**NERR**

**The National Environment and Recreation Research Symposium**

**Celebrating 32 Years of NERR**

**Annapolis, MD**

**April 5 – 7, 2020**

**Schedule of Presentations and Events**

***Acknowledgements***

***2020 Conference Committee***

Chuck Nelson (Michigan State University) - 2020 Conference Chair

Diane Kuehn (SUNY College of Environmental Science and Forestry) - 2021 Conference Chair

Carla Barbieri (North Carolina State University) – 2019 Conference Chair

***Scholarship Committee***

Chair: Hung-Ling –*Stella*– Liu (South Dakota State University)

Members: Ellen Drogin Rodgers (George Mason University), Laurie Harmon (University of Wisconsin – La Crosse), Dave Klenosky (Purdue University) & Andy Holdnak (University of West Florida)

***Committees and Other Efforts***

* *Website*: Diane Kuehn (SUNY College of Environmental Science and Forestry) & Clifton Watts (East Carolina University)
* *Social networking*: Sara Brune (North Carolina State University), Kathryn Stevenson (North Carolina State University) & Sonja Wilhelm Stanis (University of Missouri)
* *Fund raising & raffle*: Sharon Todd (SUNY Cortland) & Kelly Bricker (University of Utah)
* *Marketing & promotion*: Kelly Bricker (University of Utah), Jerry Vaske (Colorado State University) & Craig Miller (Illinois Natural History Survey)
* *Hospitality Suite NERR 2020*: Clifton Watts (East Carolina University)
* *Social media*: John Confer (California University of Pennsylvania)
* *International*: Bob du Lee (Bowling Green State University) & Arne Arnberger (University of Natural Resources and Life Sciences Austria)

***2020 NERR Scholarship Recipients***

The NERR Scholarship Committee is pleased to announce the following students will receive NERR 2020 scholarships:

**•** Ami Choi (University of Minnesota)

• Tasha Dooley (University of New Hampshire)

• Benjamin Ghasemi (Texas A&M University)

• Gwyneth Schuler (East Carolina University)

• Lauren Janowicz (West Virginia University)

• Alice Morgan (West Virginia University)

• Cristina Watkins (University of Tennessee)

• Eunjung Yang (University of Florida)

***National Environment and Recreation Research Association (NERRA)***

***Executive Officers***

Alan Graefe (The Pennsylvania State University) – Chief Officer

Andy Holdnak (University of West Florida) – Treasurer

Ellen Drogin Rodgers (George Mason University) – Secretary

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Jim Absher (Natural Resources Sociologist), Carla Barbieri (North Carolina State University), Kelly Bricker (University of Utah), Diane Kuehn (SUNY College of Environmental Science and Forestry), Jerry Vaske (Colorado State University), Phillip Wang (Kent State University), Clifton Watts (East Carolina University), I-Chun (Nicky) Wu (Middle Tennessee State University) & Lauren Mullenbach (Student Rep., Pennsylvania State University).

***History of NERR***

The first Northeastern Recreation Research Symposium (NERR) was held April 2 - 4, 1989 at the New York State Park Management Institute in Saratoga Springs State Park, where 75 participants enjoyed the hospitality of the iconic and historic Gideon Putnam Hotel. The original idea was born two years earlier in the reception buffet line at the first ISSRM symposium in Corvallis, Oregon. Hungry and thirsty friends and colleagues Tom More, Jerry Vaske, Maureen Donnelly and Alan Graefe, who were familiar with the Southeast Recreation Research Symposium and other regional meetings, discussed the need for a suitable annual conference for recreation researchers in the northeast United States. NERR was the result of that discussion.

That first successful meeting led to a continuous stream of annual meetings in several locations. In 1996, the symposium moved to the Sagamore Resort in Bolton Landing on the shore of Lake George, New York, where it remained for many years. In 2012, the symposium moved to the historic Otesaga Hotel in Cooperstown, New York, after the Sagamore could no longer accommodate us due to a major renovation project. NERR was held at the Otesaga for three years before moving to Annapolis, Maryland, when an opportunity arose to partner with the Society of Outdoor Recreation Professionals to hold a joint conference in 2015. Annapolis provided more convenient access for the increasing number of attendees flying in from all around the country and even from overseas countries. This accessibility, combined with the warm reception we received from the Loews Hotel (now Graduate Hotel Annapolis), led to the decision to stay in Annapolis since 2016.

NERR typically attracts between 120-150 participants. The attendees have been mostly academics and recreation resource management professionals from state and federal agencies and non-governmental organizations. From the beginning, NERR has welcomed students, many of whom made their first research presentations at this meeting, and later returned as professors bringing their own students along, creating a second generation of committed participants. Until recently, the symposium was managed by an informal “steering committee” and operated under the auspices of several universities, originally SUNY-ESF in Syracuse and then Penn State. In 2017 the National Environment and Recreation Research Association (NERRA) was formed to manage the conference. The symposium name was changed to National Environment and Recreation Research, but the NERR acronym was maintained, to reflect the broader geographic and topical focus of the meeting. We now welcome you to the 2020 NERR Symposium and thank you for helping to continue and expand the reach of this historic event.

***Day 1 - Sunday, April 5, 2020***

***9:40 AM Meet for guided tour of Annapolis ($29 extra; not included in registration fee)***

**Come explore the colonial history of Annapolis!**  
Given the positive response to the social activity last year, the NERR Symposium is offering again the opportunity to socialize and network by joining a guided tour through the deep-rooted stories of the nation's heritage before the conference kicks-off!

The guided tour will take place on **Sunday, April 5th from 10:00 to 11:15 am ($29/pp, paid the day of)**. We will meet in the **lobby of the hotel at 9:40 am and leave at 9:45 am**. The visitor center is a 5-minute walk from the hotel (26 West Street).

The tour takes place in electric cars so the availability is limited to 25 people. To ensure your spot, **please contact**[**sbrunea@ncsu.edu**](mailto:sbrunea@ncsu.edu)**to RSVP preferably by Wednesday, April 1st.**

***Day 1 - Sunday, April 5, 2020***

***10:00 a.m. – 5:30 p.m. Registration Atrium***

***Pre-conference Networking Event TBA***

***1:00 – 1:20 p.m.******Welcome and Opening Remarks Atrium***

*NERR 2020 Chair, Chuck Nelson, Michigan State University*

***Session I (Sunday, 1:30 – 3:00 p.m.)***

***1:30 – 3:00 p.m.******Session I-A: Agriculture/Food Tourism Ballroom A***

*Facilitator:* TBA

* *The influence of food tourism experiences on tourists’ health*

Shenglang Jin, (Huangshan University), Jie Gao (San Jose State University), Alvin Hung Chin (St. Cloud State University) & Yawei Wang, (Montclair State University)

* *Growing new markets: The contribution of agri-tourism to local food consumption*

Sara Brune, Whitney Knollenberg, Kathryn Stevenson, Caitlin Reilly & Carla Barbieri (North Carolina State University)

* *Growing our future: Agricultural literacy among North Carolina youth and their families.* Caitlin Reilly, Kathryn Stevenson, Whitney Knollenberg, Sara Brune & Carla Barbieri (North Carolina State University).
* *Creative Place-making and Community Capitals Framework: Finding the perfect blend for the sustainable development of craft-beverage tourism.*

Claudia Gil Arroyo, Whitney Knollenberg & Carla Barbieri (North Carolina State University).

***1:30 – 3:00 p.m. Session I-B: Outdoor Recreation I Ballroom B***

*Facilitator:* TBA

* *Activity-based market segmentation and visitor trends on the Monongahela National Forest*

Connor Akers, Chad Pierskalla, Jinyang Deng & Dave Smaldone (West Virginia University)

* *Passengers’ whale watching experiences in Channel Islands and Stellwagen Bank National Marine Sanctuaries: Socio-demographic profiles, expenditures, importance-satisfaction ratings and related attitudes*

Lauren Knapp (National Marie Sanctuary), Ryan Shea & Danielle Schwarzmann (National Sanctuary Foundation) & Vernon Leeworthy (NOAA Office of National Marine Sanctuaries)

* *A historical geospatial analysis of severe weather events in Oklahoma State Parks: A aark management aerspective*.

I-Chun (Nicky) Wu (Middle Tennessee State), Adam J. Mathews (Western Michigan University), Hung-Ling (Stella) Liu, (South Dakota State University), Nicholas Rose (North Idaho College)

* *Dude hears my car: Understanding park visitor perceptions of road noise and related management actions*.

William L. Rice, Katherine Y. Zipp, Peter Newman & B. Derrick Taff (Pennsylvania State University) & Zackary D. Miller (Utah State University).

***1:30 – 3:00 p.m. Session I-C: Diversity and Gender Ballroom C***

*Facilitator:* TBA

* *Gender differences in leadership pursuit among early career conservation professionals*.

Samantha Lockwood, Michael Edwards, Erin Seekamp, Jackie Bruce & Whitney Knollenberg (North Carolina State University)

* *Gender differences and the influence of childhood experience on situational fears in the outdoor environment*.

Sharon L. Todd, Sean Dunn & Kenneth Cohen (SUNY Cortland)

* *Travel barriers faced by LGBT individuals: A systematic review*

Samantha R. Stolze (Middle Tennessee State).

* *Developing engagement strategies and research methods for diversity, equity and inclusion in the outdoors.*

Monika Derrien (USDA Forest Service, Pacific Northwest Research Station)

***3:00 – 3:30 p.m. Afternoon Break Atrium***

***Session II (Sunday, 3:30 – 5:00 p.m.)***

***3:30 – 5:00 p.m. Session II-A: Environmental Sustainability Ballroom A***

*Facilitator: TBA*

* *Fracking politics: Political ideology and state forest recreationists’ perceptions of shale natural gas energy development in Pennsylvania*

Michael Ferguson & Myles L. Lynch (University of New Hampshire), Zachary D. Miller (Utah State University) & Peter Newman (Pennsylvania State University)

* *A political power struggle: The influence of political orientation upon water-based recreationists’ perceptions of offshore wind energy development in New Hampshire*.

Tasha L. Dooley, Michael D. Ferguson, Lauren A. Ferguson & Clayton Mitchell (University of New Hampshire).

* *The influence of location on water quality perceptions across a geographic and socioeconomic gradient in Appalachia*

Ross G. Andrew, Robert C. Burns & Mary E. Allen (West Virginia University).

* *Resident perceptions of ecosystem services: Benefits and costs of urban greenspace*

Emily Piontek & Sonja Wilhelm Stanis (University of Missouri)

***3:30 – 5:00 p.m. Session II-B: Tourism Ballroom B***

*Facilitator:*

* *Community resilience and community quality of life in a tourism destination.*

Eunjung Yang, Jinwon Kim & Brijesh Thapa (University of Florida).

* *Cold as ice? Arctic tourists’ epiphanies and connection to wildlife*

Jennie Warmouth (National Geographic Grosvenor Teacher Fellow), Jeffrey C. Skibins & Gwyneth Schuler (East Carolina University)

* *Tourism motives and tourist characteristics: Their relationships and implications for tourism planning*

Clifton Watts (East Carolina University) & Paige Viren (San Francisco State University)

* *Flygskam / Flight shame – A multiple method exploratory study*

Wesley S. Roehl (Temple University).

***3:30 – 5:00 p.m. Session II-C: Urban Settings Ballroom C***

*Facilitator:*

* *More than “just green enough”: Helping park professionals achieve equitable greening and limit environmental gentrification*.

Joshua Baur and Ashley Estrada (San Jose State University)

* *Community needs assessment for Shiawassee National Wildlife Refuge expansion*

Charles M. Nelson & Kali Maisano (Michigan State University)

* *Freeways and farms: Emma Prusch and Taylor Street urban farms study.*

Sharon L. Todd, Eric Kovatchitch & Anderson Young (SUNY Cortland).

* *The relationship between park access, food desert, obesity, and diabetes in the US.*

Jae In Oh, Kang Jae “Jerry” Lee, Aaron Hipp (North Carolina State University)

***5:15 – 6:15 p.m. (Sunday) Poster Session and Reception Atrium***

* *Do National Parks or different levels of scenic areas drive lodging business performance?*

Chia-Ning Chiu (National llan University).

* *Technology and tools for underwater surveys for natural resources management.*

Mark Gleason (Grand Valley State University).

* *Social capital and minor league baseball: A community gathering activity*

Roy Ramthun, Susan Williams & Angelique Edwards (Concord University).

* *White Salmon River recreation: 2019 user characteristics, satisfaction and crowding*.

Melissa Hurtado, Robert C. Burns, Ross G. Andrew, Mary E. Allen (West Virginia University) Jasmine Moreira (Ponta Grossa State University)

* *The energy experience: Exploring the effects of experience use history upon sater-based recreationists’ perceptions of offshore wind energy development in New Hampshire*

Georgia Giles, Michael Ferguson, Lauren Ferguson & Clayton Mitchell (University of New Hampshire).

* *The Influence of visitors’ perceptions of trail risk and difficulty on registry sign-ins in the Catskill Park.*

Diane Kuehn and Matthew Borovy (SUNY ESF).

* *Remote sensing tools for parks and protected areas management*.

Robert S. Bristow, Timothy LeDoiux & Anna Therien (Westfield State University).

* *On the trail to conflict prevention: An assessment of the relationship between antecedent conflict factors and self-reported dog-walking practices*

Jane M. Walsh (Nova Southeastern University).

* *Optimizing the cost-efficiency of climate adaption planning for historical resources : A sensitivity analysis of optimal preservation model at Cape Lookout National Seashore*

Mengqing Wang1 , Zhewen Yang1 , Ping Chen1 , Xiao Xiao1 (1Arizona State University). Erin Seekamp2 (2North Carolina State University)

* *Examining the subcultural differences in recreation activities and perceived constraints to visit national parks among racial/ethnic groups*.

Zongrui Liu, Lanting Jiang, Junya Lu & Xiao Xiao (Arizona State University)

* *Staff perceptions of factors influencing a program encouraging voluntary use of non-lead deer hunting ammunition*.

John H. Schultz, Sonja A. Wilhelm Stanis, Damon M Hall & Elisabeth B. Webb (University of Missouri)

* *Finding adventure: Identifying factors of adventure towns*

Alice Morgan, Michael Strager & Dave Smaldone (West Virginia University).

* *Promoting small town tourism through special events: A case study of a college town*.

Hung Ling (Stella) Liu, Xu Li (South Dakota State University).

* *Fishing for conflict: Exploring visitor use management and experience quality among anglers and kayakers on the Middle Youghiogheny River in Ohiopyle State Park*

Holly R. Stokely (University of New Hampshire), Michael Ferguson, Andrew Mowen & Alan Graefe (Pennsylvania State University)

* *Mari-culture tourism: Introducing a process to cultivate coastal community supply and demand.* Mitch Carstens & Emily Yeager (East Carolina University), Whitney Knollenberg & Carla Barbieri (North Carolina State University), Jane Harrison & Julie Liebach (North Carolina Sea Grant)
* *Assessing the impacts of on-water recreation on marine protected areas: Overview of methodological techniques*. Tatiana Iretskaia (Michigan State University)
* *Using co-management theory to conceptualize strategies for the creation of tourism advocates.*

Hailey Post 1 , Whitney Knollenberg 1 , (North Carolina University) & Ashley   
Schroeder 2 (The Pennsylvania State University)

* *An examination of attitudes toward a donation program in an urban zoo setting.*

Lin Zhang (University of Arizona), David B. Klenosky (Purdue University) & Christine A. Vogt (Arizona State University).

* *Student-based participatory trail assessment: Comparative case study of Brazil and USA*.

Suet Yi Cheung , Samantha Lockwood, Anne McWhinney, Andrew Rogers, Ya Fai Leung (North Carolina State University), Wei Fang (The Chinese University of Hong Kong) & Douglas de Souza Pimenta ( Rio de Janeiro State University & Fluminense Federal University)

* *Using environmental education to foster engagement and stewardship in citizen science*

Jessica Kaplan, Dave Smaldone & Megan Kruger (West Virginia University).

* *Differentiating and retaining dog-park permit holders: The role of the place and proximity*

Kota Minegishi, Ingrid E. Schneider (University of Minnesota) & Albert Boaitey (University of Wisconsin-River Falls).

* *Last chance tourism and social media: Are they shaping the tourist experience in “Greenland?*

Claudia Gil Arroyo & Hailey Post (North Carolina State University).

* *Urban challenge course offers unique benefits* *for female youth and kids of color*

Robby Cooper, Scott VanderWey & Kevin Wright (Washington State University).

* *Spatial structural equation modeling: A robust tool for park and recreation managers*

Jinwon Kim, Changwook & Kim, Brijesh Thapa (University of Florida)

* *Tourism industry clusters and community resilience*.

Jinwon Kim, Kevin Ash, Eunjung Yang (University of Florida) & Seongsoo (Simon) Jang (Cardiff University).

* *Assessment of the 2014 West Virginia Recreation Accessibility Guide and Emergency Rescue Plans*.

Damon Cassedy, Chad Pierskalla, Steve Selin &Andrea Talliaferro (West Virginia University).

* *Visual attention and perceived crowding in nature-based parks: An eye-tracking study.*

Xiao Xiao, Junyu Lu,Megha Budruk (Arizona State University) & Evan Jordan (Indiana University)

* *Using eye-tracking techniques to explore crowding issues in the trade shows.*

Jie Gao (San Jose State University) & Xiao Xiao, Junyu Lu (Arizona State University)

* *Bridging the gap between destination marketers and communities they serve*.

Annette Rummel (Great Lakes Bay Regional Convention and Visitors Bureau), Paige P. Viren & Pavlina Latkova (San Francisco State University).

***6:30 – 8:30 p.m. (Sunday) Buffet Dinner Ballroom***

***7:15 p.m. Founder’s Forum Speaker Ballroom***

Speaker Andrew Mowen (Pennsylvania State University)

***Day 2 - Monday, April 8, 2019***

***7:00 a.m. – 8:00 a.m. Breakfast Atrium***

***7:00 a.m. – 5:30 p.m. Registration Atrium***

***Session III (Monday, 8:00 – 9:30 a.m.)***

***8:00 – 9:30 a.m. Session III-A: Human Dimensions Wildlife Ballroom A***

*Facilitator:* TBA

* *A review of 50 state policies related to private land hunting: Public access, landowner tags, license exemptions, habitat incentives and game management*

Luke Macaulay (University of California, Berkley).

* *Effects of stated attribute importance on hunter satisfaction: Who gains satisfaction from waterfowl hunting?*

Matthew Gruntorad1, Jeffery J. Lusk2, Mark P. Vrtiska2, Christopher J. Chizinski1 & Jo Beth Mullens2 (University of Nebraska1) (Nebraska Game and Parks Commission2)

* *Fishing for trout and satisfaction in stocked waters of West Virginia*

Mary E. Allen, Ross G. Andrew, Kyle Harman, Robert C. Burns (West Virginia University).

* *Encouraging voluntary use of non-lead ammunition on national wildlife refuges: Factors influencing program support by field staff*.

John H. Schultz, Sonja A. Wilhelm Stanis, Christine Jie Li (University of Missouri) & Elisabeth B. Webb (US Geological Survey).

***8:00 – 9:30 a.m. Session III-B: Unique Methods Ballroom B***

*Facilitator: Rodney Warnick*

* *Economic impact analysis – Great New England Air Show: Lessons learned after a decade of EI assessments*

Rodney B. Warnick (University of Massachusetts) & David C. Bojanic (University of Texas

at San Antonio).

* *The role of emotional dimensions in natural protected area soundscape management.*

Andrea Ednie (University of Wisconsin-Whitewater), Karen Beeftink (University of Maine-

Machias), Trace Gail & Andres Adiego (Center for Patagonia Ecosystem Research, Chile)

* *Examining decision-making and information use by Appalachian Trial long-distance hikers.*

Andrew Glenn Rogers & Yu-Fai Leung (North Carolina State University).

* *Bison approach: A virtual reality study.*

Stephanie E. Freeman, Zachary D. Miller, Jacob A. Benfield, B. Derrick Taff & Peter Newman

(Pennsylvania State University).

***8:00 – 9:30 a.m. Session III-C: Roundtable I Ballroom C***

*Facilitator: TBA*

* *Place, policies and pricing: Recreational dog-walking management opportunities and challenges*

Arne Arnberger1, Ingrid E. Schneider2, Deonne VanderWoude3, Sonja Wilhelm Stanis4 (1University of Natural Resources and Life Sciences Austria, 2University of Minnesota, 3City of Boulder Open Space & Mountain Parks, 4University of Missouri).

Across and within recreational/ or recreation area systems, the increase in dogs accompanying human visitors leads to both opportunities and challenges for area management. Given the high estimated dog-ownership rates around the world and estimated continued increase in ownership (APPA Research & Markets, 2019), these challenges and opportunities will persist. While dog-parks are among the fastest type of park under development (Trust for Public Land, 2018) and recreational dog walking occurs across and within systems of varied ownership, fewer than one in five dog-related studies include visitor perceptions (Weston et al. 2014). In an effort to address this gap and respond to management challenges and research opportunities, this organized roundtable addresses related management challenges and opportunities. Following a 5- minute introduction to dogs in parks and outdoor areas, four short presentations (7-10 minutes each with 5 minutes questions) will be presented to share recent research and spur discussion. The presentations will examine 1) differences in place attachment between dog walkers and non-dog walkers in two countries across several sites, 2) development and adherence to dog-control measures, 3) perceptions of fees and permits, and 4) norms for dog-waste pick up across and within a major urban dog-park system. The remaining 30 minutes of facilitated discussion will be guided and informed by participant interests with a goal of developing an informed list of future research and management opportunities.

***9:30 – 10:00 a.m. Mid-morning Break Atrium***

***Session IV (Monday, 10:00 – 11:30 a.m.)***

***10:00 – 11:30 a.m. Session IV-A: Recreation Theory Ballroom A***

*Facilitator:* TBA

* *Recreation is a social-ecological complex adaptive system*.

*Wayde Morse* (Auburn University)

* *Evaluating social-ecological intensities through space and time on a national wildlife refuge*. Olivia A. DaRugna, Mark A. Kaeomingk, Kevin Pope (University of Nebraska)
* *The need for mental health programming in community recreation: A comparison of resident and student priorities in West Virginia*.

David Graefe (Lock Haven University)

* *Veblen’s leisure and the demise of capitalism: A hermeneutic explanation*.

Philip Wang (Kent State University) & Xiang Cheng (Zhejiang University).

***10:00 – 11:30 a.m. Session IV-B: Physical and Mental Health Ballroom B***

*Facilitator:*  TBA

* *Adolescent adventures in geology: Best practices and recommendations for developing and implementing an adventure geology camp for high school students while understanding impacts on perceived self-efficacy of participants.*

Lauren Janowicz, Robert Burns & Dave Smaldone (West Virginia University).

* *Environmental concern and adaptive migration: The role of community attachment in vulnerable environments*.

Daniel Pilgreen, Gerard Kyle, Ashley Ross & Richard Woodward (Texas A&M University)

* *Towards a long-term understanding of outcomes through work at a residential outdoor environmental education camp*.

Timothy J. Mateer, B. Derrick Taff, Pete Allison, Carter A. Hunt & Ellen Will (Pennsylvania State University).

* *Occupational solar exposure at summer camp*.

Jason P. T. Morgan (California State University) & Jackson Wilson (San Francisco State University)

***10:00 – 11:30 a.m. Session IV-C: Roundtable II Ballroom C***

*Facilitator: TBA*

* *Sustainable Community Development in Parks and Protected Areas: Interdisciplinary Partnerships through Applied Research*.

Kelly S. Bricker1, N. Qwynne Lackey1, Matthew Brownlee2  Ryan Sharp3  & Michael Blacketer2  (University of Utah1 ) (Clemson University, 2) (Kansas State University 3)

External threats to parks and protected areas (PPA) endanger the long-term sustainability viability of these preserves. In the face of growing threats, PPA managers are challenged to implement new management strategies to navigate encroaching development around their borders. In order to mitigate threats, strategies that mobilize communities as ambassadors for parks are much needed (Keiter, 2013; Slocum, 2017).

Panelists will discuss how research partnerships with park administrators at Theodore Roosevelt National Park informed mitigation strategies that both rely on and reinforce strong relationships with gateway communities. The study details how regional collaboration offers opportunities for communities to draw upon the assets of the park for sustainable tourism development.

***12:00 – 1:15 p.m. (Monday) Lunch and Keynote Address Atrium***

Speaker Wendy Hart Ross, Superintendent Theodore Roosevelt National Park

***1:15 – 1:45 p.m. Silent Auction Atrium***

Kelly Bricker and Sharon Todd

***Session V (Monday, 2:00 – 3:30 p.m.)***

***2:00 – 3:30 p.m. Session V-A: Outdoor Recreation II Ballroom A***

*Facilitator:*  TBA

* *Trends in Recreation Visitation to National Forests and Grasslands*.

Donald B.K. English & Eric M. White (USDA Forest Service).

* *Sustainability in the classroom: Understanding integration of sustainability concepts into curricula across disciplines.*

Rick Gage (University of Nebraska-Kearney) & David Graefe (Lock Haven University)

* *Place Attachment and environmental worldview as Antecedents of wilderness preservation.*

Christopher J. Wynveen (Baylor University) Kyle Maurice Woosnam & Samuel J. Keith (University of Georgia).

* *Overcoming constraints – Visitation constraints & Park management strategies*.

Hung-Ling, Paige O’Farrell & Kiley Foss (South Dakota State University).

***2:00 – 3:30 p.m. Session V-B: Urban Spaces Ballroom B***

*Facilitator: TBA*

* *Comparing news coverage of three prominent urban parks using an environmental justice framework.*

Lauren E. Mullenbach & Andrew J. Mowen (The Pennsylvania State University).

* *Effects of the location on festival experiences*.

Joohyun Lee & Hannah Nichols (Eastern Mennonite University).

* *Impacts of Park Renovations Over Time and Across Neighborhoods*.

Samantha L. Powers1 , Nicholas A. Pitas2 , Jerrica Oliver Peets1 , Benjamin Hickerson3 , Birgitta L. Baker1 , Lauren E. Mullenbach1 , & Andrew J. Mowen1 (1The Pennsylvania State University), (2 State University of New York), (3 University of North Carolina).

* *Changes in development of urban green areas and perceived safety: Case Study from Tallinn, Estonia*

*Mart Reimann & Helen Soovali-Sepping (Tallinn University)*

***2:00 – 3:30 p.m. Session V-C: Roundtable III NPS Conversation Ballroom C***

*Facilitator: TBA*

National Park Service Roundtable conversation with Wendy Hart Ross, Superintendent Theodore Roosevelt National Park and Bob Ratcliffe, Chief of Conservation and Recreation Programs for NPS regarding the past, present and future of the National Park Service including resources, facilities, visitors and employees.

***3:30 – 4:00 p.m. Afternoon Break Atrium***

***Session VI (Monday, 4:00 – 5:30 p.m.)***

***4:00 – 5:30 p.m. Session VI-A: Outdoor Recreation III Ballroom A***

*Facilitator: TBA*

* *Visitor monitoring and management in park and protected areas: An international perspective*.

Robert C. Burns (West Virginia University), Arne Arnberger (University of Natural Resources and Life Sciences, Austria), Jasmine Mioreira (University of Ponta Grossa, Brazil) & Eick von Ruschkowski ( Alred Toepfer Academy for Nature Conservation of Lower Saxony, Germany)

* *How do you say, “crowding” in Spanish? Results from a crowding study in Beltzville State Park, PA*.

Adrian Benedetti, Alan Graefe, Derrick Taff, & Max Olsen (Pennsylvania State University).

* *Recreation participation and consumption outlooks to 2070 for winter activities.*

Ashley E. Askew (University of Georgia), Eric M. White(USD-Forest Service Pacific Northwest Station) & J.M. Bowker (USDA-Forest Services Southern Research Station).

* *Toward a valid of recreation benefits: Examining the recreations setting-benefit relationship across diverse sites.*

Peter J. Fix, Rachel Garcia, Kimberly Diamond, R. Bryant Wright, (University of Alaska), Dorothy Morgan (USDI Bureau of Land Management) Randy J. Virden (Arizona State University) & Timothy Casey (Colorado Mesa University)

***4:00 – 5:30 p.m. Session VI-B: Environmental Sustainability II Ballroom B***

*Facilitator:* TBA

* *Pathways to engagement with nature.*

S. Brent Jackson, Kathryn Stevenson, Nils Peterson, Lincoln Larson & Erin Seekamp (North Carolina University).

* *What students say about science: A qualitative approach to science relevancy in adventure STEM education.*

Alice Morgan, Dave Smaldone, Steven Selin, Jinyang Deng, Gay Stewart & Marion Holmes (West Virginia University).

* *The new citizen scientist: Multi-project participation*.

Bradley Allf, Caren Cooper, Lincoln Larson, Rob Dunn, Sara Futch & Maria Sharova (North Carolina State University).

* *Exploring the development of sustainable tourism civic reporting indicators for bio-cultural conservation visitors*.

Christina T. Cavaliere & Jonathon Day (Colorado State University) & Kelly Bricker (University of Utah).

***4:00 – 5:30 p.m. Session VI-C: Roundtable IV Ballroom C***

*Facilitator: TBA*

*Connecting visitor use data to environmental justice and increasing participation rates among the youth in National Marine Sanctuaries.*

Daniel Schwarzmann, Grace Bottitta-Williamson, Michelle Rome (NOAA Office of National Marine Sanctuaries) Robert Burns, Mary Allen, Ross Andrew (West Virginia University) & Jasmine Cardoza Moreira (Ponta Gross University, Brazil)

Visitors to federal protected area settings number in the hundreds of millions annually, and account for significant economic impacts in gateway communities and within some protected areas. However, a knowledge gap exists with respect to fully understanding the number of visitors in many agencies. While the US Forest Service has a good understanding of the numbers of visitors who use National Forest settings, many federal agencies are just beginning to quantify use (e.g., boating and fishing in NMS settings and viewing wildlife and viewing scenery in NPS settings). This Roundtable will focus on various approaches of estimating visitation in protected areas, as well as the opportunities and challenges associated with the management of visitors.

***5:45 – 6:45 p.m. NERRA General Business Meeting Ballroom A***

Alan Graefe - NERRA CEO

***Dinner on Your Own***

***Day 3 - Tuesday, April 9, 2019***

***7:00 a.m. – 8:00 a.m. Breakfast Atrium***

***7:00 a.m. – 12:00 p.m. Registration Atrium***

***Session VII (Tuesday, 8:00 – 9:30 a.m.)***

***8:00 – 9:30 a.m. Session VII-A: Tourism II Ballroom A***

*Facilitator: TBA*

* *Exploring stress among Korean American leisure travelers*.

Ami Choi & Ingrid E. Schneider (University of Minnesota).

* *Examining outdoor experiences and place relationships through online trip reports*.

Hannah Schaefer Tibbett & Melanie Armstrong (Western Colorado University) & Monika Derrien (USDA Forest Service Pacific Northwest)

* *A critical examination of sustainable tourism development and practices.*

Hans Vogelsong (East Carolina University).

* *Factors influencing perceived appropriateness of concessioner activity in Grand Teton National Park*

Nick Pitas (State University of New York - Brockport)

***8:00 – 9:30 a.m. Session VII-B: Methods and Theory Ballroom B***

*Facilitator:* TBA

* *Analyzing virtual and augmented reality technologies in tourism and hospitality industries*

Yawei Wang & Ross A. Malaga (Montclair State University) & Jie Gao (San Jose State University)

* *Using participatory mapping to assess spatial outcomes of overnight users in Grand Teton National Park.*

Erinn Drage, William Rice, Peter Newman & Derrick Taff (Pennsylvania State University) & Jennifer Newton (Grand Teton National Park).

* *Longitudinal association of leisure time physical activity at different intensities with psychological and social well-being: A parallel latent growth curve model*

Changwook Kim & Jinwon Kim (University of Florida).

* *Does Urban Sprawl Matters? Understanding the Spatial Relationship between Urban Sprawl, Physical Activity Participation and Adult Obesity*

Jinwon Kim, Changwook Kim & Brijesh Thapa (University of Florida).

***8:00 – 9:30 a.m. Session VII-C: Ag Tourism and Economic Considerations Ballroom C***

*Facilitator: TBA*

* *Growth Pole theory and urban development: The case of Great Divide Brewing Company and the Ballpark Neighborhood of Denver*

Alison Bender (Eastern Washington University) & Rick Gage (University of Nebraska)

* *Implementation of a socioeconomic monitoring program for the National Park Service*.

David Pettebone, Bret Meldrum, Lynne Koontz, Leslie Richardson (National Park Service Ft. Collins, CO), Steven Lawson & Christ Leggett (Resource Systems Group, White River Junction, VT)

* *Economic value of elk viewing in Michigan*.

Paul Austin Hunt & Frank Lupi (Michigan State University).

***9:30 – 10:00 a.m. Morning Break Atrium***

***Session VIII (Tuesday, 10:00 – 11:30 a.m.)***

***10:00 – 11:30 a.m. Session VIII-A: Diversity and Outdoor Recreation Ballroom A***

*Facilitator:*  TBA

* *Cardiac endurances increases in Taiwanese elderly after a six-week intervention using outdoor fitness equipment in an urban park.*

Hsueh-Wen Chow and Kung-Tang Chang (National Cheng Kung University Taiwan), Jorg

Konigstorfer (Technical University of Munich) & Andrew Mowen (Pennsylvania State

University)

* *Exploring females' career development in hospitality.*

Liu Ting (Huangshan University), Jie Gao (San Jose State University) & Alvin Hung Chung

Yu (St. Cloud State University)

* *Cultural events in nature-based tourism destinations: Insights from southeastern Nigeria.*

Chigozie J. Odum (University of Nigeria)

* *Investigating factors related to African American women’s physical activity*.

Jahmaad I. Harrell & Birgitta L. Baker (Pennsylvania State University).

***10:00 – 11:30 a.m. Session VIII-B: Human Dimensions of Wildlife Ballroom B***

*Facilitator: TBA*

* *Who visits national wildlife refuges? Understanding patterns of visitation to better manage visitors’ experiences*.

Lara Mengak & Alia Dietsch (Ohio State University) & Natalie Sexton (U.S. Fish and Wildlife Service)

* *Recreation user conflict and satisfaction impacts on Tennessee Wildlife Management Areas*.

Cristina E. Watkins (University of Tennessee)

* *On the relationship between hunting participation and pro-environmental behaviors*.

Benjamin Ghasemi & Gerard T. Kyle (Texas A&M University).

* *Another test of the satisfaction model of crowdin*g

Gerard Kyle (Texas A&M University) & Adam Landon (Minnesota Department of Natural

Resources)

***Symposium Concludes (Tuesday 11:30)***

***Thanks for your participation.***

***See you next year!***

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***Abstract Reviewers***

***Oral and Poster Presentations:***

Clifton Watts (East Carolina University), Robert Bristow (Westfield State University), Robert Burns (West Virginia University), Michael Ferguson (University of New Hampshire), Jie Gao (Montclair State University), Andy Holdnak (University of West Florida), Dan McCole (Michigan State University), Alison Murray (Eastern Washington University), Ashley Schroeder (The Pennsylvania State University), Gail Vander Stoop (Michigan State University), Paige Viren (San Francisco State University), Phillip Wang (Kent State University), Rodney Warnick (University of Massachusetts at Amherst), Sonja Wilhelm Stanis (University of Missouri), I-Chun Mullenbach (Nicky) Wu (Middle Tennessee State University), Charles Nelson (Michigan State University) & Chris Wynveen (Baylor University).

***Round-Tables***:

Alan Graefe (Pennsylvania State University), Charles Nelson (Michigan State University), Ellen Rodgers (George Mason University) & Diane Kuehn (SUNY College of Environmental Science and Forestry).