

# **KANSAS ORNITHOLOGICAL SOCIETY**

**69<sup>th</sup> Annual Meeting**



**Geary County Fairgrounds  
Junction City, Kansas**

**6 - 8 October 2017**

## Schedule at a glance

### Friday, October 6<sup>th</sup>

7:00 - 9:00 p.m. Social at the Geary County 4-H/Sr. Citizens Building, (Geary County Fairgrounds) 1025 S. Spring Valley Road, Junction City (*All Friday & Saturday events occur at the Fairgrounds*)

### Saturday, October 7<sup>th</sup> (*see detailed schedule on following page*)

8:00 a.m. Registration and refreshments, Geary County 4-H/Sr. Citizens Building

8:50 a.m. Welcome and Announcements

9:00 a.m. Paper Session

11:30 a.m. KOS Business Meeting

11:30 - 1:30 p.m. Lunch. KOS Board meeting: onsite. There are many locations in Junction City to eat. A list will be in your registration materials.

1:30 p.m. Birdwatcher's Hour

2:00 p.m. Paper Session.

4:30 p.m. KOS Business Meeting

6:00 – 9:00 p.m. Banquet, Awards and speaker

### Sunday, October 8<sup>th</sup>

7:00-12:00 p.m. Field Trips - Meet at the Fairgrounds Parking Lot

Noon Lunch and compilation – Starbird Building, Milford Nature Center

The Sunday noon lunch and compilation is at the Milford Nature Center. Follow signage to Milford Lake. On the south side of the Milford Lake Dam, (on State Highway K-57) look for the sign that says “Milford Fish Hatchery and Nature Center”. Follow this road down past the outlet tubes and then continue north on Hatchery Drive at the base of the dam. Almost to the end of the road turn right on the paved road (look for another brown sign that directs you to the Fish Hatchery and Nature Center.) Look for signs directing you to the building where we’ll have lunch (there’s only two buildings there – the Starbird Building is first and on the right as you enter.) Also feel free to check out the outdoor exhibits. The Milford Nature Center has some excellent displays and several birds of prey.

### Upcoming Meetings

May 4 – 6, 2018 in Dodge City Kansas; Ford, Hodgeman, Clark and nearby counties.

Fall 2018 – This will be KOS's 70<sup>th</sup> Annual Meeting. Nothing is firm but Lawrence is being considered

## Detailed Schedule for Saturday, October 7<sup>th</sup>

- 8:00 a.m. Registration and refreshments, Geary County 4-H/Sr. Citizens Building
- 8:50 Welcome and Announcements  
Nic Allen, President Kansas Ornithological Society  
Chuck Otte, Local Committee Chair
- (Presenting author denoted by \* following their name.)*
- 9:00 **Construction and Use of a Recycling Bin for Monofilament Fishing Line -**  
*Lynnea Nelson\*, North Osage 4-H Club, Wildlife Project*
- 9:15 **The Role of Brood Parasitism in Shaping Nestling Growth and Development Strategies: Preliminary Results -** *Sarah Winnicki\*, Kansas State University; Edwin Harris, Beloit College; Braiam Rosado Ramos, Universidad del Turabo; Darrien Savage; and W. Alice Boyle, Kansas State University*
- 9:30 **Possible Relationship Between Vocal Communication System and Fat Reserve in Wintering Birds: A Test of the Optimal Body Mass Theory -** *Nuwanthika Perera\* and Christopher M. Rogers, Department of Biological Sciences, Wichita State University*
- 9:45 **Mesocarnivore Occupancy Within Kansas Spring Cover Crops -** *Adela C. Annis\*, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; David Haukos, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; and Jeff Prendergast, Kansas Department of Wildlife, Parks, and Tourism*
- 10:00 Break
- 10:15 **Response of Bird Communities to Cattle Grazing and Plant Diversity in CRP Grasslands -** *Benjamin S. Wilson\* and William E. Jensen, Department of Biological Sciences, Emporia State University*
- 10:30 **Nest Success and Brood Parasitism of Birds in Response to Grazing of CRP Grasslands -** *Heather M. Kraus\* and William E. Jensen, Department of Biological Sciences, Emporia State University*
- 10:45 **Determining the Influence of Vegetation on Bird Occupancy in Quivira National Wildlife Refuge -** *Liz Tanner\*; Kyle Schumacher; Dr. Robert Channell; Dr. William Stark, Department of Biological Sciences, Fort Hays State University*
- 11:00 **Habitat Classifications are for the Birds: Breeding Bird Associations with Defined Habitat Classifications at Quivira National Wildlife Refuge -** *Kyle W. Schumacher\*; Liz E. Tanner; Rob Channell; Mitchell J. Greer; and William J. Stark, Department of Biological Sciences, Fort Hays State University*

- 11:15        **Comparison of Foraging Behavior and Energetics by Great Egrets (*Ardea alba*) and Snowy Egrets (*Egretta thula*) Across Three Microhabitats** - *Abigail C. Harper\**, Zoo Science Program, Friends University; and *Alan D. Maccarone*, Biology Department, Friends University
- 11:30        KOS Business Meeting
- 11:45 – 1:30 p.m.      Lunch – there are numerous eating establishments in Junction City, please refer to listing in welcome packet you received at registration.  
KOS Board meet on-site – lunch will be brought in.
- 1:30 p.m.      Birdwatcher’s Hour – Birders share photos of birds seen in the past year –  
(presented papers will continue as soon as this session is over)
- 2:00        **Phylogenetic Relationships of Weaverbirds: A First Molecular Phylogeny of the Bird Family Ploceidae** - *Thilina N. De Silva\**; *A. Townsend Peterson*, Department of Ecology and Evolutionary Biology, and Biodiversity Institute, University of Kansas; *John M. Bates*, Field Museum of Natural History; *Sumudu W. Fernando*; *Matthew G. Girard*, Department of Ecology and Evolutionary Biology, and Biodiversity Institute, University of Kansas
- 2:15        **Notes on the Sympatric Nesting of two Fox Sparrow Subspecies Groups in South-central Alaska** - *Lucas H. DeCicco\**, Biodiversity Institute, University of Kansas
- 2:30        **Patterns of Genomic Differentiation in ‘Montane’ Avifauna of Borneo: A Case Study Utilizing Three Independent Lineages** - *Johnathan P. Hruska\**, Biodiversity Institute, University of Kansas; *Vivien Chua*, Museum of Natural Science and Department of Biological Sciences, Louisiana State University, Baton Rouge, LA; *Rob Moyle*, Biodiversity Institute, University of Kansas; *Fred Sheldon*, Museum of Natural Science and Department of Biological Sciences, Louisiana State University, Baton Rouge, LA
- 2:45        **Morphological Differences Between Sexes of the Gray-breasted Wood-Wren, a Monochromatic Passerine from the Neotropics** - *Fernando Machado-Stredel\**, Department of Ecology and Evolutionary Biology, University of Kansas; *Jorge Pérez-Emán*, Universidad Central de Venezuela
- 3:00        **Completeness of Digital Accessible Knowledge of the Birds of West Africa and Priorities for Survey and Inventory** - *Benedictus Freeman\** and *A. Townsend Peterson*, Biodiversity Institute, University of Kansas
- 3:15        Break

- 3:30      **Hybridization and Parental Interaction of Great-tailed Grackle and Common Grackle (*Quiscalus*)** - Alexis F. L. A. Powell\*, Department of Biological Sciences, Emporia State University; and Jack Kirkley, Biology Department, University of Montana – Western
- 3:45      **Effects of Patch-burn Grazing on Density and Space Use of Dickcissels** - Bram H. F. Verheijen\*, Division of Biology, Kansas State University; Hannah L. Clipp, School of Natural Resources, West Virginia University, Morgantown, WV; Alessandro J. Bartolo, Hampshire College, Amherst, Massachusetts; William E. Jensen, Department of Biological Sciences, Emporia State University; and Brett K. Sandercock, formerly Division of Biology, Kansas State University
- 4:00      **Characterizing Great Egret (*Ardea alba*) Behavior and Estimating Energy Expenditure Using Accelerometry Data** - Alan D. Maccarone, Biology Department, Friends University; and John N. Brzorad, Reese Institute for Conservation of Natural Resources, Lenoir-Rhyne University, Hickory, NC
- 4:15      **Breeding Bird Response to Experimental Forest Management in the Missouri Ozarks** - Andrew George\*, Department of Biology, Pittsburg State University; Paul Porneluzi, Division of Science and Mathematics, Central Methodist University, Fayette, MO; Janet Haslerig, Missouri Department of Conservation, Jefferson City, MO; John Faaborg, Division of Biological Sciences, University of Missouri, Columbia, MO
- 4:30      KOS Business Meeting
- 6:30      Banquet, Awards & Speaker

Banquet Speaker - Alice Boyle, Assistant Professor in the Division of Biology at Kansas State University, will take us to the tropical rain forest for the evening and tell us about the little colorful, dancing birds known as manakins. She will tell us about the manakins' "dating game," and how both the weather and living on a steady diet of fruit affects how they live and die.

## Abstracts of Presented Papers

### **Construction and Use of a Recycling Bin for Monofilament Fishing Line** - *Lynnea Nelson\**, *North Osage 4-H Club, Wildlife Project*

Birds face hazards when they encounter monofilament fishing line in their natural environment. Collection and recycling of monofilament line significantly reduces this hazard. With a few low-cost supplies, you too can join the battle reducing this hazard for our feathered friends. Berkley, a major line producer, accepts monofilament line for recycling to reduce hazards to wildlife. Join me and learn what you need, how to build and where to install these recycling bins. Let's work together to get them throughout Kansas!

### **The Role of Brood Parasitism in Shaping Nestling Growth and Development Strategies: Preliminary Results** - *Sarah Winnicki\**, *Kansas State University*; *Edwin Harris*, *Beloit College*; *Braiam Rosado Ramos*, *Universidad del Turabo*; *Darrien Savage*; and *W. Alice Boyle*, *Kansas State University*

Patterns of animal growth and development vary widely, and drivers of variation are often unclear. Differences in altricial bird nestling development have been linked to differences in food availability and predation risk, but current models of development largely ignore the cost of brood parasitism. We hypothesize that avian brood parasitism likely plays a role in the generation of development strategies either directly or by mediating food availability and/or predation risk. We located and monitored the nests of three grassland-obligate songbirds that are known hosts for the parasitic Brown-headed Cowbird (*Molothrus ater*): Grasshopper Sparrows (*Ammodramus savannarum*), Dickcissels (*Spiza americana*) and Eastern Meadowlarks (*Sturnella magna*). Using a series of observational studies, comparative analyses, and manipulative experiments we seek to decouple the effects of food intake, predation risk, and brood parasitism on the variation in nestling fledge age, fledge stage, and developmental prioritization. We will present some preliminary results from the 2017 breeding season, highlighting previously unknown relationships between habitat associations, parasitism, parental investment, and predation risk.

### **Possible Relationship Between Vocal Communication System and Fat Reserve in Wintering Birds: A Test of the Optimal Body Mass Theory** - *Nuwanthika Perera\** and *Christopher M. Rogers*, *Department of Biological Sciences, Wichita State University*

Fat reserve is a key adaptation in wintering small birds for maximizing individual fitness in a variable environment. Optimal body mass models suggest that the winter fat reserve maximizes winter survival by balancing costs, such as greater predation risk, and benefits, such as ability to withstand food scarcity, of fat deposition. Flocking integration may be important in determining the fat reserve of birds. I am testing the hypothesis that if bird species have a high vocal repertoire, then they will have high communication efficiency (which reduces predation risk) and this allows a high fat reserve. This hypothesis was tested by recording vocalizations of the Dark-eyed Junco (DEJC) and American Tree Sparrow (ATSP) in Kansas. The junco is typically fatter in winter than the tree sparrow and is predicted to have a larger vocal repertoire within its winter flocks. A Marantz digital recorder with a Sennheiser directional microphone was used to record vocalizations at winter feeding stations. Raven software was used to describe vocalizations within each species. In contrast with the hypothesis, ATSP has a mean call rate of 1.62 calls / bird / minute whereas DEJC has a mean call rate of 0.12 calls / bird / minute even though a

significant difference is not detected. DEJC produced more than one call type in every observation period, while ATSP produced only one call type throughout the observations. These results support the hypothesis that communication ability plays a significant role in determining interspecific variation in fat levels of small wintering birds.

**Mesocarnivore Occupancy Within Kansas Spring Cover Crops** - *Adela C. Annis\**, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; *David Haukos*, U.S. Geological Survey, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University; and *Jeff Prendergast*, Kansas Department of Wildlife, Parks, and Tourism

Cover crops have been suggested as a way to provide increased habitat for multiple wildlife species during the breeding season. Kansas State University, Kansas Department of Wildlife, Parks, and Tourism (KDWPT), and the Kansas Cooperative Fish and Wildlife Research Unit are researching the benefits of spring cover crops to ring-necked pheasants (*Phasianus colchicus*) in western Kansas. The influence of spring cover crops on the occupancy of potential nest predators, specifically mesocarnivores, is important to consider and determine if cover crops create ecological traps. Three spring cover crop mixes (commercial, wildlife, and custom mixes) were planted in March and terminated in June and July before the planting of the cash crop, winter wheat. A chemical fallow control treatment was also applied. Three repetitions of each mix with field sizes ranging between 12 and 20 hectares were studied. We deployed 24 camera traps within the cover crop and chemical fallow treatments between April and August. Cameras took over 130,000 photos and mesocarnivores identified included bobcat (*Lynx rufous*), coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), American badger (*Taxidea taxus*), and long-tail weasel (*Mustela frenata*). In addition, cameras documented use of cover crops by nongame species including upland sandpipers (*Bartramia longicauda*), passerines such as the Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*), Western Meadowlark, Horned Lark (*Eremophila alpestris*), Red-wing Blackbird (*Agelaius phoeniceus*), and Lark Sparrow (*Chondestes grammacus*). Information from this study will provide KDWPT with information on mesocarnivore occupancy within western Kansas and potential benefits of spring cover crops to wildlife.

**Response of Bird Communities to Cattle Grazing and Plant Diversity in CRP Grasslands** - *Benjamin S. Wilson\** and *William E. Jensen*, Department of Biological Sciences, Emporia State University

Grassland bird populations have been in decline, partially due to the loss of contiguous grassland habitat to row-crop agriculture. However, the Conservation Reserve Program (CRP) is helping to restore grassland habitat in the United States. Conservation practices (CP) for CRP grassland include varying levels of plant diversity in seed mixes (e.g., higher in CP25 vs. CP2 options); however, there are disincentives for grazing by cattle in CRP. We hypothesize that conservative grazing by cattle and increased plant diversity will promote higher species richness and diversity of grassland birds in CRP. We are testing this hypothesis by using line-transect surveys of birds on 108 CRP fields, half of which were experimentally grazed by cattle in 2017, across the statewide, longitudinal precipitation gradient in Kansas. The preliminary results of our 3-year study show that species richness and diversity of birds in CRP are not substantially affected by cattle grazing or CP (CP2 vs. CP25). However, both species richness and diversity declined from west to east across the state. Even at smaller geographical scales (western, central, and eastern thirds of the state), cattle grazing and CP type were unimportant to bird species richness and

diversity. Analyses from the next two years of data collection might reveal lag effects of cattle grazing in 2017 on grassland bird communities.

**Nest Success and Brood Parasitism of Birds in Response to Grazing of CRP Grasslands - Heather M. Kraus\* and William E. Jensen, Department of Biological Sciences, Emporia State University**

Grassland bird populations have experienced declines in recent decades that coincide with fragmentation and loss of prairie habitat. The Conservation Reserve Program (CRP), a federal, cropland idling program, has benefitted grassland birds through grassland restoration. Although the CRP provides better habitat than row crops, grazing by domestic cattle (*Bos taurus*), which is currently restricted in CRP, might improve habitat structure for some bird species. However, such changes in habitat structure, and the presence of cattle, might affect nest concealment from predators and attract brood parasitic Brown-headed Cowbirds (*Molothrus ater*). We investigated the response of daily nest survival of Mourning Doves (*Zenaida macroura*) and Dickcissels (*Spiza americana*), and brood parasitism of Dickcissel nests, to experimental grazing disturbance (in 2017 only) across 36 CRP fields in central Kansas. Daily nest survival rates were not strongly related to grazing disturbance. Brood parasitism rate (presence or absence of cowbird offspring) was similarly unaffected by grazing treatment but was negatively related to nest concealment. Brood parasitism intensity (number of cowbird offspring per parasitized nest) was higher in grazed CRP. Although daily nest survival and brood parasitism rate were unaffected by cattle grazing, there may be lag effects in future years due to changes in nest concealment from grazing in 2017. Brood parasitism intensity was affected by grazing, which suggests the presence of cattle might increase parasitism pressure by cowbirds, at least in years when cattle are present. Patterns of nest success and brood parasitism by cowbirds might change and will be investigated through 2019.

**Determining the Influence of Vegetation on Bird Occupancy in Quivira National Wildlife Refuge - Liz Tanner\*; Kyle Schumacher; Dr. Robert Channell; Dr. William Stark, Department of Biological Sciences, Fort Hays State University**

The National Wildlife Refuge System is charged with managing public lands in a highly fragmented landscape. However, many refuges lack a repeatable sampling protocol, particularly for non-game species. In 2014, Quivira National Wildlife Refuge developed a partnership with the Fort Hays State University. The goal of this partnership is to create an effective sampling protocol that gives insight into habitat use on the refuge. As part of this partnership, avian surveys were conducted from May to July 2016 and a vegetation survey was performed in July 2016. Over the course of the sampling season, 48 bird species were observed with a total of 13,932 individuals. Using occupancy models, we were able to determine which vegetative covariates (if any) have the greatest impact on each bird species observed. Understanding how the birds are responding to the vegetation on the refuge is important in determining habitat use and developing an effective sampling protocol.



**Habitat Classifications are for the Birds: Breeding Bird Associations with Defined Habitat Classifications at Quivira National Wildlife Refuge** - Kyle W. Schumacher\*; Liz E. Tanner; Rob Channell; Mitchell J. Greer; and William J. Stark, Department of Biological Sciences, Fort Hays State University

In 2014, Quivira National Wildlife refuge in south-central Kansas initiated a collaborative research project with Fort Hays State University to develop long-term monitoring protocols for assessment of native fauna response to habitat management practices performed across the refuge. As part of this monitoring effort, four breeding bird point-count survey transects were established across the refuge. Each transect contained 30 stop points arranged to investigate grassland bird community associations with habitat classifications as defined by the US Fish and Wildlife Service's National Vegetation Classification System (NVCS). Transects were sampled 10 times from 29 May to 07 July 2016, and vegetation measurements for each stop point were collected in late July 2016. Non-metric multidimensional scaling (NMDS) was used to assess accuracy of habitat classifications when compared to collected vegetation data. Stop points were reclassified into four groups based off vegetation data. Analysis of variance was conducted to compare bird community association with NVCS classifications and association with habitat classifications from collected vegetation data. Bird communities weakly but significantly associated with NVCS classifications ( $F=3.216$ ,  $df=3,11$ ,  $p=.026$ ) and with habitat classifications based off collected vegetation data ( $F=3.136$ ,  $df=3,11$ ,  $p=0.028$ ). This suggests that breeding birds in this grassland ecosystem select habitat more broadly than the focus of current management practices under NVCS guidance. Grassland habitats classified by NVCS could be providing too fine of scope for management practices intended to delineate specific communities of grassland specialist birds.

**Comparison of Foraging Behavior and Energetics by Great Egrets (*Ardea alba*) and Snowy Egrets (*Egretta thula*) Across Three Microhabitats** - Abigail C. Harper\*, Zoo Science Program, Friends University, and Alan D. Maccarone, Biology Department, Friends University

Wading birds forage across a variety of microhabitats, all of which have the potential to alter foraging behavior based upon the energetic value of the prey present. In order to measure the differences in foraging behavior across microhabitats, we observed Great Egret and Snowy Egret foraging behavior for a total of thirty-six hours between May and August 2017. For both species, we completed six hours of observations in each of three local microhabitats: rivers, ponds, and weirs. During each observation session, we recorded strike rates and capture rates per minute, and prey lengths relative to egret bill length. From this data, foraging efficiencies were calculated by comparing number of strikes made to number of prey captured. Actual prey lengths, weights, and energetic values were estimated for all fish. While Great Egrets (43%) and Snowy Egrets (42%) had similar foraging efficiencies overall, we found significant differences in foraging efficiencies, mean fish size, and therefore energetic value by microhabitat.

**Phylogenetic Relationships of Weaverbirds: A First Molecular Phylogeny of the Bird Family Ploceidae** - Thilina N. De Silva\*; A. Townsend Peterson, Department of Ecology and Evolutionary Biology, and Biodiversity Institute, University of Kansas; John M. Bates, Field Museum of Natural History; Sumudu W. Fernando; Matthew G. Girard, Department of Ecology and Evolutionary Biology, and Biodiversity Institute, University of Kansas

Weaverbirds are small-to-medium-sized, majorly seed-eating songbirds that are distributed in largest part across Sub-Saharan Africa; a few species are also found in tropical Asia and on

islands in the Indian Ocean. The group comprises 116 species in 17 genera. The family shows intriguing variation in behavior, nest structure, and plumage coloration, yet their relationships have seen no detailed phylogenetic study. We developed a first extensive phylogeny for the family Ploceidae covering ~70% of the species, based on a multilocus dataset of three mitochondrial loci and four nuclear markers. Analysis of these genes offered strong support for monophyly of the family, revealing seven distinct clades within Ploceidae. Results indicated broad polyphyly of *Ploceus*: Asian *Ploceus* species should retain the generic name, whereas African *Ploceus*, together with *Anaplectes*, should be placed in *Malimbus*. In light of deep divergence, we assign the Malagasy *Ploceus* species to their own genus, *Nelicurvius*. We place *Amblyospiza albifrons* in a reestablished monotypic subfamily Amblyospizinae based on our DNA data, and also considering behavior and morphology. Divergence time analysis based on DNA substitution rates suggests a mid-Miocene origin of the family. Our study also estimates that brood parasitic behavior originated 8–11 million years ago in African finches, considerably later than previously thought of. This study lays a foundation for an array of future studies of character evolution, biogeography, and evolutionary history of the family.

### **Notes on the Sympatric Nesting of two Fox Sparrow Subspecies Groups in South-central Alaska - Lucas H. DeCicco\*, Biodiversity Institute, University of Kansas**

Observations on how closely related sympatric taxa interact on breeding grounds are integral to lines of evidence for biologically informed taxonomy and systematics. Upon geographic contact, subspecies may form a zone of continual intergradation wherein a majority of individuals are phenotypically intermediate. Conversely, ‘true’ species should maintain reproductive isolation despite contact. Fox Sparrows (*Passerella iliaca*) are a highly polytypic species with four distinct and geographically parsed subspecies groups. In Alaska, two of these subspecies groups (the coastal *unalaschcensis* group and the interior *iliaca* group; subspecies *sinuosa* and *zaboria* respectively) come in contact with one another in a few locations. Over a four-year period, I opportunistically investigated (via multimedia documentation and specimen collection) one of these contact zones located in south-central Alaska around the city of Anchorage. The expectation, given that these taxa are considered conspecific, is that intergradation would occur at this zone of contact resulting in a continuum across geographic space of phenotypes. Within this zone of contact I found largely equivalent numbers of phenotypically pure *sinuosa* and *zaboria* with a very limited number of intergrades, despite complete mixture and little to no habitat segregation. My observations and the specimens I collected suggest that, upon contact and despite substantial overlap, these two subspecies groups segregated themselves. I therefore conclude that, at this specific location, these two subspecies groups treat one another as biologically distinct species.

### **Patterns of Genomic Differentiation in ‘Montane’ Avifauna of Borneo: A Case Study Utilizing Three Independent Lineages - Johnathan P. Hruska\*, Biodiversity Institute, University of Kansas; Vivien Chua, Museum of Natural Science and Department of Biological Sciences, Louisiana State University, Baton Rouge, LA; Rob Moyle, Biodiversity Institute, University of Kansas; Fred Sheldon, Museum of Natural Science and Department of Biological Sciences, Louisiana State University, Baton Rouge, LA**

The principal objective of biogeography is to infer biological and geological processes responsible for observed patterns of biodiversity across time and space. By definition, biogeographical inquiries require a *priori* illustrations of how extant biodiversity is distributed

across contemporary landscapes. Once established, these patterns inform hypotheses that seek to evaluate the potential contemporaneous and historical processes that produce them. Historically, the contemporaneous and historical distribution of biodiversity has been difficult to assess. Traditional methodological practices, relying heavily upon morphological markers, have been incapable of accurately assessing patterns of biodiversity. Broadly speaking, these markers have failed to: 1) Accurately demarcate patterns of biodiversity due to conserved morphological features. 2) Accurately reconstruct the genealogical history of populations and species. 3) Reject hypotheses invoking biological and geological process, such as: reproductive isolation, vicariance, environmental selection, and many others. The development of recent sequencing technologies that have facilitated the recovery of several thousand genomic markers has helped address these shortcomings. As a result, long-standing biogeographic hypotheses have been tested extensively in recent years. One region that has experienced a renaissance of biogeographic inquiry is the island of Borneo. As a result, several models assessing the evolution of biodiversity on Borneo have emerged. Here, we present patterns of genomic differentiation across three independent lineages of birds *Stachyris* (Timaliidae), *Yuhina* (Zosteropidae), and *Pellorneum* (Pellorneidae). We provide additional data to the assessment of how avian diversity is distributed across montane habitats on Borneo, and make inferences regarding what contemporary and historical processes have produced them.

**Morphological Differences Between Sexes of the Gray-breasted Wood-Wren, a Monochromatic Passerine from the Neotropics** - *Fernando Machado-Stredel* \* *Department of Ecology and Evolutionary Biology, University of Kansas*; *Jorge Pérez-Emán, Universidad Central de Venezuela*

Sexual size dimorphism (SSD) is present in most avian taxa, particularly in species in which males and females have similar plumages. Traditionally, ornithologists have focused on sexing monochromatic temperate and migratory birds using mensural characters. Unfortunately, there is a lack of knowledge on the extent of SSD for tropical avifaunas. In this study we assess this phenotypic pattern in five Venezuelan subspecies of a widespread Neotropical bird, the Gray-breasted Wood-Wren (*Henicorhina leucophrys*, Troglodytidae), and generate models to discriminate sexes with classical morphometric characters (i.e., wing, tail and bill lengths). Two-tailed t-tests were used to evaluate mean differences between male and female specimens (N=137) using the mentioned variables, since their measurement error percentages were relatively low (< 10%). Additionally, univariate Logistic Regression Analyses were performed to classify individuals. These models were compared through correct classification percentages and their AICc values. We found that all taxa have significant mean sexual differences in all variables, and that some are more dimorphic than others. Our models correctly classified 80-93% of the males and 70-93% of the females. We stress the relevance of museum specimen analyses to tackle phenotypic variation questions, prior to conduct field studies. This research represents a straightforward approach to discriminate sex in monochromatic species, and to the best of our knowledge, it constitutes the first study that addresses intraspecific SSD in a Neotropical passerine.

**Completeness of Digital Accessible Knowledge of the Birds of West Africa and Priorities for Survey and Inventory** - *Benedictus Freeman\** and *A. Townsend Peterson*, *Biodiversity Institute, University of Kansas*

Primary biodiversity data provides baseline information widely used to assess the status of global biodiversity and inform conservation decisions. However, these datasets are not always available for all taxa or evenly distributed across regions and landscapes. This study aims to identify current survey gaps in the knowledge of West African birds that can be used to guide future avian surveys and inventories across the region, and inform biodiversity conservation decisions. We used Digital Accessible Knowledge (DAK) of the birds of West Africa, available online from Global Information Facility (GBIF) and eBird. Bird records were subjected to extensive cleaning in ArcGIS, and completeness indices for each site at 0.5o, 0.3o and 0.1o pixel were calculated for the entire region. Well-known sites were those with completeness indices above 80% and >200 associated DAK records. We identified 81 well-known pixels at 0.1o, 73 at 0.3o and 63 at 0.5o. Well-known sites were notably clustered around accessible areas (e.g., cities). Countries with more pixels of well-known sites were Ghana, Cameroon, The Gambia, and Ivory Coast. Our results show the biases and gaps in West African bird's data, and identify areas to be prioritized in future avian surveys and inventories.

**Hybridization and Parental Interaction of Great-tailed Grackle and Common Grackle (*Quiscalus*)** - *Alexis F. L. A. Powell\**, *Department of Biological Sciences, Emporia State University*; and *Jack Kirkley*, *Biology Department, University of Montana – Western*

Great-tailed Grackle (*Quiscalus mexicanus*) and Common Grackle (*Q. quiscula*) are phylogenetically distant among grackles and were historically allopatric. Range expansions brought these species into increasing contact in the past century, but have not led to notable interactions. We report a brood of two hybrid offspring of a male Great-tailed Grackle and female Common Grackle at the periphery of these species' ranges, in Dillon, MT, in 2015. Both parents fed the fledglings at the nest tree—an extraordinary behavior for male Great-tailed Grackle. Moreover, after the young left the tree and moved ~2 km across town, the male alone fed them for at least six more weeks. During that time, the young began prebasic molt and grew blue-black secondary coverts as expected for male Great-tailed Grackle but not for Common Grackle or female Great-tailed Grackle. Analysis of DNA from one offspring confirmed that it had hybrid nuclear DNA, had Common Grackle mitochondrial DNA, and was male.

Hybridization of Great-tailed Grackle with other blackbirds has been reported, but Common Grackle hybridization has not been documented previously with any species. In 2016, the male Great-tailed Grackle again courted a female Common Grackle that nested in his tree, but she was also attended by a male Common Grackle. She produced five young, but none were hybrids. Also in 2016, another male Great-tailed Grackle in the vicinity was observed feeding the nestling(s) in one of three nests that he defended, suggesting that male parental care is more common in that species than has been appreciated.

**Effects of Patch-burn Grazing on Density and Space Use of Dickcissels** - *Bram H. F. Verheijen\**, Division of Biology, Kansas State University; *Hannah L. Clipp*, School of Natural Resources, West Virginia University, Morgantown, WV; *Alessandro J. Bartolo*, Hampshire College, Amherst, Massachusetts; *William E. Jensen*, Department of Biological Sciences, Emporia State University; and *Brett K. Sandercock*, formerly Division of Biology, Kansas State University

Territorial behavior has important consequences for the fitness of an individual, as it could have large effects on reproductive success and survival. Understanding the distribution of territories across the landscape is therefore essential for assessing the population dynamics of a species, especially when of conservation concern. Over the past decades, habitat loss and intensification of the management of remaining grasslands have led to large population declines in grassland songbirds in North America. An alternative rangeland management regime, patch-burn grazing, creates heterogeneity in vegetative structure on the landscape by restoring the historical interaction of fire and grazing. Patch-burn grazing can increase the diversity and abundance of grassland songbirds, but effects on space use remain unknown. During a two-year field study, we tested how the density and territory size of Dickcissels (*Spiza americana*) varied among burning and grazing treatments in managed tallgrass prairie in northeast Kansas. We found that management regime affected densities, but not territory size, of male Dickcissels, where densities were highest on the patch-burn grazing patch that was burned in the previous year. Patch-burn grazing management might therefore benefit Dickcissel populations by providing higher quality breeding habitat in some patches. Our project is one of the first to test the effects of rangeland management on the territorial behavior of grassland birds. Combining management-specific estimates of territory size with estimates of reproductive success for grassland songbirds is essential for conservation of declining populations, since territory size could limit the number of breeding birds that benefit from high quality breeding habitat.

**Characterizing Great Egret (*Ardea alba*) Behavior and Estimating Energy Expenditure Using Accelerometry Data** - *Alan D. Maccarone\**, Biology Department, Friends University, and *John N. Brzorad*, Reese Institute for Conservation of Natural Resources, Lenoir-Rhyne University, Hickory, NC

In addition to providing unprecedented details regarding movements of free-ranging animals, state-of-the-art satellite GPS transmitters (48-g Bird Solar; e-obs) also measure overall body position and acceleration along x-y-z axes. From 2015-2017, Great Egrets were captured in the field in Kansas and along the East Coast and outfitted with harness-mounted GPS transmitters. Tags were programmed to collect 4-sec pulses of continuous accelerometry data every 4 minutes. Teachable algorithms are presented that scan very large data sets and classify accelerometry traces into the most common behaviors: resting/alert (vertical and horizontal), flying, and walking. Over 80% of the traces fall into identifiable patterns and are consistent with bird location, such as walking on foraging grounds, flying between colony or roost site and foraging grounds, and resting horizontally (as during incubation) and vertically at colonies or roosts. Less common behaviors (striking at prey, preening) were matched with field observations made on several birds. By summing behavior categories, an estimation was made of both activity budgets and energy expenditure. We present overall dynamic body acceleration (ODBA) as a unitless index of energy expenditure, which was derived from accelerometry data, and compares well with actual energy expenditure (measured in Joules).

## **Breeding Bird Response to Experimental Forest Management in the Missouri Ozarks -**

*Andrew George\**, Department of Biology, Pittsburg State University; *Paul Porneluzi*, Division of Science and Mathematics, Central Methodist University, Fayette, MO; *Janet Haslerig*, Missouri Department of Conservation, Jefferson City, MO; *John Faaborg*, Division of Biological Sciences, University of Missouri, Columbia, MO

The Missouri Ozark Forest Ecosystem Project (MOFEP) is a landscape-scale manipulative study designed to evaluate ecosystem responses to silvicultural practices over broad time scales. Nine experimental plots (mean area = 400 ha) were established in southeastern Missouri in 1991 and assigned to even-aged, uneven-aged, or no-harvest management cycles within a randomized-complete block design. We spot-mapped birds and monitored nests on each plot for five years pre-harvest, 14 years following the first harvest, and three years following the second harvest. Densities of four of five mature-forest species decreased on all sites following harvests and have not returned to pre-harvest levels, including on no-harvest sites. Densities of early successional species were low on all sites prior to the first harvest, but increased on even-aged and uneven-aged sites following harvests. After peaking within six years of harvest, densities of early-successional species gradually decreased to near pre-harvest levels. Nest-survival was similar among management types for both mature-forest and early-successional species, although nest-parasitism rates were generally higher for early successional species. More frequent even-aged reentry intervals (< 10 years) may be sufficient to maintain early-successional species on the landscape, but understanding effects of management practices on mature forest species will require closer examination of the spatial and temporal sensitivity of individual species.

## **Nominating Committee Report: Slate of Candidates**

**President** – Nic Allen

**Vice President** – Cheryl Miller

**Secretary** – Chuck Otte

**Treasurer** – Max Thompson

**Membership Development** - Patty Marlett

**Board Member** – Henry Armknecht

**Board Member** – Rodney Wright

**Business Manager** – Dan Larson

**Editor, *Bulletin*** - Eugene Young

**Editor, *Horned Lark*** – Chuck Otte

The Board Member positions of Kevin Groeneweg and Terry Mannell do not expire and Matt Gearheart stays on board as Past-President. These positions are automatic and do not require a vote.

Thank you to Barry Jones and Alexis Powell for your service on the Board!

*The 2017 Nominating Committee was comprised of Matt Gearheart, Henry Armknecht and Chuck Otte.*