, Illinois Natural History Survey; Heath M. Hagy, Illinois Natural History Survey; Christopher N. Jacques, Western Illinois University; Aaron P. Yetter, Illinois Natural History Survey.

9:40 AM **Modeling Transition Rates of Sandhill Cranes Using a Multi-state Model and Estimating Population Trends with N-mixture Models.** Mike Wheeler, Tim Van Deelen – University of Wisconsin, Madison; Jeb Barzen, International Crane Foundation

10:00 AM **BREAK**

10:20 AM **Range Overlap Between Mid-Continent and Eastern Populations of Sandhill Cranes Revealed Through GPS Tracking.** David Wolfson, University of Minnesota; John Fieberg, Department of Fisheries, University of Minnesota; Tom Cooper, U.S. Fish and Wildlife Service; Jeff Lawrence, Minnesota Department of Natural Resources; David Andersen, Minnesota Cooperative Fish and Wildlife Research Unit.

10:40 AM **The Art of Conservation Planning for Waterfowl in the Midwest – Does It Matter How We Allocate Our Resources?** Heath M. Hagy, Margaret Kenna*, J. Conner England, Joshua M. Osborn, Aaron P. Yetter, Jeffrey M. Levensgood – Illinois Natural History Survey, University of Illinois at Urbana-Champaign.

11:00 AM **Wintering Ecology of Canada Geese (*Branta canadensis*) in the Greater Chicago Metropolitan Area.** Kendra Slown, Southern Illinois University Carbondale; Michael Eichholz, Southern Illinois University Carbondale; Heath Hagy, Illinois Natural History Survey.

11:20 AM **Does Use of Steel Shot Result in Greater Waterfowl Crippling? Using Harvest Data to Determine Effectiveness of Non-toxic Shot.** Craig A. Miller, Brent D. Williams – Illinois Natural History Survey.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

Human Dimensions: Fish

Grand Ballroom E

Moderator: Nicholas Cole, UNL

- 8:00 AM **Spatial Covariance of Angling Pressure and Catch Among Nebraska Water Bodies and Application to Social-ecological Systems.** Mark A. Kaemingk, Nebraska Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Nebraska-Lincoln; Christopher J. Chizinski, School of Natural Resources, University of Nebraska-Lincoln; Keith L. Hurley, Nebraska Game and Parks Commission; Kevin L. Pope, U.S. Geological Survey-Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska-Lincoln.
- 8:20 AM **Factors Influencing Angler Fishing Behavior.** **Brian S. Harmon**, Nicholas W. Cole – Nebraska Cooperative Fish and Wildlife Research Unit, School of Natural Resources, University of Nebraska; Christopher J. Chizinski, School of Natural Resources, University of Nebraska; Kevin L. Pope, U.S. Geological Survey-Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska.
- 8:40 AM **Factors Affecting Fishing License Purchase Patterns and Angler Retention in Iowa.** Jeff Kopaska, Julie Tack, George Scholten – Iowa Department of Natural Resources.
- 9:00 AM **Evaluation of the Fishing Impoundments and Stream Habitats (FISH) Program.** Susan Steffen, Kansas Department of Wildlife, Parks and Tourism; William K. Blair, Emporia State University; David Breth, Kansas Department of Wildlife, Parks and Tourism.
- 9:20 AM **Contributors to Angler Satisfaction in the Southern Lake Michigan Fishery.** Elizabeth Golebie, Craig A. Miller – Illinois Natural History Survey.
- 9:40 AM **Analyzing Social Capital and Participation in Commons: A Case Study from Nanasawa Satoyama Landscape Japan.** Bidur Khadka, Ph.D. candidate, Yokohama National University, Japan.
- 10:00 AM **BREAK**
- 10:20 AM **Inland Fisheries Habitat Management: Lessons Learned from Wildlife Ecology and a Proposal for Change.** Greg G. Sass, Wisconsin Department of Natural Resources; Andrew L. Rypel, Wisconsin Department of Natural Resources; Joshua D. Stafford, U.S. Geological Survey.

1:20 PM - 5:00 PM

SPECIAL SYMPOSIUM [S5]: Continued - Playa Wetland Ecology Yankee Hill I/II

Moderator: Ted LaGrange, NGPC

- 1:20 PM **Influence of Playa Wetlands and the Conservation Reserve Program on Native Invertebrate Pollinator Communities in the Llano Estacado.** Angela Begosh, Loren M. Smith, Scott T. McMurry – Oklahoma State University.
- 1:40 PM **Can Cattle Grazing Improve Waterfowl Habitat in Reed Canarygrass (*Phalaris arundinacea*) Invaded Wetlands?** Heidi L. Hillhouse, University of Nebraska - Lincoln.
- 2:00 PM **Ask the Experts: What We Can and Cannot Say About Playas and Recharge.** Anne M. Bartuszevige, Miruh Hamend – Playa Lakes Joint Venture.
- 2:20 PM **Trade-offs in Ecosystem Services: Hunter Use and Landowner Perceptions of Wetlands in an Agrarian Landscape.** Joseph J. Fontaine, U.S. Geological Survey Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska–Lincoln; Lindsey Messinger, Minnesota Department of Natural Resources; Michelle Lute, WildEarth Guardians; Caitlyn Gillespie, Klamath Bird Observatory; Dustin R. Martin, Virginia Department of Game and Inland Fisheries; Kent Fricke, Kansas Department of Wildlife, Parks, and Tourism
- 2:40 PM **Best Management Practices for Rainwater Basin Wetlands.** Dana Varner, Rainwater Basin Joint Venture
- 3:00 PM **BREAK**
- 3:20 PM **How Will Playa Plant Communities Respond to a Changing Climate? Inferences from a Greenhouse Experiment.** Rachel K. Owen, School of Natural Resources, University of Missouri; Elisabeth B. Webb, Missouri Cooperative Fish and Wildlife Research Unit, U.S. Geological Survey; Keith W. Goyne, School of Natural Resources, University of Missouri.
- 3:40 PM **Modeling Greenhouse Gas Flux in Playa of the Rainwater Basin of Nebraska.** Zhuoqing Li, Loren M. Smith, Scott T. McMurry – Department of Integrative Biology, Oklahoma State University; Dale W. Daniel, Stearns, Conrad and Schmidt Consulting Engineers.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

4:00 PM **Agricultural Contaminants in the Rainwater Basin.** Michelle L. Hellman, Nebraska Cooperative Fish and Wildlife Research Unit, University of Nebraska-Lincoln, School of Natural Resources; Craig R. Allen, Nebraska Cooperative Fish and Wildlife Research Unit; Ted LaGrange, Nebraska Game and Parks Commission; Daniel D. Snow, University of Nebraska-Lincoln, School of Natural Resources.

4:20 PM **Round Table Discussion for Symposium.** Moderated by Dana Varner, Science Coordinator, Rainwater Basin Joint Venture.

Reptiles and Amphibians

Arbor I/II

Moderator: Dennis Ferraro, UNL

1:20 PM **The Influence of Conspecific Cues and Predator Presence on Anuran Breeding Habitat Selection Decisions.** Valerie L. Buxton, University of Illinois; Michael P. Ward, Illinois Natural History Survey and University of Illinois; Jinelle H. Sperry, Engineer Research and Development Center and University of Illinois.

1:40 PM **Evolution of Host-Parasite Interactions in Fragmented Landscapes.** Johanna Fornberg, Johannes Foufopoulos – University of Michigan.

2:00 PM **Snake Fungal Disease Affects Survival and Behavior of Free-ranging Massasauga Rattlesnakes.** Sasha Tetzlaff, University of Illinois at Urbana-Champaign; Michael Ravesi, Camp Grayling Joint Maneuver Training Center; Evin Carter, University of Tennessee at Knoxville; Brett DeGregorio, US Army ERDC-CERL; Matthew Allender, University of Illinois at Urbana-Champaign; Bruce Kingsbury, Indiana University-Purdue University Fort Wayne.

2:20 PM **Detection and Occupancy of the Eastern Massasauga Rattlesnake Across Southern Michigan.** Stephanie A. Shaffer, Henry Campa, III, Gary Roloff – Michigan State University; Daniel Kennedy, Michigan Department of Natural Resources.

2:40 PM **Assessing Habitat Management for an Isolated Population of *Aspidoscelis sexlineata* (Six-Lined Racerunner) Using Focal Animal Sampling and Visual Encounter Surveys.** Reine Ecker, Brionna Schrag, Melanie Schott, Teresa Yoder-Nowak, Danielle Potts -University of Michigan-Flint.

Wildlife Populations

Arbor I/II

Moderator: Erica Stuber, UNL

3:20 PM **Isolation Not Dragon Predation Caused Unicorn Extinction in Pre-historic Sky Island: Fairy-tale Creatures Teach Spatial Ecology in Ohio.** Andrew J. Gregory, Ashlee N. Nichter – School of Earth Environment and Society, Bowling Green State University.

3:40 PM **Evaluating Fall Harvests with Practicable Wild Turkey Management Models: Incorporating Observation Uncertainty and Regulation Cycle.** Sydney E. Manning, Bryan S. Stevens, David M. Williams – Michigan State University Boone and Crockett Quantitative Wildlife Center.

4:00 PM **Evaluating the Sensitivity of Density Estimates in a Spatial Capture-Recapture Model of Black Bears in the Northern Lower Peninsula of Michigan.** Jennifer Smith, David Williams – Michigan State University; Mike Wegan, Dwayne Etter – Michigan Department of Natural Resources, William Porter, Michigan State University.

4:20 PM **Characterizing Individual Variation in Resource Selection of Elk in Missouri.** Kyle Redilla, Michigan State University; Trenton Smith, Missouri Department of Conservation; Barbara Keller, Cervid Program Supervisor, Missouri Department of Conservation; Joshua Millspaugh, University of Montana; Robert Montgomery, Michigan State University.

4:40 PM **Bird-Window Collisions: A Comparison of Migration Phenology and Collision Rates on a University Campus in Indiana.** Sarah E. Fischer, Kamal Islam –Ball State University.

Conservation and Grasslands

Hawthorne

Moderator: Edward Raynor, UNL

1:20 PM **Building Partnerships and Alignments to Advance Conservation on Private Lands.** Margaret O’Gorman, President, Wildlife Habitat Council.

1:40 PM **Adjacent Land Use as a Driver of Species Diversity in Ditches.** Ashlee Nichter, Andrew Gregory - Bowling Green State University.

2:00 PM **How Do Nectar Quality, Pollen Quality, and Flower Abundance Influence Pollen Collection of Bumblebees (*Bombus spp.*) in Northern Virginia?** Preston Thompson, Bowling Green State University.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

2:20 PM **The Ecology of the Monarch Butterfly Relative to Density, Host Plant Occurrence and Habitat Use in the Flint Hills.** Caroline Skidmore, Kelsey McCullough – Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; David Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit.

2:40 PM **Pipelines to Pollination: Implications of Vegetation Management on Marcellus–Utica Natural Gas Pipeline Rights-of-way.** Gabriel Karns, Claire Beck - The Ohio State University, School of Environment and Natural Resources.

3:00 PM **BREAK**

Pollinators

Hawthorne

Moderator: Edward Raynor, UNL

3:20 PM **Impacts of Land Use on Habitat Suitability and Forage for Honey Bees in the Northern Great Plains.** Matthew Smart, Clint Otto - USGS Northern Prairie Wildlife Research Center.

3:40 PM **Using Plant-pollinator Interaction Data to Make a National Impact.** Katie Lamke, Judy Wu-Smart - University of Nebraska-Lincoln, Clint Otto, USGS Northern Prairie Wildlife Research Center.

4:00 PM **The Nebraska Beneficial Insect Protection Plan, A Current Conservation Effort.** Judy Wu-Smart, University of Nebraska-Lincoln

4:20 PM **A Descriptive Analysis of Regal Fritillary (*Speyeria idalia*) Habitat Utilizing Biological Monitoring Data Along the Big Bend of the Platte River, NE.** Andrew J. Caven, Kelsey C. King, Joshua D. Wiese, Emma M. Brinley Buckley - Crane Trust

SPECIAL SYMPOSIUM [S8]: Fate of Freshwater

Mussels

Grand Ballroom A

Moderator: Diane Waller, USGS

1:20 PM **Invasive Mussel Collaborative: Connecting People, Science and Management.** Cecilia Weibert, Erika Jensen, Sarah Cook, Great Lakes Commission; Sandy Morrison, U.S. Geological Survey

1:40 PM **Effects of Dreissenids on Unionid Communities in the Mississippi and Ohio Rivers.** Heidi L. Dunn, Ecological Specialists, Inc.; Patricia Morrison, U.S. Fish & Wildlife Service, Ohio River Islands National Wildlife Refuge; Janet Clayton, West Virginia Division of Natural Resources.

2:00 PM **20 Years Measuring Long-term Survival and Population Status of Native Mussels in the Face of a Zebra Mussel Invasion.** Rick A. Hart, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service; Mike Davis, Minnesota Department of Natural Resources; Bernard Sietman, Minnesota Department of Natural Resources; James W. Grier, North Dakota State University; Andrew C. Miller, US Army Corps of Engineers, Waterways Experiment Station.

2:20 PM **Spatial Variation in Biofouling of a Unionid Mussel (*Lampsilis siliquoidea*) by Dreissenid Mussels in the Great Lakes.** James H. Larson, U.S. Geological Survey, Upper Midwest Environmental Sciences Center; Mary Anne Evans, U.S. Geological Survey, Great Lakes Science Center; Robert J. Kennedy, U.S. Geological Survey, Upper Midwest Environmental Sciences Center; Sean W. Bailey, U.S. Geological Survey, Upper Midwest Environmental Sciences Center; Jeff Schaeffer, U.S. Geological Survey, Great Lakes Science Center; William B. Richardson, U.S. Geological Survey, Upper Midwest Environmental Sciences Center.

3:00 PM **BREAK**

3:20 PM **Our St. Croix River: Battleground for Invading Zebra Mussels.** Byron N. Karns, National Park Service, St. Croix National Scenic Riverway

3:40 PM **Significance of Dreissenids in Native Freshwater Mussel Restoration.** Megan Bradley, Nathan Eckert, Doug Aloisi – U.S. Fish & Wildlife Service.

4:00 PM **Potential Use of Zequanox® for Conservation of Freshwater Mussels.** James Luoma, Diane Waller, Todd Severson, Jeremy Wise, Kerry Weber – USGS Upper Midwest Environmental Sciences Center; Denise Mayer, New York State Education Department - New York State Museum Field Research Laboratory.

4:20 PM **Review of Rapid Response Tools Used to Control Invasive Dreissenid Mussels.** Michelle Bartsch, Diane Waller, Eric Lord – U.S. Geological Survey, Upper Midwest Environmental Sciences Center.

GENERAL FISHERIES: Miscellaneous

Grand Ballroom B

Moderator: Jamilynn Poletto, UNL

1:20 PM **Implementation of a 228.6 Mm Crappie Minimum Length Limit at Two Indiana Impoundments.** Andrew Buelmann, Sandy Clark-Kolaks, David Kittaka, Dan Carnahan – Indiana Department of Natural Resources.

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

1:40 PM **Are Fish Avoiding You? Behavioral Syndromes and Fishing-induced Behavioral Change in *Ambloplites rupestris*.** Alexis D. Fedele, Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska-Lincoln; Christopher J. Chizinski, School of Natural Resources, University of Nebraska-Lincoln; Joseph J. Fontaine, U.S. Geological Survey—Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska-Lincoln; Kevin L. Pope, U.S. Geological Survey—Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska-Lincoln

2:00 PM **The Effects of Electrofishing Waveform on Immobilization Thresholds for Blue Catfish.** William Morris, Missouri Cooperative Fish & Wildlife Research Unit; University of Missouri; Craig Paukert, U.S. Geological Survey, Missouri Cooperative Fish & Wildlife Research Unit; University of Missouri; Zach Ford, Missouri Department of Conservation; Andy Turner, Missouri Department of Conservation; Jan Dean, Dean Electrofishing, LLC.

2:20 PM **Murphy's Law of Aquaponics.** Brittney Adams, University Nebraska at Kearney; Nate Bickford, University Nebraska at Kearney.

2:40 PM **Tooth Replacement Rate of *Carcharodon carcharias* (Linnaeus, 1758).** John Clay Bruner, Department of Biological Sciences and Laboratory for Vertebrate Paleontology, University of Alberta

3:00 PM **BREAK**

Mississippi River and Others

Grand Ballroom C

Moderator: Tony Barada, NGPC

1:20 PM **Larval Fish Populations Differ Spatiotemporally on a Large Unimpounded River.** Jordan J. Pesik, Eastern Illinois University; V. Alex Sotola, Texas State University; Sharon Rayford, U.S. Fish & Wildlife Service; Robert E. Colombo, Eastern Illinois University.

1:40 PM **Larval Fish Assemblages Differ Spatially and Temporally Among Tributaries of Two Large River Systems.** Jordan J. Pesik, Eastern Illinois University; Daniel R. Roth, Eastern Illinois University; David H. Wahl, Illinois Natural History Survey; Robert E. Colombo, Eastern Illinois University.

2:00 PM **Historic Food Webs Discern Ecosystem Changes in a Large River.** Mark Pyron, Robert Shields, Mario Minder, Jesse Becker - Ball State University.

2:20 PM **Freezing and Flooding: Factors Affecting Centrarchid Sportfish Populations in the Lower Illinois River.** Jason DeBoer, Illinois River Biological Station; Andrea Fritts, U.S. Geological Survey; Mark Fritts, U.S. Fish & Wildlife Service; Rich Pendleton, New York State Department of Environmental Conservation; Levi Solomon, Illinois River Biological Station; TD VanMiddlesworth, North Carolina Department of Environmental Quality; Andrew Casper, Illinois River Biological Station.

2:40 PM **Diet Contents and Dietary Selectivity of Fishes in the U.S. Great Basin.** Mario Minder, Robert Shields, Mark Pyron - Ball State University; Emily Arsenault, Mike Thai, Jim Thorp - University of Kansas; Olaf Jensen, Rutgers University.

3:00 PM **BREAK**

Technical Approaches to Conservation

Grand Ballroom D

Moderator: Rick Schneider, NGPC

1:20 PM **There's an App for That: Digital Data Entry in Fisheries.** Kirk D. Steffensen, Nebraska Game and Parks Commission.

1:40 PM **Assessing Compliance with Electronic Deer Harvest Registration.** Ben Beardmore, Bob Holsman, Brian Dhuey, Dan Storm - Wisconsin Department of Natural Resources

2:00 PM **A Watershed in Motion: Understanding Changing Dynamics Across Time and Space.** Emma Brinley Buckley, University of Nebraska-Lincoln and NET Television; Mary Harner, Departments of Communication & Biology, University of Nebraska at Kearney; Michael Forsberg, Department of Agricultural Leadership, Education & Communication, University of Nebraska-Lincoln and Michael Forsberg Photography; Michael Farrell, Department of Agricultural Leadership, Education & Communication, University of Nebraska-Lincoln and NET Television.

2:20 PM **Nest Success and Species Composition of Nest Predators in Dry Evergreen Forest of Northeast Thailand.** Daphawan Khamcha, George A. Gale - Conservation Ecology Program, School of Bioresources and Technology, King Mongkut's University of Technology Thonburi (Thailand)

2:40 PM **New Insights into the Common Predators of Grassland Wildlife.** Timothy P. Lyons, Illinois Natural History Survey, Prairie Research Institute, and Department of Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign; Julia A. Nawrocki, Department of Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign; Thomas J. Benson Illinois Natural History Survey, Prairie Research Institute; Robert L. Schooley, Department

TECHNICAL SESSIONS & SYMPOSIA - Tuesday

	of Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign; Michael P. Ward, Department of Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign.	2:20 PM	Exploring Linkages Between Hunting and Fishing Permit Sales Among Upland Game Permit Holders. Alisha Grams, Nathaniel Price, Matthew Gruntorad – School of Natural Resources, University of Nebraska-Lincoln; Kevin Pope, U.S. Geological Survey, Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska, Lincoln; Christopher J. Chizinski, School of Natural Resources, University of Nebraska-Lincoln; Joseph J. Fontaine, U.S. Geological Survey, Nebraska Cooperative Fish and Wildlife Research Unit, and School of Natural Resources, University of Nebraska, Lincoln.
3:00 PM	BREAK		
3:40 PM	Quantifying the Impact of Thermal Data Loggers on Nest Survival and Estimation of Daily Survival Rate. Matt Stephenson, Lisa Schulte Moore – Natural Resource Ecology and Management, Iowa State University; Robert Klaver, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Unit.		
4:00 PM	How We Hunt: Modeling the Future of Pheasant Behavior. Lyndsie S. Wszola, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln; Joseph J. Fontaine, U.S. Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln.	2:40 PM	OPEN
		3:00 PM	BREAK
4:20 PM	Using Database Driven Web Content to Improve Anglers Access to Information. Jeff Kopaska, Brandon Burnett – Iowa Department of Natural Resources.	3:20 PM	Trends in Nebraska Deer Hunter Satisfaction. Matthew Gruntorad, Christopher Chizinski - University of Nebraska-Lincoln.
		3:40 PM	The Economic Benefits of Publicly Accessible Hunting Lands. Lindsey N. Messinger, Farmland Wildlife Populations and Research Group, Minnesota Department of Natural Resources; Michael T. Winkler, Pheasants Forever; Joseph J. Fontaine, U.S. Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln

HUMAN DIMENSIONS: Wildlife

Grand Ballroom E

Moderator: Nat Price, UNL

1:20 PM	Creating Social Habitat for Women and Novice Adult Hunters. Emily E. Iehl, University of Wisconsin-Madison; Alanna Koshollek, Aldo Leopold Foundation; Keith Warnke, Wisconsin Department of Natural Resources; Timothy R. Van Deelen, University of Wisconsin-Madison.	4:00 PM	Promoting Wildlife Habitat and Conservation Partnerships Through State-Funded Grant Programs. Clay Buchanan, Michigan Department of Natural Resources.
1:40 PM	Developing Future Conservation Leaders: The GLADE Model. Janice Schnake Greene, Missouri State University.	4:20 PM	Ethno-Geographical Relation to Wildlife Crime in Nepal: Analysis of Case Reported in National Print Media. Ganesh Puri, Department of Forest Nepal; Gangaram Regmi, Global Primate Network Nepal; Yajna Timilsina, Institute of Forestry Pokhara Nepal.
2:00 PM	Age-Period-Cohort Modeling to Project Size, Composition, and License Revenue Contributions of Michigan's Future Hunting Population. Brent Rudolph, Michigan Department of Natural Resources; Richelle Winkler, Michigan Technological University; Chris Henderson, Michigan State University.		

TECHNICAL SESSIONS & SYMPOSIA - Wednesday

WEDNESDAY TECHNICAL SESSIONS

8:00 AM - 12:00 PM

Bats

Arbor I/II

Moderator: Colleen Rothe-Groleau, NGPC

- 8:20 AM **Nightly Summer Activity Patterns of the Northern Long-eared Bat.** Catherine M. Berrick, University of Nebraska -Lincoln; Zachary A. Warren, Nebraska Cooperative Fish & Wildlife Research Unit, School of Natural Resources, University of Nebraska; Craig R. Allen, U.S. Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, School of Natural Resources, University of Nebraska.
- 8:40 AM **Roosting Habits of the Eastern Small-footed Bat in the Shawnee National Forest, Illinois.** Kristi A. Confortin, Timothy C. Carter – Ball State University.
- 9:00 AM **Estimating the Summer Distribution of a Threatened Bat Species in Nebraska.** Zachary A. Warren, Nebraska Cooperative Fish and Wildlife Research Unit; Craig R. Allen, U.S. Geological Survey; Michael D. Whitby, Nebraska Cooperative Fish and Wildlife Research Unit.
- 9:20 AM **Determining the Habitat Use of Nebraska Bats: What Scale Is Best?** Baxter H. Seguin, Zac A. Warren, Michael D. Whitby, Craig R. Allen – University of Nebraska-Lincoln.
- 9:40 AM **Habitat Characteristics Influencing Summer Occupancy of Myotis Species in Bottomland Hardwood Forests.** Jacquelyn Dearborn, University of Missouri; Derek Corcoran Barrios, University of Missouri; Elisabeth Webb, USGS Missouri Cooperative Fisheries and Wildlife Research Unit; Sybill Amelon, USFS Northern Research Station; Shauna Marquardt, USFWS Missouri Ecological Services Field Office.

Wildlife Predators

Hawthorne

Moderator: Adam Jones, NGPC

- 8:00 AM **Trap and Translocation of Red-tailed Hawks at O'Hare International Airport: Why May Some Birds Return?** Craig K. Pullins, Travis Guerrant, Scott Beckerman - USDA-APHIS-Wildlife Services; Brian E. Washburn Ph.D., USDA-APHIS-Wildlife Services, National Wildlife Research Center.
- 8:20 AM **Prey Selection of Northern Goshawks in the Lewis and Clark National Forest, Montana.** Marilyn Wright, Nate Bickford – University of Nebraska- Kearney.

- 8:40 AM **Estimating Density of Bobcats with Capture-Mark-Recapture Data from Camera Traps.** Tim Swearingen, Western Illinois University; Christopher Jacques, Western Illinois University; Bob Bluett, Illinois Department of Natural Resources; Christopher DePerno, North Carolina State University; Jonathan Jenks, South Dakota State University; Chuck Anderson, Colorado Parks & Wildlife, Mammals Research Division
- 9:00 AM **Estimation of Distribution and Abundance of the Spotted Hyena (*Crocuta crocuta*) in the Northern Tuli Game Reserve, Botswana.** Jazmin Castillo, Dr. Andrei Snyman, Dr. John P. Carroll - University of Nebraska-Lincoln.
- 9:20 AM **Using Prey Biomass Estimates to Assess Habitat Suitability for Large African Carnivores in a Potential Corridor Region of Northwestern Botswana.** Emma Doden, University of Wisconsin-Stevens Point, College of Natural Resources, Wisconsin Center for Wildlife; Christiaan Winterbach, Tau Consultants; Scott Hygnstrom, University of Wisconsin-Stevens Point, College of Natural Resources, Wisconsin Center for Wildlife; Jason Riddle, University of Wisconsin-Stevens Point, College of Natural Resources; Rob Thomson, Tau Consultants; Gail Potgieter, Tau Consultants; Shanell Budleski, University of Wisconsin-Stevens Point, College of Natural Resources; Haylee Stangler, University of Wisconsin-Stevens Point, College of Natural Resources; Hanlie Winterbach, Tau Consultants.
- 9:40 AM **Spatial and Temporal Structure of Canid Community in Nebraska.** Lucia Corral, Claire Helmke - Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln; Teresa J. Frink, Department of Applied Sciences, Chadron State College; Joseph J. Fontaine, U.S. Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln.

Great Lakes

Grand Ballroom A

Moderator: Mark Kaemingk, UNL

- 8:00 AM **Linking Creel Survey Data with Biotic and Abiotic Data to Identify Drivers of Fishery Change in Southern Lake Michigan.** Mitchell Zischke, Department of Forestry and Natural Resources, Purdue University, Illinois-Indiana Sea Grant; Charles Roswell, Lake Michigan Biological Station, Illinois Natural History Survey; Benjamin Dickinson, Lake Michigan Office, Indiana Department of Natural Resources; David Bunnell, Great Lakes Science Center, United States Geological Survey; Benjamin M. Gramig, Department of Agricultural Economics, Purdue University

TECHNICAL SESSIONS & SYMPOSIA - Wednesday

- 8:20 AM **Indicator Species Can Successfully Guide Restoration Efforts for Migratory Fishes in the Great Lakes.** Kimberly B. Fitzpatrick, Geography and Environmental Sustainability, University of Oklahoma; Allison T. Moody, Austin Milt – Center for Limnology, University of Wisconsin; Matthew W. Diebel, Wisconsin Department of Natural Resources; Matthew Herbert, Mary Khoury, Eugene Jacobson, Patrick J. Doran – The Nature Conservancy; Michael C. Ferris, Computer Science, University of Wisconsin; Peter B. McIntyre, Center for Limnology; Thomas M. Neeson, Geography and Environmental Sustainability, University of Oklahoma.
- 8:40 AM **Diel Horizontal Migration of Small-bodied Fishes in Lake Michigan.** Mitchell Zischke, Department of Forestry and Natural Resources, Purdue University, Illinois-Indiana Sea Grant; Lee Henebry, Department of Forestry and Natural Resources, Purdue University; Andrew Ramirez, Department of Biological Sciences, Purdue University; Sara Andree, Department of Natural Resources & Environmental Sciences, University of Illinois; Tomas Höök, Department of Forestry and Natural Resources, Purdue University, Illinois-Indiana Sea Grant.
- 9:00 AM **Methods for Evaluating Shallow Water Habitat Restoration in the St. Clair River.** Jason L. Fischer, University of Toledo; Edward F. Roseman, U.S. Geological Survey, Great Lakes Science Center; David Mifsud, Herpetological Resource Management; Stacey Ireland, Robin DeBruyne – U.S. Geological Survey, Great Lakes Science Center; Melanie Foose, Department of Environmental Quality, Office of the Great Lakes; Rosanne Ellison, U.S. Environmental Protection Agency, Great Lakes National Program Office; Christine M. Mayer, University of Toledo; Greg Kennedy, Scott Jackson – U.S. Geological Survey, Great Lakes Science Center.
- 9:20 AM **Northern Madtom (*Noturus stigmosus*) Use of Artificial Reefs in the St. Clair – Detroit River System.** Jennifer L. Johnson, Justin Chiotti, Andrew Briggs, James Boase – U.S. Fish & Wildlife Service; Ed Roseman, U.S. Geological Survey; Jan-Michael Hessenauer, Michigan Department of Natural Resources.
- 9:40 AM **Floating Down the River: Vertical Distribution of Larval Fishes in the St. Clair-Detroit River System.** Stacey Ireland, Edward F. Roseman – USGS Great Lakes Science Center; Robin L. DeBruyne, USGS Great Lakes Science Center, University of Toledo, Lake Erie Center; Dustin Bowser, Robert D. Hunter – USGS Great Lakes Science Center; Stacy Provo, USGS Great Lakes Science Center, Center for Ecosystems Studies Unit, Michigan State University, Department of Fisheries and Wildlife; Patricia A. Thompson, USGS Great Lakes Science Center, West Virginia University; Emily Bouckaert, USGS Great Lakes Science Center, Michigan Technological University
- 10:00 AM **BREAK**
- 10:20 AM **Export of Pelagic Fish Larvae from the Detroit River.** Ed Roseman, USGS Great Lakes Science Center; Mark DuFour, University of Toledo; Jeremy Pritt, Ohio DNR; Robin DeBruyne, Jason Fischer, David Bennion – USGS Great Lakes Science Center.
- 10:40 AM **Updated Estimated Spawning and Hatch Locations of Naturally Spawmed Grass Carp Eggs in a Great Lakes Tributary.** Holly S. Embke, University of Toledo; Patrick M. Kocovsky, U.S. Geological Survey; Catherine A. Richter, U.S. Geological Survey; Tatiana Garcia, U.S. Geological Survey; Christine M. Mayer, University of Toledo; Song S. Qian, University of Toledo.
- 11:00 AM **Effects of Carbon Dioxide on Fish Behavior and Swimming Performance: Implications for Use as a Movement Barrier.** Eric Schneider, Caleb Hasler, Cory Suski - University of Illinois.
- 11:20 AM **Early Invasion Dynamics of New Zealand Mudsnaills.** Samantha Stanton, Michigan State University; William Keiper, Michigan Department of Environmental Quality; Seth Herbst, Michigan Department of Natural Resources; Daniel Hayes, Michigan State University
- 11:40 AM **Introduction of New Zealand Mudsnaills into the Upper Midwest; Range Expansion and Aquatic Threat.** Justin Wegner, Mark Luttenton – Annis Water Resources Institute.

Grassland Birds

Grand Ballroom B

Moderator: Mary Bomberger Brown, UNL

- 8:00 AM **The Importance of Scale in Evaluating the Effectiveness of Umbrella Species.** Erica Stuber, Nebraska Cooperative Fish and Wildlife Research Unit UNL; Lutz Gruber, Quantco; Joseph Fontaine USGS Nebraska Cooperative Fish and Wildlife Research Unit UNL.
- 8:20 AM **Influence of Habitat and Landscape on the Occupancy of Shrubland Birds.** Kyle Van den Bosch, Michael P. Ward – University of Illinois at Urbana-Champaign; Thomas J. Benson, Illinois Natural History Survey, and University of Illinois at Urbana-Champaign.
- 8:40 AM **Bird Occupancy on Cover Crop Fields During Their Spring Migration in the Midwest Corn Belt Region.** Cassandra A. Wilcoxon, Michael P. Ward – University of Illinois-Urbana-Champaign; Jeffery W. Walk, The Nature Conservancy.
- 9:00 AM **Obligate Grassland Bird Response to Woody Plant Configurations.** Stephen Winter, U.S. Fish & Wildlife Service; Britt Smith, Texas Tech University; Sam Fuhlendorf, Oklahoma State University.

TECHNICAL SESSIONS & SYMPOSIA - Wednesday

9:20 AM	Grassland Bird Response to Season of Burn and Grazing Intensity. Sarah Ogden, Kansas Cooperative Fish and Wildlife Research Unit, Division of Biology, Kansas State University; David A. Haukos, U.S. Geological Survey, Kansas Cooperative Research Unit, Kansas State University; KC Olson, Jonathan Alexander, Jack Lemmon – Department of Animal Sciences and Industry, Kansas State University.	8:20 AM	Assessing Calf Survival and Cause-specific Mortality in the Declining Moose Population in Northeastern Minnesota. William J. Severud, University of Minnesota; Glenn D. DelGiudice, Minnesota Department of Natural Resources; Tyler R. Obermoller, University of Minnesota.
9:40 AM	Estimating the Effect of Perennial Vegetation in an Agricultural Landscape on Grassland Birds. Julia Dale, Matt Stephenson, Lisa Schulte-Moore – Iowa State University; Robert Klaver, U.S. Geological Survey, Iowa Cooperative Fish and Wildlife Unit.	8:40 AM	Behavioral Responses of Female Elk to Hunting in Northwest Minnesota. Ryan G. Tebo, Gino J. D'Angelo - Farmland Wildlife Research and Populations Group, Minnesota Department of Natural Resources; Lou Cornicelli, Wildlife Research Program, Minnesota Department of Natural Resources
10:00 AM	BREAK	9:00 AM	Comparison of Adult Urban and Rural White-tailed Deer Home Range Size in Southern Indiana. Jonathan K. Trudeau, Garrett B. Clevinger, Timothy C. Carter - Ball State University.
10:20 AM	Influence of Vegetation Cover on Avian Productivity and Community Ecology in Restored Grasslands of the Prairie Pothole Region. Ashlee K. Minor, Doctoral Student, Southern Illinois University-Department of Zoology, Cooperative Wildlife Research Laboratory; Michael Eichholz, Southern Illinois University-Department of Zoology, Cooperative Wildlife Research Laboratory, Center for Ecology	9:20 AM	Comparisons of Dispersal and Excursion Events Between Localized Populations of Urban and Rural White-tailed Deer (<i>Odocoileus virginianus</i>). Garrett B. Clevinger, Jonathan K. Trudeau, Timothy C. Carter – Ball State University.
10:40 AM	Grassland Bird Productivity in Warm Season Grass Fields in Southwest Wisconsin. Christine A. Ribic, U.S. Geological Survey, Wisconsin Cooperative Wildlife Research Unit; Carolyn M. Byers, Madison Audubon Society; David W. Sample, Wisconsin Department of Natural Resources; John D. Dadisman, Wisconsin Department of Natural Resources; Michael R. Guttery, Alaska Department of Fish and Game.	9:40 AM	Dispersal of Yearling Male White-tailed Deer in Wisconsin. Brittany E. Peterson, University of Wisconsin-Madison; Dan J. Storm, Wisconsin Department of Natural Resources; Andrew. S. Norton, Iowa Department of Natural Resources; Tim R. Van Deelen, University of Wisconsin-Madison.
11:00 AM	Effects of Habitat Heterogeneity on Survival and Movements of Fledgling Dickcissels. Bram H.F. Verheijen, Brett K. Sandercock – Division of Biology, Kansas State University.	10:00 AM	BREAK
11:20 AM	Taking Fledglings into Consideration When Assessing Management Impacts on Grassland Bird Productivity. Daniel Wolcott, Department of Forest and Wildlife Ecology, University of Wisconsin-Madison; Christine Ribic, U.S. Geological Survey, Wisconsin Cooperative Wildlife Research Unit; Rosalind Renfrew, Vermont Center for Ecostudies; James Herkert, Illinois Department of Natural Resources; David Sample, Wisconsin Department of Natural Resources.	10:20 AM	Post-mortem RNA Degradation in White-tailed Deer (<i>Odocoileus virginianus</i>) in Westcentral Illinois. Emma K. Trone*, Christopher N. Jacques, James T. Lamer, Paige Zick – Western Illinois University; Guoqing Lu, University of Nebraska-Omaha; Paul A. Shelton, Illinois Department of Natural Resources.
		10:40 AM	RNA-Seq Based Transcriptome Analysis of White-tailed Deer (<i>Odocoileus virginianus</i>). Emma K. Trone*, Christopher N. Jacques, James T. Lamer - Western Illinois University; Jun Wang, Guoqing Lu, Jun Wang - University of Nebraska-Omaha; Paul A. Shelton, Illinois Department of Natural Resources.
		11:00 AM	Influence of Ecologic Factors on Prevalence of Meningeal Worm Infection in South Dakota, USA. Christopher N. Jacques, Jonathan A. Jenks - South Dakota State University; Robert W. Klaver, U.S. Geological Survey; Shelli A. Dubay, University of Wisconsin-Stevens Point.
		11:20 AM	Evaluating Gene Expression in Chronic Wasting Disease Infected White-tailed Deer (<i>Odocoileus virginianus</i>). Emma K. Trone*, Christopher N. Jacques, James T. Lamer, Paige Zick – Western Illinois University; Guoqing Lu, Jun Wang - University of Nebraska-Omaha; Paul A. Shelton, Illinois Department of Natural Resources.

Ungulates

Grand Ballroom C

Moderator: Will Inselman, NGPC

8:00 AM **Double Observer Evaluation of Pronghorn Aerial Line Transect Surveys.** Timothy J. Smyser, University of Idaho; Richard J. Guenzel, Wyoming Game and Fish Department; Christopher N. Jacques, Western Illinois University; Edward O. Garton, University of Idaho.

TECHNICAL SESSIONS & SYMPOSIA - Wednesday

11:40 AM **Expansion and Growth of Chronic Wasting Disease in Wisconsin.** Trevor Hefley, Department of Statistics, Kansas State University; Mevin Hooten, USGS, Colorado Cooperative Fish and Wildlife Research Unit, Department of Fish, Wildlife, and Conservation Biology, Colorado State University; Daniel Walsh, Robin Russell – USGS, National Wildlife Health Center, Madison Wisconsin.

Acipencidae

Grand Ballroom D

Moderator: Kirk Steffensen, NGPC

8:00 AM **Examination of Pallid Sturgeon Life-history Characteristics Throughout the Missouri River Basin.** Martin Hamel, Jonathan Spurgeon - University of Nebraska; Kirk Steffensen, Nebraska Game and Parks Commission; Mark Pegg, University of Nebraska.

8:20 AM **Migration and Spawning of Pallid Sturgeon in the Platte River, Nebraska.** Justin D. Haas, J. David Adams, Ryan L. Ruskamp – Nebraska Game and Parks Commission; Aaron DeLonay, Kimberly A. Chojnacki – U.S. Geological Survey; Gerald E. Mestl, Nebraska Game and Parks Commission

8:40 AM **Identifying Potential Age-0 Sturgeon Interception Habitat in the Upper Channelized Missouri River.** Jerrod Hall, Gerald Mestl – Nebraska Game and Parks Commission.

9:00 AM **Population Demographics of Shovelnose Sturgeon (*Scaphirhynchus platyrhynchus*) in the Wabash River.** Jessica L. Thornton, Rob Colombo - Biological Sciences Department, Eastern Illinois University; Leslie D. Frankland, Jana Hirst - Illinois Department of Natural Resources, Division of Fish and Wildlife; Craig Jansen, Indiana Department of Natural Resources, Division of Fish and Wildlife; Vaskar Nepal KC, Virginia Institute of Marine Science, College of William and Mary.

9:20 AM **The Effects of Temperature and Feeding Rate on the Growth of Larval Green Sturgeon: Implications for Survival and Recruitment of Early Life History Stages.** Jamilynn B. Poletto, University of Nebraska-Lincoln; Benjamin Martin, Eric Danner - NOAA Southwest Fisheries Science Center; Dennis E. Cocherell, Joseph J. Cech Jr., Nann A. Fangue – University of California Davis.

9:40 AM **A Novel Approach for Assessing Paddlefish Populations Using Mark-Recapture Information.** Nick Kramer, Kansas Department of Wildlife, Parks, and Tourism; Quinton Phelps, Sara Tripp, Paul Cieslewicz, Dave Herzog - Missouri Department of Conservation.

SPECIAL SYMPOSIUM [S9]: Landscape Conservation Science and Management Grand Ballroom E

Moderator: Kristin Shaw, USFWS

8:00 AM **Effect of Supplement Food on Breeding Biology of Eastern Blue Bird (*Sialia sialis*) in South Florida, USA.** Sangam Khalil, Department of Forestry Range & Wildlife Management, Islamia University Bahawalpur, Pakistan; Kathryn E. Sieving, Department of Wildlife Ecology and Conservation, University of Florida; Maqsood Anwar, Department of Wildlife Management, PMAS-Arid Agriculture University, Rawalpindi, Pakistan; Tanveer Hussain, Department of Forestry Range & Wildlife Management, Islamia University Bahawalpur, Pakistan.

8:20 AM **Multi-scale Assessments for the Landscape Approach to Resource Management.** Gordon Reese, Lucy Burris, Natasha Carr, Sarah Carter – U.S. Geological Survey; Ian A. F. Leinwand, Cherokee Services; Daniel Manier, U.S. Geological Survey.

8:40 AM **Reintroducing Extirpated Lake Sturgeon (*Acipenser fulvescens*) to the Maumee River, Ohio: An Overview of Collaborative Efforts.** Jessica Sherman*, Jonathan Bossenbroek, Todd Crail, Christine Mayer – University of Toledo; James Boase, Justin Chiotti – U.S. Fish & Wildlife Service; Christopher Vandergoot, U.S. Geological Survey.

9:00 AM **Precision Conservation - Landscape Design for Wildlife, Water Quality and Agricultural Productivity.** Gwen White, Tallgrass Prairie LCC; Michael Schwartz, The Conservation Fund; Jorgen Rose, Indiana University.

9:20 AM **Leopold's the Land Ethic and Conservation Perceptions of Illinois Farmers.** Laura Schwiezer, Craig A. Miller - Illinois Natural History Survey; Jerry J. Vaske, Colorado State University.

9:40 AM **Developing LiDAR-Derived Playa Wetland Maps for Wetland Restoration Decision Making.** Zhenghong Tang, Ph.D., Community and Regional Planning Program, University of Nebraska-Lincoln

10:00 AM **BREAK**

10:20 AM **Developing a Decision Support Tool to Guide Restoration and Protection of Great Lakes Coastal Wetlands.** Matthew Cooper, Burke Center for Freshwater Innovation, Northland College; Todd Redder, LimnoTech; Chris Hippensteel, Central Michigan University; Valerie Brady, Natural Resources Research Institute, University of Minnesota Duluth; Don Uzarski, Institute for Great Lakes Research, Central Michigan University.

10:40 AM **Developing the Phragmites Adaptive Management Framework (PAMF) in the Great Lakes Basin.** Danielle M. Haak, Georgia Cooperative Fish and Wildlife Research Unit, University of Georgia; Kurt

TECHNICAL SESSIONS & SYMPOSIA - Wednesday

	P. Kowalski, U.S. Geological Survey - Great Lakes Science Center; Clinton T. Moore, U.S. Geological Survey, Georgia Cooperative Fish and Wildlife Research Unit, University of Georgia; Abram DaSilva, U.S. Geological Survey - Great Lakes Science Center.	8:40 AM	Comparison of Silver Carp Environmental DNA from Live Fish and Carcasses in Outdoor Mesocosms. Catherine A. Richter, Katy E. Klymus, Nathan Thompson, Duane C. Chapma - U.S. Geological Survey.
11:00 AM	A Monarch's View of the City: A Multi-City Landscape Conservation Design. Abigail Derby Lewis, Field Museum; Kristin Shaw, U.S. Fish and Wildlife Service.	9:00 AM	From Lab to Field: Comparing Estimates of Asian Carp Abundance Using eDNA, Netting and Side-scan Sonar Methods. Katy Klymus, Nathan Thompson, Karl Anderson, Duane Chapman, Cathy Richter - U.S. Geological Survey.
11:20 AM	Helping Stakeholders Understand Vegetative Changes on Two Large-scale Prairie Green Roofs in the Flint Hills Eco-region. Lee R. Skabelund, Kansas State University (KSU), Dept. of Landscape Architecture and Regional & Community Planning; Deon van der Merwe, KSU, Veterinary Diagnostic Lab; Stacy Hutchinson, Ajay Sharda, Trisha Moore - KSU, Dept. of Biological & Agricultural Engineering (BAE); Mary Knapp, KSU, Dept. of Agronomy; Dale Bremer, KSU, Horticulture & Natural Resources; Elizabeth Musoke, Allyssa Decker - KSU, College of Architecture, Planning & Design, Environmental Design & Planning ; Ryan Peters, KSU, Dept. of Horticulture & Natural Resources; Kyle Koehler, Priyasha Shrestha, Pamela Blackmore - KSU-LARCP; Devon Bandad, KSU-BAE; Mark Mayfield, KSU Herbarium, Division of Biology; Jeffrey L. Bruce, Jeffrey L. Bruce & Company, LLC.	9:20 AM	Assessing Movement of Adult Silver Carp and Bighead Carp in the Upper Illinois Waterway System Using GPS Satellite and Radio Telemetry. Andrew Mathis, James Lamer - Western Illinois University; Brent Knights, Upper Midwest Environmental Sciences Center, U.S. Geological Survey; Kevin Irons, Illinois Department of Natural Resources.
		9:40 AM	Monitoring Invasive Bigheaded Carp Reproduction in Large River Tributaries with Larval Sampling Gear Comparison. Daniel Roth, Jordan Pesik, Robert E. Colombo - Eastern Illinois University; David Wahl, Illinois Natural History Survey
11:40 AM	Green Roof Vegetation Characterization Using Color-infrared and Thermal Sensors Mounted on a Small Unmanned Aircraft System. Deon van der Merwe, Kansas State University (KSU), Department of Diagnostic Medicine/Pathobiology; Ajay Sharda, KSU, Department of Biological & Agricultural Engineering; Dale Bremer, KSU, Department of Horticulture & Natural Resources; Lee R. Skabelund, KSU, Department of Landscape Architecture and Regional & Community Planning.	10:20 AM	Invasive Asian Carp Are a Poor Food Resource for Native Piscivores. Daniel Gibson-Reinemer, Jason DeBoer, Allison Anderson, Levi Solomon, Kris Maxson, Andrew Casper - Illinois Natural History Survey.
		10:40 AM	Asian Carp Contracted Harvest in the Upper Mississippi River. James T. Lamer, Allison Lenaerts, Courtney Cox, Boone LaHood, Eli Lampo - Western Illinois University; Kevin Irons, Illinois Department of Natural Resources.
		11:00 AM	Reproduction of Black Carp (<i>Mylopharyngodon piceus</i>) in the Middle Mississippi River. Wes Sleeper, Missouri Department of Conservation and Southeast Missouri State University; Quinton Phelps, Dave Herzog - Missouri Department of Conservation
		11:20 AM	An Evaluation of Plankton Sampling Methods to Detect Zebra Mussel Veligers in a Newly-Infested Kansas Reservoir. Jessica Edmunds, Kansas Department of Wildlife, Parks, and Tourism; Chris Steffen, Kansas Department of Wildlife, Parks, and Tourism; Ben Smith, DOI National Park Service, Lake Mead NRA; Jason Goeckler, US Fish and Wildlife Service.
8:00 AM	The Duality of Asian Carp Monitoring: Protecting the Great Lakes While Providing Insight into Fish Species Distribution and Abundance in the Chicago Area Waterway System. Tristan Widloe, Stephen Pescitelli - Illinois Department of Natural Resources, Division of Fisheries	11:40 AM	Invasive Fishes of the U.S. Great Basin. Robert Shields, Mario Minder, Mark Pyron - Ball State University; Emily Arsenault, Michael Thai, James Thorp - University of Kansas.
8:20 AM	Detection of Invasive Carp in Illinois River with Standard Electrofishing and Novel Trawling Techniques. Jeremy Hammen, U.S. Fish & Wildlife Service, Columbia Fish & Wildlife Conservation Office; Jason Breeggemann, U.S. Fish & Wildlife Service, Green Bay Fish & Wildlife Conservation Office; Pablo Oleiro, Missouri Department of Conservation; Jeena Credico, U.S. Fish & Wildlife Service, La Crosse Fish & Wildlife Conservation Office; Jason Goeckler, U.S. Fish & Wildlife Service, Columbia Fish & Wildlife Conservation Office; Wyatt Doyle, U.S. Fish & Wildlife Service, Columbia Fish & Wildlife Conservation Office.		

Aquatic Invasive Species

Grand Ballroom F

Moderator: Jessica Burnett, UNL

POSTERS

P01 FISHERIES POSTERS	
P01-1	Validating Aging Structures in Asian Carp Charmayne Anderson, James T. Lamer – Department of Biological Sciences, Western Illinois University; Brent Knights, Upper Midwest Environmental Center, United States Geological Survey; Jun Wang, Shanghai Ocean University; Levi Solomon, Andy Casper – Illinois River Biological Station, Illinois Natural History Survey
P01-2	Comparison of Methods for Characterization of Fish Thermal Habitat Ryan Andrews, Dan Hayes – Michigan State University.
P01-3	Use of Lake Erie's Ohio Reef Complex by Walleye (<i>Sander vitreus</i>) During the Spring Spawning Season Andrew Bade, Stuart Ludsin – The Ohio State University; Tom Binder, Michigan State University; Christopher Vandergoot, Matt Faust – The Ohio Department of Natural Resources Division of Wildlife.
P01-4	Benthic Foragers Selecting for the New Zealand Mud Snail James Beaubien, Jerrod Lepper, Mitchell Nisbet, Daniel Hayes – Department of Fisheries and Wildlife, Michigan State University.
P01-5	Stream Connectivity Effects on Island Backchannel Habitat Conditions Under Regulated Flows in the Lower Osage River. John Brant, Elisa Baebler – University of Missouri; Del Lobb, Missouri Department of Conservation; Craig Paukert, US Geological Survey Missouri Cooperative Fish and Wildlife Research Unit.
P01-6	Survival and Drift Behavior of Pallid Sturgeon Free Embryos and Larvae in an Artificial Channel Kevin Buhl, Travis Schaeffer – US Geological Survey.
P01-7	Tag Retention and Survival of Small Bighead Carp Implanted with Acoustic Tags at Three Temperatures Curt Byrd, Five Rivers Services LLC; Duane C. Chapman, US Geological Survey; Emily Pherigo, US Fish and Wildlife Service.
P01-8	Effects of Invasive Non-Native Aquatic Macrophytes on the Foraging and Diet Composition of Small-sized Fish. Natália Carniatto, Programa de Pós-graduação em Ecologia de Ambientes Aquáticos Continentais, Universidade Estadual de Maringá; Rosemara Fugi, Núcleo de Pesquisas em Limnologia, Ictiologia e Aquicultura, Universidade Estadual de Maringá.
P01-9	Trends in Relative Abundance of Sport Fishes of the Tahquamenon River, Michigan During 1988-2016. Christopher J. Cortell, Kevin L. Kapuscinski – Lake Superior State University; Cory Kovacs, Michigan Department of Natural Resources (Newberry).
P01-10	Age and Growth Demographics of Asian Carp in the Upper Mississippi River Cortney Cox, Jim Lamer, Allie Lenaerts, Boone LaHood – Western Illinois University; Greg Whitledge, Southern Illinois University; Brent Knights, US Geological Survey; Kevin Irons, Illinois Department of Natural Resources.
P01-11	Determining Potential Bias by Chaoborus During Hydroacoustic Surveys of Prey Fish Biomass in Ohio Reservoirs. Rebecca A. Dillon, The Ohio State University; Joseph D. Conroy, Ohio Division of Wildlife; Stuart A. Ludsin, The Ohio State University.
P01-12	Long-term Trends in age-0 Yellow Perch <i>Perca flavescens</i> Abundance in Southern Lake Michigan Jason Doll, Ball State University.
P01-13	Seasonal Dynamics of Blue Suckers (<i>Cypleptus elongatus</i>) Inhabiting Great-river Tributaries in Missouri Brandon Brooke, Randy Kramer, Corey Dunn – Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, University of Missouri-Columbia; Craig Paukert, US Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit, Department of Fisheries and Wildlife Sciences, University of Missouri-Columbia.
P01-14	The Effect of Agricultural Runoff on Fish in the Prairie Pothole Region Jillian K. Farkas, Drew R. Davis, Brianna L. Henry, Jeff S. Wesner, Jacob L. Kerby – University of South Dakota.

POSTERS

P01-15	Comparison of Swimming Speeds in Larval Bighead, Silver, and Grass Carp Amy E. George, Tatiana Garcia, Benjamin H. Stahlschmidt, Duane C. Chapman – US Geological Survey.
P01-16	Influence of Temperature Gradient on Macroinvertebrate Assemblages in Rapid Creek Michaela Halvorson; Dr. Lisa Kunza.
P01-17	Variation in Fish Communities of the Lower Wabash River Eric C. Hine, Evan Boone – Eastern Illinois University; Leslie D. Frankland, Tim Edison – Illinois Department of Natural Resources; Robert E. Colombo, Eastern Illinois University.
P01-18	CANCELLED: Diets of Wabash River Minnows Jordan Hoppes, Mark Pyron – Ball State University.
P01-19	Morphological Differences in Three Catostomidae Species Between Two Midwestern Rivers Bethany Hoster, Robert Colombo – Eastern Illinois University.
P01-20	Light Traps Provide Insight About age-0 Fish Use of Restored Shorezone Areas in the St. Clair River Scott A. Jackson, Edward F. Roseman – US Geological Survey, Great Lakes Science Center; Robin DeBruyne, US Geological Survey, Great Lakes Science Center, University of Toledo, Lake Erie Center; Jason L. Fischer, University of Toledo; Stacey Ireland, US Geological Survey, Great Lakes Science Center; Ethan Acromite, University of Toledo; Hayley Schroeder, US Geological Survey, Great Lakes Science Center; Dana Castle, University of Toledo; Stacy Provo, US Geological Survey, Great Lakes Science Center, Center for Ecosystems Studies Unit, Michigan State University, Department of Fisheries and Wildlife; Nathan Williams, US Geological Survey, Great Lakes Science Center.
P01-21	Habitat Preferences of Turtles on 9-Mile Island of Pool 12 of the Mississippi River Amy Shook, David E Koch – University of Dubuque.
P01-22	Exploitation of Paddlefish in the Mississippi River Nick Kramer, Kansas Department of Wildlife, Parks, and Tourism; Quinton Phelps, Sara Tripp, Dave Herzog – Missouri Department of Conservation.
P01-23	Larval Fish Community Survey of Pools 19, 18, and 17 of the Upper Mississippi River Boone M. La Hood, James T. Lamer – Western Illinois University; Kevin S. Irons, Illinois Department of Natural Resources.
P01-24	Rusty Crayfish Consumption of Silver Carp Fecal Pellets Zachary Laughlin, Robert Shields, Dr. Mark Pyron – Ball State University.
P01-25	Reproductive Potential of Silver and Bighead Carp in the Upper Mississippi River Allison Lenaerts, Jim Lamer, Cortney Cox, Boone La Hood – Western Illinois University; Alison Coulter, Southern Illinois University; Kevin Irons, Illinois Department of Natural Resources.
P01-26	Depth Distribution of Juvenile Bluegill Sunfish in an Oligotrophic Wisconsin Lake David Lonzarich, Nate Sylte, Emma Donley – University of Wisconsin - Eau Claire.
P01-27	Long-term Changes in Biotic and Abiotic Factors Influence Larval Gizzard Shad (<i>Dorosoma cepedianum</i>) Relative Abundance. Brett T. Miller, Brian C. Peterson – Department of Biology, University of Nebraska at Kearney; Casey W. Schoenebeck, Department of Biology, University of Nebraska at Kearney and Minnesota Department of Natural Resources, Glenwood Area Fisheries Office; Keith D. Koupal, Nebraska Game and Parks Commission, Fisheries Division.
P01-28	Flathead Catfish Recruitment in the Lower Wabash River Cassi J. Moody-Carpenter, Leslie D Frankland, Tim Edison and Robert E. Colombo.

POSTERS

P01-29	Comparing Swimming Performance of Bluntnose Minnows (<i>Pimephales notatus</i>) in Lentic and Lotic Systems. Crystal C. Nichols, Jason C. Doll – Ball State University.
P01-30	Using Side-scan Sonar to Classify River Aquatic Habitat Jerrod Parker, John Epifanio, Yong Cao – Illinois Natural History Survey.
P01-31	Long-Term Fish Community Monitoring and Status of Topeka Shiner at Pipestone National Monument, Minnesota. Calvin R. Rezac; Jeff M. Williams, Hope R. Dodd, David G. Peitz, J. Tyler Cribbs, Katie N. Bertrand, and Brian D. S. Graeb.
P01-32	Minnnows, Madtoms, and Mudpuppies: Population Demographics of Sensitive Aquatic Organisms Indicates Improved Habitat Conditions in the St. Clair-Detroit Rivers System. Emily Galassini, Dustin Bowser – US Geological Survey Great Lakes Science Center; Andrew Briggs, Justin Chiotti – US Fish and Wildlife Service; Robin DeBruyne, Jason Fischer – University of Toledo; Jan-Michael Hessenauer, Michigan Department of Natural Resources; Stacey Ireland, Scott Jackson – US Geological Survey Great Lakes Science Center; David Mifsud, Herpetological Resource and Management, LLC; Stacy Provo, Department of Fisheries and Wildlife Michigan State University; Jason Ross, US Fish and Wildlife Service; Hayley Schroeder, US Geological Survey Great Lakes Science Center; Maegan Stapleton, Herpetological Resource and Management, LLC; Jenny Sutherland, Eastern Michigan University; Mike Thomas, Kevin Wehrly, Todd Wills – Michigan Department of Natural Resources; Jim Boase, US Fish and Wildlife Service; Katie Greenwald, Eastern Michigan University; Greg Kennedy, Ed Roseman – US Geological Survey Great Lakes Science Center.
P01-33	Sampling Characteristics of Egg Mats Brian A. Schmidt, Edward F. Roseman – US Geological Survey Great Lakes Science Center; Nicole King, University of Toledo, Lake Erie Center; Jason Fisher, US Geological Survey Great Lakes Science Center; Christine Mayer, University of Toledo, Lake Erie Center; Greg Kennedy, US Geological Survey Great Lakes Science Center; Stacy Provo, Michigan State University, Department of Fisheries and Wildlife; Paige Wigren, US Fish and Wildlife Service.
P01-34	Dispersal of Vertebrates Among Islands in a Riverine Ecosystem Jana Green, Justin Currie, Ryan Farney, Michael J. Shaughnessy Jr. – Northeastern State University.
P01-35	Attractants for Asian Carp Larvae Ben H. Stahlschmidt, Amy E. George, Duane C. Chapman – US Geological Survey.
P01-36	Ontogenetic Diet Shifts of Blue Catfish (<i>Ictalurus furcatus</i>) Using Stable Isotope Analysis Ashley L Stanley, James T Lamer – Kibbe Field Station, Western Illinois University; Mark W. Fritts, US Fish and Wildlife Service La Crosse, Wisconsin; Andrew F. Casper, Illinois River Biological Station, Illinois Natural History Survey; Katie Mainor, Kibbe Field Station Western Illinois University; Devon Oliver, Neil Rude, Greg Whitley – Southern Illinois University.
P01-37	Distribution and Phenology of <i>Didymosphenia geminata</i> in the St. Marys River, a Great Lakes Connecting Channel. Joseph Stutesman, Lake Superior State University Student, Ashley Moerke, Professor at Lake Superior State University.
P01-38	Use of eDNA to Predict the Presence of Mudpuppies (<i>Necturus maculosus</i>) Along the St. Clair-Detroit River System. Jenny Sutherland, Eastern Michigan University, US Geological Survey; David Mifsud, Maegan Stapleton – Herpetological Resource and Management; Amber Stedman, Eastern Michigan University; Edward Roseman, US Geological Survey; James Boase, Andrew Briggs, Justin Chiotti – US Fish & Wildlife Service; Katherine Greenwald, Eastern Michigan University.
P01-39	Bayesian Hierarchical Modeling of Ozark Mountain Cold Water Stream Temperatures Bridget Whitehead, Joanna Whittier – University of Missouri; Del Lobb, Jacob Westhoff – Missouri Department of Conservation; Craig Paukert, US Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit.

POSTERS

P01-40	Relationship Between Water Temperature and Flow Rates for Missouri Streams Bridget Whitehead, Joanna Whittier – University of Missouri; Del Lobb, Missouri Department of Conservation; Jacob Westhoff, Missouri Department of Conservation; Craig Paukert, US Geological Survey, Missouri Cooperative Fish and Wildlife Research Unit.
P01-41	Reversing Habitat Loss in Reservoirs: No One Can Do It Alone Matthew D. Wolfe, Fisheries Biologist, District 3 (Northeast Ohio), Ohio Department of Natural Resources, Division of Wildlife; Dr. Joseph D. Conroy, Fisheries Biologist, Inland Fisheries Research Unit, Ohio Department of Natural Resources, Division of Wildlife.
P01-42	Multi-stressor Effects of PPCPs on <i>Daphnia magna</i> Growth, Reproduction, and Mortality Scott E. Zello, Melody J. Bernot, Randall J. Bernot – Ball State University.

P02 WILDLIFE POSTERS

P02-1	Initial Assessment of Rates of Cercariae Infections in Host Snail Populations Nathaniel Akey, Mark Luttenton – Biology Department Grand Valley State University.
P02-2	Changes of Native Bee Diversity in Agriculture Systems Due to Additional Habitat Madison Almquist, Dr. Gregory Zimmerman – Lake Superior State University.
P02-3	Summer Roost Selection of Four Myotis Species in the Pine Ridge Region of Western Nebraska Brett Andersen, Keith Geluso – University of Nebraska-Kearney.
P02-4	Brood Rearing Resource Selection of Greater Sage-Grouse on the Eastern Fringe of Their Range Lindsey Bischoff, South Dakota State University; Dr. Andrew Gregory, Bowling Green State University; Dr. Jonathan Jenks, South Dakota State University; Travis Runia.
P02-5	Flight Initiation Distances of Nesting Piping Plovers (<i>Charadrius melodus</i>) in Response to Human Disturbance. Mary Bomberger Brown, School of Natural Resources, University of Nebraska; Joel G. Jorgensen, Lauren R. Dinan – Nongame Bird Program, Nebraska Game and Parks Commission.
P02-6	Urban Bat Community Composition Along a Rural-Urban Gradient Ela-Sita Carpenter, University of Missouri.
P02-7	Roosting Habits of the Northern Long-eared Bat (<i>Myotis septentrionalis</i>) in a Managed Forest Kristi Confortin, Timothy Carter, Jocelyn Karsk – Ball State University; Scott Haulton, Indiana Department of Natural Resources, Division of Forestry.
P02-8	Human Observers vs Autonomous Recording Units: A Comparison of Two Avian Research Methods Julia Dale, Matt Stephenson, Lisa Schulte-Moore – Iowa State University; Robert Klaver, US Geological Survey, Iowa Cooperative Fish and Wildlife Unit.
P02-9	Roost Site Habitat Selection by Maternity Colonies of Federally Endangered <i>Myotis sodalis</i> in Bottomland Hardwood Forests. Jacquelyn Dearborn, University of Missouri; Elisabeth Webb, US Geological Survey Missouri Cooperative Fisheries and Wildlife Research Unit; Sybill Amelon, US Forest Service Northern Research Station; Shauna Marquardt, US Fish and Wildlife Service Missouri Ecological Services Field Office.
P02-10	Radio-tracking Fledgling Cerulean Warblers in Southern Indiana Clayton D. Delancey; Garrett MacDonald; Claire Nemes; Kamal Islam, Department of Biology, Ball State University.
P02-11	Assessment of Painted Turtle Age and Size from Long-term Pond Study Ellen Dolph, Larkin Powell – University of Nebraska-Lincoln.

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P02-12	Seasonal Home Ranges, Movements, and Habitat Selection of Female Elk in Northwestern Minnesota Alicia E. Freeman, Minnesota State University - Mankato; Gino J. D'Angelo, School of Forestry and Natural Resources, University of Georgia; Louis J. Cornicelli, Minnesota Department of Natural Resources; John D. Krenz, Minnesota State University - Mankato.
P02-13	The Role of Habitat Size and Quality on Presence and Abundance of Small Arvicoline Rodents in Northeast Iowa. Kamden Glade, Jake Haberman, Rob Rottler, Jake Thumann, Dr. David McCullough – Wartburg College.
P02-14	Assessment of Monarch Butterfly Habitat and Productivity in Urban Spaces: Methods and Approaches. Nigel Golden, University of Massachusetts - Amherst; Abigail Derby Lewis, Chicago Field Museum.
P02-15	Home Range Size, Movements, and Survival Rates of Sora and Virginia Rails in a Managed Marsh Complex in Northwestern Ohio. James Hansen, The Ohio State University; Brendan Shirkey, John Simpson – Winous Point Marsh Conservancy; Robert Gates, The Ohio State University.
P02-16	Survival, Nesting, and Brood-rearing Ecology of Columbian Sharp-tailed Grouse in Northwestern Colorado Rachel E. Harris, R. Scott Lutz – University of Wisconsin – Madison; Anthony D. Apa, Colorado Parks and Wildlife.
P02-17	Using Citizen Science to Monitor Carnivores in Nebraska Claire Helmke, Lucia Corral – Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska–Lincoln; Michelle Lute, Jenny M. Dauer – School of Natural Resources, University of Nebraska–Lincoln; Teresa J. Frink, Department of Applied Sciences, Chadron State College; Joseph J. Fontaine, US Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska–Lincoln.
P02-18	Associations Among Habitat Characteristics and Meningeal Worm Prevalence in Eastern South Dakota Christopher N. Jacques, Jonathan A. Jenks – South Dakota State University; Robert W. Klaver, US Geological Survey; Shelli A. Dubay, University of Wisconsin-Stevens Point.
P02-19	Influence of Habitat and Intrinsic Characteristics on Survival of Neonatal Pronghorn Christopher N. Jacques, Jonathan A. Jenks – South Dakota State University; Robert W. Klaver, US Geological Survey.
P02-20	Incorporating Detection Probability into Northern Great Plains Pronghorn Population Estimates Christopher N. Jacques, Jonathan A. Jenks – South Dakota State University; Robert W. Klaver, US Geological Survey; Christopher S. DePerno, North Carolina State University.
P02-21	Prevalence of Ectoparasites and <i>Strongyloides robustus</i> in Southern Flying Squirrels (<i>Glaucomys volans</i>) in West-Central Illinois. Mary Beth Scheihing, Will T. Rechkemmer, Sean E. Jenkins – Department of Biological Sciences, Western Illinois University; Bridget M. Walker, Shelli A. Dubay, College of Natural Resources, University of Wisconsin-Stevens Point; Christopher N. Jacques, Department of Biological Sciences, Western Illinois University.
P02-22	Environmental Variables Influencing Raccoon Exposure to Parvovirus in Wisconsin Amanda Kamps, US Department of Agriculture-APHIS; Shelli Dubay, University of Wisconsin-Stevens Point; Christopher N. Jacques, Western Illinois University; Cady Sartini, University of Wisconsin-Stevens Point.
P02-23	Bat Community Ecology of <i>Myotis septentrionalis</i> in Northeastern Iowa Francis E. Tillman, Meagan J. Albon – University of Dubuque; Madeleine E. Zuercher, University of California-Berkeley; Gerald L. Zuercher, David E Koch, Rasika G. Mudalige-Jayawickrama – University of Dubuque.
P02-24	American Marten Habitat Suitability in the Northern Lower Peninsula of Michigan Angela Kujawa, Paul Keenlance, Alexandra Locher – Grand Valley State University; Robert Sanders, Little River Band of Ottawa Indians; Joseph Jacquot, Grand Valley State University.
P02-25	Grassland Bird Response to Grassland Restorations That Vary in Vegetative Diversity Joseph Lambert, Iowa State University; Robert Klaver, US Geological Survey, Jennifer Vogel – Iowa State University.
P02-26	Evaluating Differences in Invertebrate Communities Between Remnant and Restored Prairies in Missouri Joseph LaRose, Deborah Finke – University of Missouri, Division of Plant Sciences; Elisabeth Webb, Missouri Cooperative Fisheries and Wildlife Research Unit.

POSTERS

P02-27	Using Geolocators to Examine Seasonal Movements and Migratory Connectivity of Cerulean Warblers, a Declining Migratory Songbird That Breeds in Indiana. Garrett J. MacDonald, Clayton D. Delancey, Kamal Islam – Ball State University.
P02-28	Common Snapping Turtle Monitoring and Assessment in Illinois Katie Mainor; James T. Lamer, Western Illinois University; Mike McClelland, Illinois Department of Natural Resources; Emily Szott; Ashley Stanley.
P02-29	Application of Photo-identification Software Using Spot Patterns of African Civets (<i>Civettictis civetta</i>) in the Northern Tuli Game Reserve, Botswana. Jessica McDaniel, School of Natural Resources, University of Nebraska - Lincoln; Andrei Snyman, Department of Biological Sciences, California State University - Los Angeles; John P. Carroll, School of Natural Resources, University of Nebraska - Lincoln.
P02-30	Utilizing Diverse Cover Crop Mixes in the Establishment of Native Warm Season Grasses Chris A. McLeland, Dave J. Niebruegge, Kendall L. Coleman - Missouri Department of Conservation.
P02-31	Partnering with Graduate Programs for Conservation Vicky J. Meretsky, School of Public and Environmental Affairs at Indiana University; Robert L. Fischman, Maurer School of Law at Indiana University.
P02-32	Ecotypic Variation in Physiological Reaction Norms in Wintering Lizards: A Common-environment Experiment Using Populations from Two Latitudes. Madeline Michels-Boyce, John Krenz – Department of Biological Sciences, Minnesota State University, Mankato; Nora Ibargüengoytía, Departamento de Zoología, INIBIOMA-CONICET, Centro Regional Universitario Bariloche, Universidad Nacional del Comahue.
P02-33	Free Food Is Not Free: Do Food Plots Pose Greater Predation Risk Than Resource Benefit for Northern Bobwhite Quail? Nadejda A. Mirochnitchenko, Erica F. Stuber – Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska–Lincoln; Joseph J. Fontaine, US Geological Survey, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska–Lincoln.
P02-34	The Northeast Climate Science Center: Improving the Way Climate Science Informs Resource Management. Nigel Golden, University of Massachusetts - Northeast Climate Science Center; Toni Lyn Morelli, US Geological Survey - Northeast Climate Science Center.
P02-35	Selection Preference of Cavity Nesting Waterfowl Trenton Rohrer, Ben Murley, Stuart Fetherston – University of Wisconsin-Stevens Point.
P02-36	Influences of Mixed Severity and Time Since Fire on Diversity in Ponderosa Habitats Sarah Nodskov, University of Nebraska Lincoln, School of Natural Resources; Caleb Roberts, University of Nebraska-Lincoln, Department of Agronomy & Horticulture, Nebraska Cooperative Fish and Wildlife Research Unit – US Geological Survey; Victoria Donovan, University of Nebraska-Lincoln, Department of Agronomy & Horticulture; Emma Keele, University of Nebraska Kearney, Department of College of Natural & Social Sciences, Department of Biology; Dirac Twidwell, University of Nebraska-Lincoln, Department of Agronomy & Horticulture; Craig Allen, Nebraska Cooperative Fish and Wildlife Research Unit – US Geological Survey; Larkin Powell, Dave Wedin – University of Nebraska Lincoln, School of Natural Resources; David Angeler, Swedish University of Agriculture Sciences, Department of Aquatic Sciences and Assessment.
P02-37	The Occurrence of Pitcher’s Thistle on Piping Plover Protected Beaches Michael Oertel, Dr. Jason Garvon – Lake Superior State University.
P02-38	Vegetation Diversity and Connectedness in Ditches Across Northwest Ohio Hannah Olenik, MS Applied Geospatial Science ‘18, Bowling Green State University; Ashlee Nichter, MS Geology ‘17, Bowling Green State University; Andrew Gregory, Assistant Professor of Spatial Ecology and GRASE Research Lab, Bowling Green State Research Lab.
P02-39	Loafing: The Wild Turkey’s Guide to the Nap Christine Parker, University of Illinois at Urbana-Champaign/Illinois Natural History Survey; Thomas Benson, Wendy Schelsky – Illinois Natural History Survey; Paul Shelton, Illinois Department of Natural Resources; Jeff Hoover, Illinois Natural History Survey.

POSTERS

P02-40	Fuel for Shorebirds: A Survey of Potential Invertebrate Prey Items Along Northern Lake Michigan's Coastline During Nesting and Migration. Lisa A Pashnik, US Geological Survey Great Lakes Science Center; Taaja R Tucker, CSS-Dynamac/US Geological Survey Great Lakes Science Center; Erica L Johnson, US Geological Survey Forest and Rangeland Ecosystem Science Center; Stephen C Riley, US Geological Survey Great Lakes Science Center.
P02-41	Impacts of Extreme Conditions on White-tailed Deer Antlers Using Harvested and Naturally Cast Antler Metrics. Brian C. Peterson, Department of Biology, University of Nebraska at Kearney; Nicolas J. Fryda, Nebraska Game and Parks Commission; Casey W. Schoenebeck, Minnesota Department of Natural Resources.
P02-42	Using Construal Theory to Understand Students' Problemization of a Biodiversity Socio-Scientific Issue A. McKinzie Peterson, Jenny Dauer, Cory Forbes – University of Nebraska - Lincoln.
P02-43	Movement Patterns of Eastern Box Turtles in an Urban Ohio Landscape Sydney A. Hartbarger, Megan R. Rude, Richard S. Phillips – Wittenberg University.
P02-44	Qualitative Analysis of Landowner Behavior Preceding a Market Bust Using Farm Magazine Articles Brooks Ronspies, Larkin Powell – University of Nebraska Lincoln School of Natural Resources.
P02-45	Seasonal Movements of Spruce Grouse (<i>Falcapennis canadensis</i>) on the Huron-Manistee National Forest in Northern Michigan. Taylor R. Ross, Anna C. Siegfried – Wittenberg University; Scott A. Warsen, Kimberly A. Piccolo – US Forest Service; Richard S. Phillips, Wittenberg University.
P02-46	Monitoring Data, Decision Support Tools and the Midwest Avian Data Center Gareth Rowell, National Park Service, Heartland Inventory and Monitoring Network; Katie Koch, US Fish and Wildlife Service, Migratory Bird Program.
P02-47	Integrating Inventory and Monitoring Studies with National Park Service Park Web Pages Chad Gross, Gareth Rowell, Mike DeBacker – National Park Service, Heartland Inventory and Monitoring Network.
P02-48	No Changes in Bat Encounters on the Mio Ranger District During the Summers of 2010-2016 Anna C. Siegfried, Taylor Ross, David J. Hixon, Douglas M. Andrews – Wittenberg University; David Richardson, US Fish & Wildlife Service; Scott Warsen, US Forest Service; Richard S. Phillips, Wittenberg University; Kimberly A. Piccolo, US Forest Service.
P02-49	Patch Size and Nest Density Influence Nest Survival Victoria L. Simonsen, Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln; Joseph J. Fontaine, US Geological Survey Nebraska Cooperative Fish & Wildlife Research Unit, University of Nebraska-Lincoln.
P02-50	Using Canvasbacks (<i>Aythya valisineria</i>) as a Bioindicator of Wetland Quality in the Upper Midwest Eric Smith, Chris Jacques – Western Illinois University; Mike Anteau, US Geological Survey Northern Prairie Wildlife Research Center; Heath Hagy, Forbes Biological Station/Frank C. Bellrose Waterfowl Research Center.
P02-51	An Attempt to Quantify the Usefulness of Thermal Imagers for Locating Grassland Bird Nests Matt Stephenson, Lisa Schulte Moore – Natural Resource Ecology and Management, Iowa State University; Robert Klaver, US Geological Survey, Iowa Cooperative Fish and Wildlife Unit.
P02-52	Preliminary Assessment of a Mussel Habitat Suitability Index Model of the Lower Maumee River Wendy J. Stevens, Jessica J. Sherman, Todd D. Crail, Jonathan M. Bossenbroek – University of Toledo.
P02-53	Butterfly Survey of Restored Croplands and Native Prairies in the Northern Loess Hills of Western Iowa Logan Anderson, James Stroh – Morningside College.

POSTERS

P02-54	Use of Silicone Passive Sampling Devices (PSDs) for Assaying Potential Exposure of Northern Leopard Frogs to Pesticides in Agricultural Wetlands. Jennifer Swanson, Taylor Yaw – Iowa State University; Clay Pierce, US Geological Survey, Iowa Cooperative Fish and Wildlife Research Unit, Iowa State University; Kelly Smalling, Mark Vandever – US Geological Survey; Bianca Zaffarano, Iowa State University; Erin Muths, US Geological Survey, Amphibian Research and Monitoring Initiative.
P02-55	Microhabitat Use of Migrating Northern Saw-whet Owls Janelle Taylor, Logan Hubbard – UW Stevens Point Wildlife Society.
P02-56	Understanding the Ecological Impacts of Timber Harvest Techniques on the Bat Community in a Midwestern Hardwood Forest: Occupancy Analyses Using Bio-acoustics Keifer Titus, Tim Carter – Ball State University.
P02-57	The Benthic Invertebrate Communities of Northern Lake Michigan’s Cladophora “graveyards” Taaja Tucker, CSS-Dynamac/US Geological Survey Great Lakes Science Center; Patrick Hudson, Lisa Pashnik, Stephen Riley – US Geological Survey Great Lakes Science Center.
P02-58	Comparison of Two Sampling Techniques and Management Effects on Herptile Fauna of Squaw Creek National Wildlife Refuge, Northwest Missouri Darrin M. Welchert, US Fish and Wildlife Service, Squaw Creek National Wildlife Refuge; Mark S. Mills, Missouri Western State University; Jordan J. Meyer, University of Wisconsin – Stevens Point.
P02-59	Ruffed Grouse (<i>Bonasa umbellus</i>) Drumming Log Preferences Near Tomahawk, Wisconsin Jeffrey Williams Jr., Holly North, Sam Lau, Benjamin Tjepkes, Jason Riddle – University of Wisconsin-Stevens Point.
P02-60	Deer Recruitment in Wisconsin: New Estimation Methods Beth Wojcik, Tim Van Deelen – University of Wisconsin-Madison; Dan Storm, Wisconsin Department of Natural Resources.
P02-61	Effects of Distance from Water Control Structures on Furbearer Detection on Track Plates in Crex Meadows Wildlife Area, Grantsburg, Wisconsin. Lisa Zoromski, Cady Sartini, PhD. – University of Wisconsin-Stevens Point; Robert Hanson, Paul Petersen – Wisconsin Department of Natural Resources.
P02-62	Population Structure Analysis of Western Painted Turtles Charrissa Zuerlein, University of Nebraska – Lincoln; Larkin Powell, Director of Great Plains Cooperative Ecosystems Study Unit.

RESEARCH-IN-PROGRESS STUDENT POSTERS TUESDAY, FEBRUARY 7 • 6:00 PM - 9:00 PM • OLIVE BRANCH ROOM

A Student Research-in-Progress Poster session will be held in conjunction with the Poster Social on Tuesday, February 7, from 6:00 PM – 9:00 PM The following posters will feature submissions from undergraduate, M.S., and Ph.D. students and include: research that is in progress, or is a proposed research project (with a focus on study design), results from completed undergraduate research projects, or student chapter class or group research project. Attendees are strongly encouraged to visit with these students and provide feedback on their research.

POSTERS

RESEARCH-IN-PROGRESS STUDENT POSTERS (SP)	
SP-01	Butterfly Survey of Restored Croplands and Native Prairies in the Northern Loess Hills of Western Iowa Logan Anderson, Morningside College.
SP-02	Establishing Long-term Flashiness Index Values for West Fork White River: Analyzing Trends Through Graphical Analyses. Caleb Artz, Ball State University.
SP-03	The Attitudes and Rurality of Nebraskans Concerning the Black-tailed Prairie Dog and its Management: A Human Dimensions Inquiry. Eric Bruster, University of Nebraska - Lincoln.
SP-04	Drawdown in Nebraskan Reservoirs, Influencing Management through Ecology and Social Behavior. Kevin Carpenter, University of Nebraska - Lincoln.
SP-05	Assessment and Mapping of the Milwaukee Estuary Habitat. Brennan Dow, UW-Milwaukee School of Freshwater Sciences.
SP-06	Resolving the Challenges of Scale in Managing Eastern Redcedar Invasion. Brittany Dueker, University of Nebraska - Lincoln.
SP-07	The Invasive Nature of Asian Carps and Predicting the impact of the Asian Carp Invasion on Native Species. Sarah Gaughan, University of Nebraska - Omaha.
SP-08	Evaluating Insecticide Exposure Risk for Grassland Wildlife on Public Lands. Katelin Goebel, University of Minnesota Twin Cities.
SP-09	Home Range Size, Movements, and Survival Rates of Sora and Virginia Rails in a Managed Marsh Complex in Northwestern Ohio. James Hansen, The Ohio State University.
SP-10	Western South Dakota's Dominant Prairie Stream Fishes: An Updated Assessment and Population Dynamics. Stephen Jones, South Dakota State University.
SP-11	American Marten Habitat Suitability in the Northern Lower Peninsula of Michigan. Angela Kujawa, Grand Valley State University.
SP-12	Evaluating Differences in Invertebrate Communities Between Remnant and Restored Prairies in Missouri. Joseph LaRose, University of Missouri.
SP-13	Rusty Crayfish Consumption of Silver Carp Fecal Pellets. Zachary Laughlin, Ball State University.
SP-14	Vegetation Diversity and Connectedness of Ditches Across Northwest Ohio. Hannah Olenik, Bowling Green State University.
SP-15	Utility of Anglersheds for Understanding Recreational Fisheries. Christine Ruskamp, University of Nebraska - Lincoln.
SP-16	Ruffed Grouse (<i>Bonasa umbellus</i>) Drumming Log Preferences Near Tomahawk, Wisconsin. Jeff Williams, University of Wisconsin-Stevens Point Wildlife Society.

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The North Central Section of The Wildlife Society is the Midwest regional section of the parent Wildlife Society organization, representing Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin. The Wildlife Society's mission is "To inspire, empower, and enable wildlife professionals to sustain wildlife populations and habitats through science-based management and conservation." The Wildlife Society enhances our members' networking and learning opportunities, professional and career development, and provides numerous ways for them to get more involved in creating a better future for wildlife and their habitats.

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The Association of Fish and Wildlife Agencies' Management Assistance Team strives to respond to agency needs by offering relevant professional development training with focus areas including leadership, organizational effectiveness, individual effectiveness, communications, emotional intelligence, management, dealing with agency change and more.

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Midwest Partners in Amphibian and Reptile Conservation (MWPARC) is a regional working group of Partners in Amphibian and Reptile Conservation (PARC). Both the regional group (MWPARC) and national group (PARC) are dedicated to the conservation of native herpetofauna (reptiles and amphibians) and their habitats.

EXHIBITORS

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Smith-Root was honored to receive the "Best Booth Award" from MFW at the 2016 Midwest Fish and Wildlife Conference in Grand Rapids, MI. It has always been an honor to partner with fisheries scientists to develop solutions for the fisheries conservation and management community. Thank you all for your dedication to improving aquatic environments.

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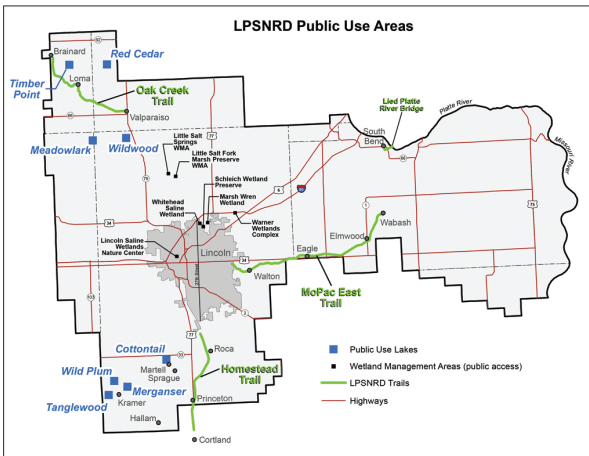
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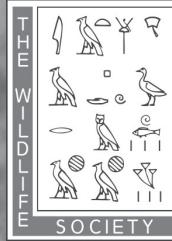


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