**SYMPOSIA**

Each day in addition to the general sessions, two concurrent symposia are offered. All symposia will be held in either the Kellogg Center (KC) Auditorium or Room 112 in the Brody Building at the following times:

Morning session: 10:30- 12:00 pm

Early afternoon session: 1:30-3:00 pm

Late afternoon session: 3:30 – 5:00 pm.

Please see the Program-At-A-Glance (p. X) for details regarding presentations in symposia. Abstracts of these presentations can be found in the Oral Presentations section of the online Abstract Booklet (website).

**Wednesday, August 2**

**S1: #TheTweetingBird: Using science communication via social media to benefit your research and your career**

Organizers: Auriel Fournier, Mississippi State University, Jordan Rutter, American Ornithological Society, and Nicole Wood, Central Michigan University

KC Auditorium, Morning session

The goals of this symposium are to teach scientists of all science communication (aka scicomm) experience levels which social media apps are available, how to use these apps, and how to apply the use of these apps to benefit multiple facets of their careers. By the end of the symposium, audience members will have a new knowledge base that they will be able to start implementing immediately.

**S2: The Kirtland’s Warbler: Full life-cycle findings and application to conservation**

Organizers: Dave Ewert, The Nature Conservancy, and Nathan Cooper, Smithsonian Migratory Bird Center

Brody 112, Morning and early afternoon sessions

The Kirtland’s Warbler is one of the rarest, yet best studied migratory passerines in North America. The one day symposium will provide a comprehensive full life-cycle review of the ecology, demography, distribution, and conservation of the Kirtland’s Warbler. The first speaker will provide an overview of the natural history and conservation of the Kirtland’s Warbler. Subsequent speakers will focus on aspects of carry-over effects, management on the breeding grounds, connectivity and migration, winter ecology, population viability analysis, climate change interactions, and projected future work with Kirtland’s Warblers. The symposium will be complemented by a one day field trip to the Kirtland’s Warbler breeding grounds in Michigan’s northern lower peninsula.

**S3: Birds of different feathers: increasing diversity in ornithology**

Organizers: Nancy Chen, University of California Davis, Scott Taylor, University of Colorado Boulder, Nandadevi Cortes-Rodriguez, Ithaca College, Sara Kaiser, Smithsonian Institution, and Kevin Omland, University of Maryland, Baltimore County

KC Auditorium, Early afternoon session

Please see page XX of the program for details on this symposium.

**Thursday, August 3, 2017**

**S4: Best tools for studies of small landbird movements in the golden age of bio-logging**

Organizer: Emily McKinnon, University of Windsor

KC Auditorium, All Day

The field of movement ecology is rapidly expanding as tracking technology is becoming simultaneously more sophisticated and light-weight. For small migratory landbirds, this has fueled an exponential increase in our understanding of migratory connectivity, migration timing, and year-round conservation needs for species at risk. There are now more types of tracking technology available than ever before, and a need for a synthesis of what tracking tools are best applied to which questions, and to which species. The talks in this symposium will be from a broad range of researchers at the forefront of the application of these technologies, who will share their expertise in the use of various tags, analysis techniques, as well discuss any impacts on study species, to inform future directions in the study of movement ecology of small landbirds.

**S5: Agriculture, ecosystem services, and avian conservation**

Organizer: Catherine Lindell, Michigan State University

Brody 112, Morning session

Food production activities cover one fourth of the Earth’s land surface. Investigations that simultaneously explore how birds affect agricultural systems and how agricultural systems affect birds are key to addressing the challenge of maintaining and increasing populations of bird species that provide ecosystem services important to agricultural productivity. This symposium presents recent research relevant to this challenge. The specific objectives of the symposium are to 1) present some of the latest techniques available to document ecosystem services provided by birds; 2) provide attendees with recent information about methods to simultaneously evaluate services and disservices by birds and calculate economic costs and benefits; 3) discuss the interplay of ecosystem service provisioning by birds and bird conservation.

**S6: Advances in estimating patterns of bird abundance and distributions at relevant spatial and temporal scales**

Organizers: Viviana Ruiz-Gutierrez, Cornell Lab of Ornithology, John Sauer, Cornell Lab of Ornithology, and Steve Kelling, USGS Patuxent Wildlife Research Center

Brody 112, Early and late afternoon sessions

Bird conservation in the anthropocene will require innovative approaches in both science and technology aimed at improving our current understanding of bird populations. This symposium provides an overview of advances and challenges surrounding how to best monitor bird populations, and describes frameworks for collecting and integrating multiple sources of information at broad spatial and temporal scales. In addition, we provide guidelines and examples of how to apply and improve upon current approaches for monitoring bird populations, with the objective of fostering more effective partnerships for bird monitoring between citizen scientists, state and government agencies, and individual researchers.

**Friday, August 4**

**S7: Elaina M. Tuttle and the curious case of the White-throated Sparrow: a memorial symposia**

Organizer: Rusty Gonser, Indiana State University

KC Auditorium, Morning session

This symposium will honor Dr. Elaina M. Tuttle (1963-2016) who passed away of metastatic breast cancer. For 28 years, she had studied a population of white-throated sparrows in an attempt to understand how a color polymorphism was maintained in the population. Elaina always used diverse approaches, from behavior to GIS to genomics to test scientific theories with her long-term research project. Former students, post-doctoral fellows and collaborators will present on their work with Elaina outlying how understanding the dynamics of this species can provide insights for understanding mating systems in general.

**S8: Trait divergence and speciation: tempo, mode, and mechanism**

Organizers: Jay McEntee, University of Florida, and Ben Winger, University of Michigan

Brody 112, Morning session

Understanding how and why traits diverge during speciation has long been a fundamental issue in evolutionary biology. In this symposium, we bring together research on trait divergence and speciation in avian systems from a variety of mechanistic perspectives and temporal scales. Does social/sexual selection or local adaptation more commonly drive trait divergence during speciation? What is the tempo of trait divergence across the avian tree of life and in different geographic theatres, and how is it influenced by population level processes? Does trait divergence typically precede or follow secondary sympatry? Recent years have brought a flood of new insight to these questions from studies in molecular ecology, phylogeography, and macroevolution, which we will explore and synthesize.

**S9: Mechanisms underlying avian response to energy development**

Organizer: Lindsay Sanders, University of Wyoming

KC Auditorium, Early and late afternoon sessions

Patterns of negative avian response to energy development have been widely documented, but without an understanding of *why*birds respond the way they do to human disturbance, we will have no way of mitigating those effects in the future. This symposium will showcase a number of recent studies investigating the response of avian communities to oil and natural gas extraction, and the mechanisms underlying those responses. We will explore a variety of means by which human activities associated with energy extraction may be altering avian communities, including variation in nest predator assemblages and food resources, stress-induced fitness consequences, and the scale of avian response. Our goal is to highlight potential mechanisms of avian decline associated energy extraction practices, and bring researchers together to discuss the breadth of this problem.

**S10: From fungi to fledglings: cavity-nesting bird ecology and conservation across North America**

Organizers: Amy Barry, Oregon State University, and James Rivers, Oregon State University

Brody 112, Early and late afternoon sessions

Primary cavity-nesting birds play a crucial role in maintaining the health and diversity of our forest ecosystems throughout the world. Cavity-nesting birds have been strongly influenced by anthropogenic activities, such as wildfire and timber harvest, and snag creation, and therefore a strong understanding of their ecology and conservation is important because it has downstream effects on a range of taxa (e.g., invertebrates, non-excavating birds, mammals). In this symposium, we bring together some of the world’s experts who study cavity-nesting birds to share new information regarding the ecology and conservation of this unique group. Our symposium highlights habitat requirements and current management strategies to inform future research and management of cavity-nesting birds; presentations range from illustrating the nexus between the fungi that promote decay and the cavity-nesting species that serve to disperse them, to new information about post-fledging movements of species of heightened conservation concern.

**Saturday, August 5**

**S11: Forty-five years of Brown-headed Cowbird control: what have we learned?**

Organizers: Mary Whitfield, Southern Sierra Research Station, and Barbara Kus, USGS Western Ecological Research Center

KC Auditorium, Morning and early afternoon sessions

Cowbird control to reduce brood parasitism is a key component of management to protect hosts of conservation concern. Dating back to the early 1970s, cowbird control has been implemented to promote recovery of several endangered species, including Kirtland’s Warbler, Golden-cheeked Warbler, Least Bell’s Vireo, Black-capped Vireo, and Southwestern Willow Flycatcher. Two conferences during the 1990s, and a symposium in 2003, provided opportunities for sharing information on cowbird ecology, impacts of cowbirds on hosts, and response of hosts to cowbird control. In the intervening decade and a half, research and practice have improved our understanding of how to use cowbird control effectively to achieve conservation goals. This symposium is intended to bring together researchers, resource managers, and practitioners to share lessons learned and recent advances in science-based cowbird management to benefit sensitive hosts.

**S12: Sagebrush birds in a changing environment**

Organizers: Steven E. Hanser, U.S. Geological Survey, Cameron Aldridge, Colorado State University in cooperation with USGS, and Peter S. Coates, U.S. Geological Survey

Brody 112, Morning and early afternoon sessions

The sagebrush ecosystem in the western United States supports a diversity of bird species, including the greater and Gunnison sage-grouse and other sagebrush-dependent passerine species. This ecosystem once covered over 150 million acres and that total has been reduced by 40% and over half of the remaining habitat has been altered due to a variety of ecosystem threats and human activities, including invasive species, conifer encroachment, climate change, livestock grazing, and development of a variety of energy resources. Presentations will provide insights on how these changes are affecting the bird community and explore potential conservation measures. The issues facing the sagebrush ecosystem are not unique and lessons learned from the collaborative conservation efforts to conserve and restore this ecosystem can serve as a model for species conservation in other ecosystems.