Wednesday, Worning Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Population biology	Biogeography	Agriculture	Songs\Vocalizations	Conserva- tion\Popn Dynamics	Habitat relationships
10:30	*Growth of two Atlantic Coast Piping Plover populations Weithman CE, Robinson SG, Hunt KL, Altman J, Bellman HA, DeRose-Wilson AL, Walker KM, Fraser JD, Karpanty SM, Catlin DH	Climate delineates the northern range boundary of the Northern Cardinal Miller CR, Porter WP, Fitzpatrick MJ, Zuckerberg B	*GPS-tracking Reveals Selection for Prairie Ponds by Tree Swallows in Cropland-Dominated Landscapes Elgin AS, Morrissey CA, Clark RG	It's the same old song: benefits of song dialects in the Lapland Longspur Montgomerie RD, Cox A, Mullie A	*Cutting out without losing out: subsampling soundscapes for long-term avian biodiversity monitoring Eiseman JP, Vonhof MJ, Gill SA	*Shrub encroachment alters distributions and demography of breeding birds in semiarid grasslands Andersen EM, Steidl RJ
10:45	When the freezer breaks: will climate warming impact the persistence of resident birds in Alaska? Williams EJ, Phillips LM, Grigsby T, Norris R, Chicalo R, Marzluff J, Swift K	Montane biogeography and the evolution of disjunct ranges: a case study in the Diglossa flowerpiercers Hiller AE, Brumfield RT, Faircloth BC	*Impact of Wildfires on Barn Owl Habitat Selection in a Vineyard Agroecosystem in Napa Valley Huysman AE, Johnson M	Behavioral landscape of 'Oma'o vocalizations in a naturally fragmented habitat Netoskie EC, Paxton KL, Paxton EH, Hart PJ	Spatial Models to Facilitate Broad-Scale Conservation of Breeding Habitat for Secretive Marsh Birds Stevens BS, Conway CJ	*Are We Sure About Shearing? Evaluating the Impact of a Widely Used but Poorly Assessed Habitat Management Practice Buckardt Thomas AC, Roth AM, McNeil Jr DJ, Johnson K, Rodewald AD, Larkin JL
11:00	Population genomics of Hawaiian House Finches (Haemorhous mexicanus): investigating genetic variation of an introduced population Demery AC, Edwards S, Shultz AJ	Diversification and biogeography in an Indo-Pacific bird radiation (Pachycephalidae) Brady SS, Joseph L, Moyle RG, Andersen MJ	Does a âĂIJSonic NetâĂÎ Protect Sunflower from Damage by Blackbirds? Werrell AK, Klug PE, Swaddle JP	*Behavioral and Spectrographic Analysis of Chatter: A Novel Vocalization in Northern Mockingbirds Brown BB, Stracey C	A Bayesian network approach for improved seasonal distribution models of long-distance migratory passerines using Tyrannus flycatchers MacPherson MP	Restoration Success: Avian Richness and Abundance Among 1,000 Acres of Restored San Francisco Bay Tidal Marsh Habitat, Based on Point Count Surveys That Employ Citizen Scientists
						Edelstein D
11:15	*Using integrated models to identify ecology and population dynamics of a threatened arctic species Dunham KD, Abebe A, Dobson SF, Koons DN, Grand JB	*Patterns and mechanisms of heterogeneous breeding distribution shifts in North American migratory birds McCaslin HM, Heath JA	Quantifying multiple-benefits of bird conservation in the agricultural mosaic of California&Zs Central Valley Seavy NE, Humple D	*Repertoire size and individual variation in vocalizations of ÊżÅŇmaĒżo (Myadestes obscurus) an endemic Hawaiian thrush Tysall EE, Paxton KL, Netoskie E, Paxton E, Hart PJ	Contrasting long-term population trends of beach-nesting shorebirds under shared environmental conditions Kwon EB, Robinson S, Weithman C, Fraser JD, Karpanty SM, Catlin DH	*Post-fire nest site selection and survival of Black-backed Woodpeckers Stillman AN, Siegel RB, Wilkerson RL, Johnson M, Howell CA, Tingley MW
11:30	Population dynamics of a long-distance migratory passerine at the edge of its range Murphy MT, Redmond LJ, Dolan AC, Cooper NW, Chutter CM, Cancellieri S	Is specialism an evolutionary dead-end? Estimates of transition rates between generalism and specialism in a New World clade Conway M, Olsen BJ	Estimating the Effect of Prairie Strips on Grassland Birds Giese JC, Schulte LA, Klaver RW	Deep Convolutional Neural Network to Detect Forest Owls of the Pacific Northwest Lesmeister DB, Ruff ZJ, Sullivan CM	*Investigation of population change in a hurricane affected Piping Plover population Robinson SG, Gibson D, Fraser JD, Bellman HA, DeRose-Wilson AL, Karpanty SM, Walker KM, Catlin DH	*Identifying critical nesting habitat for ducks in AlbertaâĂŹs western boreal forest Dyson ME, Slattery SM, Fedy BC
11:45	Using museum specimens to investigate fitness variation across avian hybrid zones Dougherty PJ, Carling MD, Fossberg SL	Cryptic bird species on a remote archipelago of the Pacific Ocean Cibois A, Thibault J, Friedman NR, Omland KE, Desutter-Grandcolas L, Robillard T, Pasquet E	Comparing land-sparing and land-sharing conservation approaches in a coffee-growing region with high avian biodiversity Valente JJ, Ryder TB, Rice RA, Gómez C, Bayly NJ, Sillett TS, Marra PP LUNCH BRE	*Sex and species divergence in vocalizations between role-reversed shorebirds, Jacana spinosa and Jacana jacana Buck EJ, Lipshutz SE, Derryberry EP	Road Mortality in Barn Owls: Identifying Temporal and Spatial Hotspots in the Fraser Valley of British Columbia Krebs EA, Hindmarch SR, Powers G	Persistence in a Changing Landscape: Recurring Bird Concentration Areas on Alaska's Arctic Coastal Plain Sullender BK, Smith MA

Wednesday, Morning Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Move- ments\Dispersal	Phylogenet- ics\Phylogeography	Sexual selection	Sym: Understanding and addressing the collapse of the North American Avifauna (Marra)	Sym: Breaking through biases: what weâĂŹve learned from female birds (Odom)	Sym: Assessing the Cumulative Effects of Resource Development on Migratory Birds in Northern Boreal Regions (Mahon)
10:30	*Effects of source population and release strategy on reintroduced Scaled Quail mortality and dispersal Ruzicka RE, Doherty, Jr PF, Rollins D	*Evolution of migration in the Nightingale-thrushes (Turdidae: Catharus) inferred via morphometric and phylogenetic analysis Halley MR, Klicka J, Catanach TA, Weckstein JD	Can male zebra finches perceive their own quality and adjust mate choice accordingly? Martin JO, Chien E, Henson KE, Burley NT	Evidence for massive decline in the North American Avifauna Rosenberg KV, Dokter AM, Blancher PJ, Sauer JR, Smith AC, Smith PA, Stanton JC, Panjabi AO, Helft L, Parr M	Extra-pair copulations in passerines: why females matter Stutchbury BJ	Soaring to new heights: analytical approaches for cumulative effects assessment for migratory birds Pelech SA, Mahon CL, Lowry N
10:45	*A burning question: Does personality predict how pre-breeding Florida Scrub-Jays explore habitat in a fire history mosaic? Sherer DL, Bohlen PJ, Bowman JR	Multiple hybrid zones in a widespread Amazonian bird reveal different evolutionary processes Moncrieff AE, Brumfield RT	Experimentally increasing perceived competition for nests reduces female reproductive performance and extra-pair offspring Murphy TG, Korsten P, Birker M, Marfull R, Komdeur J	Decline and survival of North America's migratory avifauna determined by a weather radar network Dokter AM	Female Bird Songs âĂŞ The other half of the conversation Benedict Ln, Hathcock T, Najar N, Mitchell L, Cavar J, Logue D	Understanding cumulative effects for land management in Alberta: models and applications Solymos P, Toms JD, Bayne EM
11:00	Long-term dynamics of breeding dispersal distances by adult Northern Spotted Owls Jenkins JM, Lesmeister D, Forsman E, Dugger K	Fine-scale genetic population structure of an understory bird (Thamnophilus atrinucha) across the Panama Canal Zone Maddox JD, Kelley JP, Tarwater CE	Male Red Carotenoid Coloration Indicates Mitochondrial Performance in the House Finch Hood WR, Hill GE, Kavazis AN, Zhang Y	Grassland bird declines: how can we stop the downward spiral? Panjabi AO, Correll M, Strasser EH, Bernath-Plaisted J, Beh A, VerCauteren TL	Female preferences shape elaborate male displays and social skills on the lek Patricelli GL	Additive and interactive cumulative effects on boreal landbirds: winners and losers in a multi-stressor landscape Mahon CL, Holloway GL, Bayne EM, Toms JD
11:15	Does experimental local extinction of a flowering plant affect hummingbird movement patterns? Leimberger KG, Hadley AS, Betts MG	Comparative phylogeography of Amazonian riverine island birds Johnson O, Brumfield RT	Infanticide and Adoption in the Green-rumped Parrotlet: Killing Cavities, Remorseless Rogues and Betrayed Saints Beissinger SR, Berg KS	Volunteer-led surveys document 40-years of shorebird declines across North America Smith PA, Smith AC, Brown S, Friis C, Paquet J, Winn B, MacDonald A	Habitat saturation drives the frequency of a rare behavior in the females of a social bird Barve SS, Koenig WD, Haydock J, Walters EL	Community-level response to cumulative effects of forestry and energy development Toms JD, Carpenter TM
11:30	Habitat Use and Foraging Flights of Roseate Spoonbills in Florida Bay Lago EA, Baldwin JD, Lorenz JJ	Contrasting drivers of diversity and turnover in Andean birds and their parasites McNew SM, Barrow LN, Bates JM, DuBay SG, Galen SC, Hackett SJ, Johnson AB, Skeen H, Valqui T, Jason WD, Williamson JL, Witt CC	Within-pair annual and lifetime reproductive success drives the opportunity for sexual selection in black-throated blue warblers Germain RR, Hallworth MT, Sillett TS, Webster MS	Conservation of boreal birds: status, trends, and data gaps Toms JD, Solymos P, Stralberg D, Barker NK, Micheletti T, Leston L, Hache S, Cumming S, Song S, Schmiegelow F	Migratory landbird conservation compromised by failure to address sexual segregation Bennett RE, Rodewald AD, Rosenberg KV	Adverse effects of climate change on boreal bird communities accentuated by natural and anthropogenic disturbances Tremblay JA, Cadieux P, Boulanger Y, Cyr D, Taylor AR, Price DT, Solymos P, Stralberg D
11:45	The allometry of movement and connectivity of bird communities Hartfelder J, Fletcher RJ, Reynolds C, Monadjem A, McCleery R	Resolving difficult nodes in manakin phylogeny using low-coverage whole genome sequencing Braun EL, White ND, Kimball RT, Moncrieff AE, Zhao M, Kurtis SM, Brumfield RT	Associations of the cloacal microbiome with sexual ornamentation, condition, sex and habitat in molting House Finches Hutton P, Giraudeau M, Sepp T, McGraw KJ LUNCH BRE	Songbirds of the sagebrush sea: declines and mechanisms Chalfoun AD, Sanders L, Scherr T, Hethcoat M	Elaborate Female Coloration and Song: Diverse Perspectives Lead to a More Comprehensive Understanding of Avian Biology Omland KE, Rose EM, Haines CD	

Wednesday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

Segon Sym. Asian Climate show Sym. Speckes Limits in Birds Limits Limits in Birds Limits in Birds Limits in Birds Limits Limi	Doom	1	2	2	4		6
sion biology and the anual file cycle; shorebirds as models to understand hondraires (Gurney) 14:00 Consideration for Taxonomy (Shizuka) 14:00 Consideration for Taxonomy (Shizuka) 14:00 Conservation statistics of the statistic statistics of the st	Room	1		3		5	6
helpi dentify links between wintering, migration, and command systems of the command property of a declaring bornal shootbail, the Lesser Restriction of the command property of a declaring bornal shootbail, the Lesser Restriction of the command property of a declaring bornal shootbail, the Lesser Restriction of the command property of the c	1	biology and the annual life cycle: shorebirds as models to understand dynamic boundaries	Climate	Limits in Birds: Integrative and Practical Considerations for Taxonomy (Winker &	Breeding biology	Conservation	Dynamics in Interspecific Interactions
of Beringian Danlin on the East Asian-Australasian [Flyway] Flyway Lametot RB, Lagosse B, Peterine S, Lary C, Liebeert, R, Milsyaugh JJ 14:30 Magnet M 14:30 Magnet M 14:30 Magnet M Southbound Migration B, Boron T B, Roberds RB, Brown S, Lamerre J, McGuir RJ, Roberds RB, Brown S, Lamerre J, McGuir RB, Brown S, Lamerre S, McGuir RB, Brown S, Lamerre S, McChin RB, Brown S, Lamerre S, McGuir RB, Brown S, Lamer RB, McGuir RB,	14:00	help identify links between wintering, migration, and breeding areas of semipalmated sandpiper? Gurney KE, Mizrahi	suitability projections: Community science reveals that birds track their ecological niche in summer and winter Saunders SP, Michel NL, Bateman BL, Wilsey CB, Slavin Z, Dale K, LeBaron G,	to species delimitation in birds Cicero C, Mason NA, Jimenez RA, Wait DR, Wang-Claypool CY,	in Wood Thrushes predict reproductive success? Israel AM, Stutchbury	interaction effects of climate and forest patch size on the persistence of forest-interior birds Chaudhary A,	sociality: how cooperation, competition, and communication across species shape avian behavior
Arctic-breeding Bost-breeding and Southbound Migration Southbound Migration Saulfeld ST. Lanctor R. B. Brown S. Lamarre J. McGuire R. Rathroad D. Ellion K. Larry C 14:45 Migratory Connectivity of a declining boreal Scheebing L. Johnson JA, Taylor A 15:00 Stopover ecology of Semipalmated Sandippers in Maritime Canada Hamilton DJ, Blüs S. Geldart E, Linhart R. Neima SG, Faquer J. Responsed S. Hamilton DJ, Blüs S. Geldart E, Linhart R. Neima SG, Faquer J. Responsed S. Hamilton DJ, Blüs S. Geldart E, Linhart R. Neima SG, Faquer J. Hassell CJ, Peng H. Piersma T Langham G Demographic the tast 5 years in the Last 5 years	14:15	of Beringian Dunlin on the East Asian-Australasian Flyway Lanctot RB, Lagasse BJ, Yezerinac S, Brown S, Kendall S, Latty C, Liebezeit J, McGuire RL, Robards M, Saalfeld ST, Slaght	threatens a songbird population through its impacts on breeding Bonnot TW, Cox WA, Thompson FR,	Towards comparable species across avian taxonomy	assemblage, and patterns of predation at Veery (Catharus fuscescens) nests in a mature forest Goguen CB, Murray	species credit in tropical forest bird communities: conservation implications for two biodiversity hotspots	information web Magrath RD, Ratnayake C, Radford A, McLachlan J, Igic
Connectivity of a declining boreal shorebird, the Lesser Yellowlegs Afrotropical bird community Christie KS, McDuffie L, Johnson JA, Taylor A A Stanley TR, Stanley TR, Stanley TR, Stanley TR, Stanley TR, Martime Canada Mauck RA, Hamilton DJ, Bliss S, Geldart E, Linhart R, Neima SG, Paquet J, Gratto-Trevor CL Site Beateman BL, Wilsey Chan Y, Tibbitts TL, Hassell CJ, Peng H, Piersma T Changham G Climate declining boreal shorebird, the Lesser Yellowlegs Significance of population genomic data in assessing avian species limits Significance of population genomic data in assessing avian species limits Sorenson MD Significance of a little-known life-history trait, laying interval length, along a latitudinal gradient Lundblad CG, Comway CJ Comw	14:30	Arctic-breeding Shorebirds during Post-breeding and Southbound Migration Saalfeld ST, Lanctot RB, Brown S, Lamarre J, McGuire R, Ruthrauff D, Elliot K,	Demographic Responses of Eastern Bluebird Populations to Climatic Variability	Limits - Lessons from the Last 5 years Ruegg KC, Smith T, Bossu C, Rajbandary	through another lens: Bird nest-site selection and productivity across the beach thermal landscape Schaale LE, Baxley JB, Pricope NG,	fragmentation alters interaction networks of Amazonian mixed-species flocks Rutt CL, Mokross K,	
Semipalmated Sandpipers in Maritime Canada Mauck RA, Hamilton DJ, Bliss S, Geldart E, Linhart R, Neima SG, Paquet J, Gratto-Trevor CL 15:15 How can habitat degradation push extreme migrants over the edge? Chan Y, Tibbitts TL, Hassell CJ, Peng H, Piersma T Piersma T Semipalmated Sandpipers in Mauck RA, Hamilton DJ, Bliss S, Geldart E, Linhart R, Neima SG, Paquet J, Gratto-Trevor CL Bateman BL, Wilsey C, Taylor L, Wu J, Langham G Shenchmark' systems for delimiting bird species 'benchmark' systems for delimiting bird species Sheard CE, Street SE, Troisi C, Clark A, Healy SD, Laland KN Shizuka D Tobias JA Troisi C, Clark A, Healy SD, Laland KN Shizuka D Vander Meiden LN, Shizuka D Vander Meide	14:45	Connectivity of a declining boreal shorebird, the Lesser Yellowlegs Christie KS, McDuffie L, Johnson JA, Taylor	reduces population growth and recruitment rates over 30 years in an Afrotropical bird community Neate-Clegg MH, Stanley TR, Sekercioglu CH,	significance of population genomic data in assessing avian species limits	variation and adaptive significance of a little-known life-history trait, laying interval length, along a latitudinal gradient Lundblad CG,	habitat conservation and monitoring Northern Goshawks in Southeast Alaska	recognition and the role of early
degradation push extreme migrants over the edge? Chan Y, Tibbitts TL, Hassell CJ, Peng H, Piersma T C, Taylor L, Wu J, Langham G Assess the vulnerability of North American Birds to climate change Assess the vulnerability of North American Birds to climate change Tokan Y, Tibbitts TL, Hassell CJ, Peng H, Piersma T Assembly Set of the extreme migrants over the edge? Chan Y, Tibbitts TL, Hassell CJ, Peng H, Piersma T Assembly Set of the combined effects of two radically different parasites Bonfield SB, Schimel CD, Stavros N, Questad E, Schniele T, Ferraz Pollock HS, Martinez AE, Kelley JP, Touchton JM, Tarwater CE	15:00	Semipalmated Sandpipers in Maritime Canada Hamilton DJ, Bliss S, Geldart E, Linhart R, Neima SG, Paquet J,	storm-petrels, and chick growth Mauck RA, Huntington CE, Haussmann MF, Dearborn DC,	'benchmark' systems for delimiting bird species	dynamics of egg colour and patterning Sheard CE, Street SE, Troisi C, Clark A,	response to spring cover crops in an agricultural landscape Godar AJ, Annis A, Haukos D,	Species Groups Vander Meiden LN,
COFFEE BREAK	15:15	degradation push extreme migrants over the edge? Chan Y, Tibbitts TL, Hassell CJ, Peng H,	assess the vulnerability of North American Birds to climate change Bateman BL, Wilsey C, Taylor L, Wu J,	beautiful: relevance of morphological analyses to integrative taxonomy of Asian Prinia species complexes Rasmussen PC, Alstrom P, Olsson U	mockingbird: the combined effects of two radically different parasites Herman JM, Fiorini VD, Crudele I, Reboreda JC, Pladas SA, Bush SE, Clayton DH	of avian habitat to direct bird conservation Bonfield SB, Schimel D, Stavros N, Questad E, Schneider F, Ferraz	informant disrupts information cascades among ant-following birds in a tropical forest fragment Pollock HS, Martinez AE, Kelley JP, Touchton JM,

Wednesday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Migration	Phylogeography	Evolution	Sym: Understanding and addressing the collapse of the North American Avifauna (Marra)	Sym: Biodiversity mediated trade-offs in agroecosystems: When do birds help or hurt farmers? (Pejchar)	Sym: Conservation, and management of boreal birds in a changing climate: What do we expect, what have we observed, and what do we do about it? (Stralberg)
14:00	*A Range-wide geolocator project fills critical knowledge gaps of our understanding of the full annual cycle of Cerulean Warblers Raybuck DW, Buehler DA, Boves TJ, L LJ, Stoleson SH, Bulluck LP, George GA, Kearns LJ, Slankard KG, Petzinger S, Cox JJ, Mylecraine KA	Genomic Signatures of Pleistocene Dry Forest Connections in a Widespread South American Songbird Corbett EC, Bravo GA, Schunck F, Naka LN, Silveira LF, Edwards SV	*A tale of two transects: sexual selection across a hummingbird hybrid zone Myers BM, Rankin DT, Brelsford A, Burns KJ, Clark CJ	American Seabirds: A review of status, threats, and conservation on land and at sea Nevins HM, Goyert H, Keitt B, Wiedenfeld D	Net effects of birds in agroecosystems Pejchar L, Clough Y, Ekroos J, Nicholas K, Olsson O, Ram D, Tschumi M, Smith H	Model-based vulnerability assessment of boreal birds in a changing climate Bateman BL, Wu J, Wilsey C, Taylor L, LeBaron G, Langham
14:15	Phenology of the Purple Martin Annual Cycle Kelly JF, Horton K, Stepanian P	Using ancient DNA from fossils to place an extinct flightless bird genus in a phylogenetic context Oswald JA, Allen JM, Folk R, Stucky B, Steadman DW, Guralnick R	Cultural Evolution Promotes Rapid Character Displacement in Sympatric Crossbills Porter CK, Benkman CW	Waterfowl in North America âĂŤ A successful story of partner-based conservation and regulated harvest Brasher MG, Moorman TE	Strategies for navigating trade-offs between avian-mediated services and disservices affecting food production and safety Kennedy CM, Latimer CE, Smith OM, Taylor JM, Owen JP, Rankin E, Snyder WE	Ecological niche modeling and potential implications for Alaskan birds under 2 ÅrC warming Wu JX, Bateman B, Wilsey CB, Taylor L, Langham G
14:30	Conservation implications of a migratory network for the Common Nighthawk Knight EC, Harrison A, Scarpignato AL, Van Wilgenburg SL, Bayne EM, Marra PP	Comparative phylogeography of four lowland forest birds distributed across the Dahomey Gap of West Africa Huntley JW, Sweet P, Hibbitts T, Arame H, Adite A	The relative roles of natural selection and sexual selection in speciation in the tanagers Price-Waldman RM, Demery AJ, Mason NA, Shultz AJ, Title PO, Burns KJ	Contrasting regional and range-wide trends inform causes of decline: case study with the Red-cockaded Woodpecker and associated pineland birds Walters JR, Rosenberg KV, Sauer JR	Trade-offs between ecosystem services and disservices provided by birds covary with agricultural intensification in the US Latimer CE, Smith OM, Owen J, Snyder W, Kennedy CM	Detecting shifts in the phenology and distribution of bird assemblages on the Kenai Peninsula, Alaska in a changing climate Magness DR, Eskelin T
14:45	Conservation in the Context of Migratory Connectivity: A Golden-winged Warbler Case Study Roth AM, Buckardt Thomas A	*Comparative genomics reveal modes of differentiation in North American warm desert birds Provost KL, Shue S, Forcellati M, Smith BT	Pleistocene glacial cycles and the relative ease of speciation with periodic gene flow Linck EB, Battey C	State of Population Trend Monitoring for North American Birds Michel NL, Smith AC, Hudson MR, Sauer J	*Understanding food safety risks associated with wild birds: a meta-analysis and conceptual framework Smith OM, Owen JP	Present and future distribution and abundance of aerial insectivores in the northwest using climate and landcover Stehelin TE, Schmiegelow FK
15:00	Migratory pathways, stopover locations, and wintering destinations of Flammulated Owls breeding in Colorado Linkhart BD, Yanco SW, Fox JW	*The Genetics of Adaptation and Diversification of the âĂIJGreat Speciators,âĂİ the Wallacean Zosterops Bloch LM, Irham M, Haryoko T, Claypool-Wang C, McGuire JA, Rowe K, Bowie RC	Early stage of the speciation process: Two coloration genes underlie species differences in a pair of capuchino seedeaters (Sporophila)âĂİ Estalles MC, Campagna L, Rodriguez Cajarville MJ, Tubaro PL, Lovette I, Lijtmaer DA	Are declines in Migratory bird species more closely associated with breeding or wintering locations? Sauer JR, Rosenberg KV, Marra PP, Link WA	Managing wild birds for strawberry production, pest control, and food safety outcomes in the California Central Coast Olimpi EM, Garcia K, Gonthier D, Karp DS	Conservation of KirtlandåÅŹs Warbler in a changing world Ribic CA, Brown DJ, Donner DM, Bocetti CI
15:15	Full annual cycle ecologyof migratory birds in the lower Great Lakes	Testing the causes of speciation with gene flow in a Neotropical avian species pair (Pachyramphus aglaiae) Musher LJ, Galante P, Blair M, Huntley J, Thom G	Signal evolution and morphological complexity in hummingbirds (Aves: Trochilidae) Eliason CM, Maia R, Parra JL, Shawkey MD	Addressing population declines with full annual cycle models: Current advances and data needs Joos CJ, Rushing CS	Birds in fruit production systems: contexts, outcomes, costs, and benefits Lindell CA	The influence of climatic dipoles on irruption dynamics in a warming world Zuckerberg B, Strong C, LaMontagne J

Wednesday, Late Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Sym: Avian biology and the annual life cycle: shorebirds as models to understand dynamic boundaries (Gurney)	Climate	Sym: Species Limits in Birds: Integrative and Practical Considerations for Taxonomy (Winker & Rasmussen)	Abundance, occupancy, trends	Conservation	Sym: Social Dynamics in Interspecific Interactions (Shizuka)
16:00	Connectivity and staging site pollution effects in a long distance migratory shorebird Morrissey CA, Bianchini K, McKellar A, Newstead D	*Characterizing a century of species losses in an isolated tropical forest fragment Curtis JR, Robinson WD, Rompré G, McCune B	Australo-Papuan perspectives on unravelling tangled knots on branches of species trees? Joseph LG	eBird Status and Trends: Species Distributions and Population Trends with Citizen Science Data Fink D, Auer T, Johnston A, Strimas-Mackey M, Iliff M, Robinson O, Petersen B, Kelling S	*Fear of predators influences nestling condition across a suburbanization gradient Grade AM, Warren PS, Lerman SB	
16:15	*Traveling as a newbie: Migratory Strategies linked to Survivorship in Juvenile Shorebirds in Peru Tavera EA, Lank DB, Drever MC, Gutierrez-Ruiz V	Dominance in hummingbird communities: an alternative way to visually represent it Ortiz-Pulido R	Coalescent-based species delimitation in avian taxonomy: history, promise, and pitfalls Mason NA, Fletcher NK, Gill B, Funk C, Zamudio K	Combining BBS and PIF Population Data to Estimate Recent Changes in IllinoisãAŽ Total Bird Population Herkert JR	*Testing the proposed IUCN Green List categories and criteria Gupta G, McGowan P, Dunn J, Sanderson R	Effects of non-breeding foraging on mixed-species flocking in Florida Jones HH, Walters MJ, Robinson SK
16:30	Within-individual advancement in Bar-tailed Godwit departure from New Zealand does not lead to earlier arrival in Alaska Conklin JR, Lisovski S, Battley PF	Plague management on prairie dog colonies maintains habitat for grassland passerines and raptors Conrey RY, Tripp DW, Youngberg EN, Panjabi AO	The genomic revolution and species delimitation in birds: gene flow matters, but what about other evolutionary forces? Cadena C	Results from a decade of banding Yellow Rails in Oklahoma and Texas Butler CJ	Saving the Red Siskin (Spinus cucullatus): Managing new flock member introductions in captivity Hill SK	Fighting over food unites the birds of North America in a continental dominance hierarchy Miller ET, Bonter DN, Eldermire C, Freeman BG, Greig EI, Harmon LJ, Lisle C, Hochachka WM
16:45	Declines in Eastern Canada Piping Plovers: are overwintering grounds the key to conservation? Gratto-Trevor CL, Rock J, Shaffer F	*Behavioral niche partitioning reexamined: do behavioral foraging differences predict dietary differences? Kent CM, Sherry TW	An incomplete overview of determining avian species limits Winker KS	Population trends and habitat associations of conservation priority bird species in Iowa Vanausdall RA, Dinsmore SJ, Kinkead KE, Frese PW	*Conservation of tidal marsh sparrows in an urban setting referencing range wide nesting occurrence Kocek AR, Elphick CS, Hodgman TP, Kovach AI, Olsen BJ, Ruskin KJ, Shriver G, Cohen JB	Interspecific Aggression and The Evolution of Avian Mimicry in Woodpeckers Leighton GM, Miller ET, Freeman BG, Lees AC, Ligon RA
17:00	Linking demographic rates to population trends in six species of Arctic-breeding shorebirds Weiser EL, Sandercock BK, Lanctot RB, Brown SC, Arctic Shorebird Demographics Network NA	Functional changes in assemblages of avian frugivores following extinction and invasion Case SB, Tarwater CE	Phylogenetic relationships within the Sharp-shinned Hawk complex with a focus on Caribbean populations Catanach TA, Johnson JA, Thorstrom R, Halley MR, Palhano S, Weckstein JD	Do drones bug songbirds? Wilson AM, Boyle KS, Gilmore JL, Kiefer C	Integrating genetic, population monitoring, and climate data to inform conservation of a declining migratory bird Saracco JF, Ruegg KC, Harrigan RJ, Taylor CM, Rubenstein M	Social dominance hierarchies among species and their consequences for behaviour, ecology and evolution Martin PR
17:15	Environmental drivers of annual survival and site fidelity of lekking Great Snipe in Norway Sandercock BK, Saether SA, Kalas JA	*Shifts in avian community composition across a human-modified landscape in Borneo, Malaysia Hightower JN, Yusah KM, Fletcher RJ	Phylogenomic analysis of species limits and hybridization in the Red-bellied/Golden- fronted Woodpecker clade (Melanerpes) Miller MJ, Lavretsky P	Risk Assessment of Great Lakes piping plovers using eABM: An R package to run Environment Agent-based Models Edwards BP, Jacobs S, Gillis D	Response of a southern California riparian bird community to habitat destruction by the invasive Kuroshio shot hole borer Kus BE	

Wednesday, LAte Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Migration	Phylogenetics	Life history\Behavior	Sym: Understanding and addressing the collapse of the North American Avifauna (Marra)	Sym: Biodiversity mediated trade-offs in agroecosystems: When do birds help or hurt farmers? (Pejchar)	Sym: Conservation, and management of boreal birds in a changing climate: What do we expect, what have we observed, and what do we do about it? (Stralberg)
16:00	Satellite tracking a wideâÁŚranging endangered vulture species to target conservation actions in the Middle East and East Africa Buechley ER, McGrady MJ, Coban E, Sekercioglu CH	Genomic and phenotypic divergence in Red Warblers (Cardellina rubra) Tsai WL, White E, Maley JM, McCormack JE	*Evolution of polygyny in weaverbirds (family Ploceidae) De Silva TN, Fernando SW, Peterson A	Pesticide exposure and effects on migratory songbirds: past and current threats Morrissey CA, Eng M, Stutchbury B, Stanton R, Clark R	Predation-mediated ecosystem services and disservices in agricultural landscapes Smith HG, Tschumi M, Birkhofer K, Ekroos J, Hjort C	Forecasting avian responses to climate-mediated increases in fire activity across the northwestern boreal forest Matsuoka SM, Sólymos P, Breen AL, Handel CM, Rupp TS, Mahon CL, Kurkowski TA
16:15	Synthesis of migration ecology in the Gulf of Mexico guides species conservation Deppe JL, Benson TJ, Bolus R, Buler J, Celis Murillo A, Diehl R, Feldman R, Knight E, Langham G, Mehlman D, Michel N, Moore F	A Phylogenomic Tree of Screech-Owls: Elucidating the Evolution of Color Polymorphism and its Ecological Correlates Kurtis SM, Owens HL, Oswald JA, Hosner PA, Guralnick R, Allen J, Ku M, Braun EL, Kimball RT	*Patterns and causes of tropical montane life histories: an observational and experimental study in Malaysian Borneo Mitchell AE, Martin TE	Determining the role of human-caused bird mortality in the collapse of the North American avifauna Loss SR	Insectivorous birds foraging in temperate and tropical agricultural lands Jedlicka JA	Simulating the effects of climate change on fire regime & vegetation: implications for woodland boreal caribou & boreal landbird communities in the Northwest Territories Hache SA, Micheletti T, Stralberg D, Cunming S, McIntire E, Tremblay J, Leblond M, Marchal J, Raymundo Sanchez A, van Telgen M
16:30	Messy eaters: DNA on dirty talons and beaks reveal what a migrating raptor eats Bourbour RP, Hull JM	Phylogenomics of the Parrots of the World Smith BT, Brumfield R, Ferreira M, Mauck W, Merwin J, Wright T, Joseph L	*Quantifying trade-offs in migration and reproduction in long-distance migratory birds of contrasting life history Cunningham SA, Schafer TL, Wikle CK, Ballard BM, VonBank JA, Weegman MD	Limitations to predicting the future of climate-driven bird declines Tingley MW	Vertebrate control from raptors motivates farmers to install nest boxes, but is secondary poisoning a concern? Martinico BL, Kross SM, Hull JM, Bourbour RP, Phillips EM, Hiroyasu E	Conservation lessons from the study of boreal birds at their southern periphery Ralston J, DeLuca WV
16:45	Winter ecology and spring migration timing of SwainsonâĂZs Thrush using forest and shade coffee plantations in Colombia Hobson KA, Gonzalez Prieto AM, McElaney S, Bayly N	Phylogenomics of pigeons and doves from whole genome sequencing Johnson KP, Boyd BM, Nguyen N, Allen JM, Steadman DW, Waterhouse RM, Sweet AD, Clayton DH, Bush SE, Shapiro MD	Timing is of the essence: later breeding predicts lower survival in American kestrels (Falco sparverius) Callery KR, Smallwood JA, Eschenbauch AL, Luttmann ER, Heath JA	Migratory Bird Policies: Changes, Threats and Opportunities for Action Senner SE	Foraging selectivity of insectivorous birds in Kenyan shade coffee systems Kammerichs-Berke D, Johnson M, Bean T	A Synthesis of Climate change impacts on boreal bird communities in managed landscapes of Canada Tremblay JA, Cadieux P, Boulanger Y, Cyr D, Taylor AR, Price DT
17:00	Population-Level Importance and Migratory Connectivity of a Shorebird Staging Site in the Midcontinental Flyway Howell JE, McKellar AE, Espie RH, Bianchini K, Morrissey CA	Wild Turkey speciation seen through full genomes Vazquez-Miranda H, Zink RM	*Loggers in artificial eggs reveal scarlet macaw incubation in natural and artificial nests Woodman CJ	Sorting through the ashes: a synthesis, roadmap and discussion for the conservation of the birds of North America Marra PP, Rosenberg K		Conservation planning for boreal birds in a changing climate: A framework for action Stralberg D, Berteaux D, Drever M, Drever R, Naujokaitis-Lewis I, Schmiegelow F, Tremblay J
17:15	Idiosyncratic changes in spring arrival dates of Pacific Northwest migratory birds *Robinson WD, Partipilo C, Hallman TA, Fairchild K, Fairchild J	Molecular phylogeny of whistling ducks (Dendrocygninae) Harshman J	Application of a novel nest density estimator: an example using sagebrush-steppe songbirds Reintsma KM, Berkeley LI, Dreitz VJ			

Thursday, Morning Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Abundance, occupancy, trends	Behavior	Biogeography	Breeding biology	Climate	Habitat relationships
10:30	*The Effects of Recreational Activities on Avian Occupancy in a High Latitude Tundra Ecosystem Meeker AL, Marzluff JM	*Provisioning coordination increases with mate familiarity in a long-lived pelagic seabird, the Manx shearwater Tyson CW, Gillies N, Guilford T, Hull J	Modeling the implications of future bioenergy scenarios on bird diversity and abundance in the Northern Great Plains Baltensperger AP, Goljani-Goljani-Amirkhiz R, Dixon M, Swanson D	A holistic approach to demographic monitoring of declining grassland songbirds Bernath-Plaisted JS, Correll MD, Panjabi AO	*The risk of climate change vs forest loss on restricted range tropical birds: The case of birds of West Africa Freeman BB, Sunnarborg J, Peterson A	Guild-specific Effects of Intensive Forest Management on Aviar Abundance Verschuyl JP, Kroll AJ Jones J, Betts MG
10:45	Juniper expansion in the sagebrush ecosystem: Avian predator occupancy patterns and implications for Sage-Grouse habitat restoration Young AC, Johnson TN	Inter- and intra-specific variance in boldness behavior of hybridizing Black-capped and Carolina chickadees Heuermann TM, Curry RL	Extraordinary plumage polymorphism in the Variable Antshrike (Thamnophilus caerulescens, Thamnophilidae) is consistent with GlogeråÄŹs Rule Marcondes RS, Brumfield RT	Variation in nest survival of the federally threatened Streaked Horned Lark on grasslands in the South Puget Sound Lowlands Slater GL, Wolf AL, Lynch J	Understanding the effects of nest site temperature on songbird reproductive fitness and parental care Scherr TM, Chalfoun AD	Influence of reproductive status of greater sage-grouse on habitat selection in a juniper dominated landscape Rabon JC, Coates PS, Ricca MA, Johnson TN
11:00	*Bias in estimated breeding-bird abundance from individual movement Fogarty FA, Fleishman E	Hierarchical fear: predation risk has direct and indirect effects on nestling growth and stress de Zwaan DR, Martin K	Natural selection on body size during range expansion in Red-bellied Woodpeckers Ralston J, Mayette-Draper E, Hamilton S, Kirchman JJ	*Seasonal variation in effects of competing predators on avian nest success Ellis KS, Larsen RT, Koons DN	Extreme weather lengthens incubation periods and lowers productivity for a sagebrush-obligate songbird Sanders LE, Hall LE, Chalfoun AD	*Multi-scale approach to evaluating space use in invasive avian dispersers and the implications for seed dispersal Wilcox RC, Tarwater CE
11:15	Distribution update, habitat use and conservation status assessment of the Grey-bellied Comet (Taphrolesbia griseiventris) Cuadros SF	Increased predator density changes nest attendance behavior of Yellow-headed Blackbirds (Xanthocephalus xanthocephalus) Harms TM, Behrens C, Ruff ZJ, Dinsmore SJ	Modelling the niche in present and past climatic scenarios for the Great Tit Machado-Stredel FJ, Song G, Zhang R, AlstrÃtm P, Qu Y, Qiao H, Mays H, Ericson PG, FjeldsÃe J, Peterson AT, Chinese Academy of Sciences NAL	Patterns of nestling growth rates in tidal marsh sparrows mirror colonization of specialist habitat Ruskin KJ, Watson VK, Olsen BJ	Intraspecific variation in morphological traits of an understory insectivore across a precipitation gradient in the tropics Tarwater CE, Kelley P	Patterns of home range resource use by the Volcano Junco, a Costa Rican highland endemic Besozzi EM, Patten M
11:30	Ecological Correlates to Habitat Use in the Coastal Cactus Wren Winchell CS, Doherty PF, Taylor JM	*Habitat- and sex-specific parental care in the monomorphic Red-headed Woodpecker Walter LA, Viverette C, Bulluck LP	How do dispersal and migration influence range expansion of birds? Pegan TM, Weeks B, Winger B	To burn or not to burn? Breeding success of king rails in a fire-managed coastal marsh McRae SB, Schroeder KM	Cascading effects of widespread disease-induced mortality of a foundation tree species on Hawaiian forest bird communities Paxton KL, Hart PJ	
11:45	Sea level rise impacts on waterbird habitat across the Hawaiian Islands Price MR, Harmon K	Parental Behaviors Mediate the Effects of Bird Blow Fly Ectoparasitism on Nestling Wood Thrushes in Suburban Forests Straley KM, Warren PS, King DI	The importance of geography and environment for diversification: a case study in the Northern Double-collared Sunbird Cinnyris reichenowi Cooper JC, Maddox D, McKague K, Bates J	Not so secretive marshbirds: Using technology to research a cryptic species, the Clapper Rail Elizondo EC, Shriver WG	Greener pastures: idiosyncratic avian responses to early forest regeneration in the Maya Biosphere Reserve Lello-Smith AM, Rodewald AD, Ruiz-Gutierrez V	

Thursday, Morning Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Molecular ecology	Sexual selection\Parental care	Lightning Talks	Sym: A bright future for birds: understanding the impacts of light pollution on avian wildlife (Kernbach)	Sym: Permeable Boundaries in Biological and Social Sciences: Human Dimensions in Bird Research and Conservation (Naves)	Sym: Migratory Connectivity of Alaskan Birds (Harrison)
10:30	Variation in the microbiome of KirtlandāĀZs Warblers between their wintering and breeding areas Skeen HR, Cooper NW, Hackett SJ, Bates JM, Marra PP	*Testing the Hotspot Hypothesis: Lesser Prairie-Chicken Lek Formation and Female Space Use Aulicky CS, Haukos D	NuÃśez-Rosas LE et al. Mexican Hummingbird Nesting Gillespie LM et al. Nest Defense in Eastern Bluebirds King KM et al. Social Polygyny in Eastern Bluebird	Circadian Rhythms, Melatonin and the Daily and Seasonal Control of Birdsong Cassone VM, Harpole CE	Why Do Bird Conservation and Ornithology Need Social Science? Dayer AA	One state, global connections: Insights from 100 years of bird banding in Alaska Scarpignato AL, Harrison A, Marra PP
10:45	Admixture mapping the genetic basis of species differences in avian hybrid zones Brelsford AT, Nwankwo E, Myers B, Clark CJ, Kirschel A	Direct effects of Brown-headed Cowbird (Molothrus ater) brood parasitism on the growth and development of grassland songbirds Winnicki SK, Boyle WA	Tagestad JT et al. Individual Variation in Suboscine Vocalizations Crook-Hill JR et al. Cross-species Auditory Stimuli and Responses Justyn NM et al. Coloration Mechanisms in Painted Bunting	Physiological and genetic mechanisms underlying organismal response to artificial light at night Alaasam VJ, Zang Y, Niu Y, Ferguson B, Pieraut S, Seymoure B, Casagrande S, Ouyang JQ		Revealing the migratory path and wintering areas of Olive-sided Flycatchers that breed in Alaska Hagelin JC, Johnson JA, Hallworth MT
11:00	Population genetics and phylogeography of Merlin (Falco columbarius) in North America Martinico BL, Sage GK, Gravley MC, Talbot SL, Haak BA, Hull JM	Influence of both male and female attractiveness on reproductive success, offspring phenotype, and nestling sex ratio Hubbard JK, Moranville GP	Ulman SE et al. Molt Dynamics of Eiders Scott BF et al. Bill Divergence and Speciation in New World Jays Barry JL et al. Melanistic Pathways in Harlan's Hawk	Effects of Spectral Composition of Nighttime Lighting on Host Competence to West Nile Virus in a Passerine Reservoir Kernbach ME, Cassone VM, Unnasch TR, Martin LB	Building Social Science Capacity in the Bird Conservation Community: Nationwide Priorities and Practices Scarl J, Barnes JC, VerCauteren T	Connectivity of pre-adult, non-territorial migratory Golden Eagles during the nesting season in Alaska McIntyre CL, Lewis SB, Katzner TE, Miller TA, Lanzone M, Collopy MW, Douglas DC
11:15	Asymmetric Gene Flow in an Understory Fijian Bird Gyllenhaal EF, Mapel XM, Andersen MJ	Frontline defenses against a purported mafia brood parasite Peer BD, Page P	Maley JM et al. Red-crowned x Lilac-crowned Hybridization Salter JF et al. Where did Cuban bobwhites come from? Hosner PA et al. Phylogeny and evolution of the Gallopheasants	Multiple reproductive costs due to light pollution: insights from manipulative experiments & continental-scale data synthesis Francis CD, Senzaki M, Ferraro DM, Barber JR		Contrasting patterns of migratory connectivity in two species of Alaska-breeding shorebirds Tibbitts TL, Gill, Jr R, Ruthrauff D, Warnock N, Harwood C, Harrison A, Hallworth M, Douglas D
11:30	Does range expansion or ongoing dispersal explain apparent panmixia in BachmanāÁŹs Sparrow? A temporal study using museum DNA Settlecowski AE, Faircloth BC, Brown JM, Cox JA, Tucker JW, Carpenter JP, Taylor SS	Social versus genetic mating systems: the complex mating system of the lark bunting Lyon BE, Chaine AS	Vazquez Lopez AM et al. Phylogenomics of Euphoniinae Robles Bello SM et al. Genetic and Phenotypic Variation in Piranga bidentata et al.	*Light pollution is greatest within migration passage areas and is related to flight altitudes of nocturnal migrants Cabrera-Cruz SA, Smolinsky JA, McCarthy KP, Buler JJ	AmericaâĂŹs Wildlife Values: How values lead to challenges and opportunities for bird conservation Dietsch AM	Migration patterns of three loon species (Gavidae) breeding in the Arctic Schmutz JA, Uher-Koch BD, Harrison A, Mulcahy DM, Fair JS, Wright KG, DeSorbo CR
11:45	The Common Loon Genoscape Lindsay AR, Larison B, Bossu C, Rajbhandary J, Sorenson MD, DaCosta JM, Kaplan JD, Evers DC, Paruk J, Smith TB, Ruegg K		Seasonal associations with urban light pollution for nocturnally migrating bird populations La Sorte FA	Understanding underserved audiences to ensure ongoing long-term citizen science data collection for Project FeederWatch Martin VY, Greig E, Bonter D		
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Thursday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Sym: Molecular ecology is for the	Behavior	Dis- ease\Ecotoxicology	Songs\Vocalizations	Migration	Conservation
	birds: using molecular techniques to advance our understanding of avian ecology (Jusino)					
14:00	An ornithologist's toolkit for molecular community ecology Jusino MA	*Plasticity of aggressive behavior in BachmanâĂŹs Sparrows Niederhauser JM, Ali S, Ziadi MP, Anderson RC	*Geographic variation in host immunogenetics and malarial parasite infection in a Catharus thrush species complex Starkloff NC, Sammons MA, Westerdahl H, Turner WC, Kirchman JJ	Partitioning of signal space in a breeding warbler community Sblendorio JM, Vonhof MJ, Gill SA	Quantifying passage population size and migration phenology of endangered rufa Red Knots staging in southwestern James Bay, Ontario, Canada MacDonald AJ, Smith PA, Friis CA, Lyons JE, Nol E	Captivity and the Gut Microbiota of 'Akikiki: Implications for Conservation of a Critically Endangered Hawaiian Honeycreeper Costantini MS, Crampton C, Masuda B, Reed F
14:15		*Exploratory Behavior in Brown-Headed Nuthatches may Indicate Successful Population Reintroduction Strategy Gray MM	Regional variation in the abundance of House Finches created the context that determined the impact of an emerging pathogen Hochachka WM, Dhondt AA	Examining the Effect of Helicopter Noise on Bird Assemblages in HawaiâĂŸi's Protected Natural Areas Gallardo Cruz KV, Paxton KL, Hart PJ	A comparison of spring and fall body condition and hematological parameters in two migratory songbirds Hatch MI, Smith RJ	Down in the âĂŸweedsâĂŹ searching for answers to Wood Thrush fledgling and juvenile survival Hayes SM, Boyd B, Stutchbury B
14:30	Using molecular methods to identify fungi at woodpecker excavated cavities in western coniferous forests Lorenz TJ, Jusino MA, Schilling JS, Andrews E, Seveyka J, Fischer PC	Incubation Behavior of Trumpeter Swans Measured by Continuous Infrared Videography Delehanty DJ, Bush DA	Cross-ecosystem subsidies in Acadia National Park: How invertebrates can help us understand mercury exposure in songbirds Jackson AK, Frampton L, Garafalo M, Harris S, Nightingale B, Youre-Moses A	*Developmental experience may contribute to adult female preferences for male mating signals Strauss AV, Podos J	Annual variation in use of a spring stopover site by three migratory shorebirds Tucker AM, McGowan CP	Comparison of abundance and annual return rates of wintering Piping Plovers on natural and man-made beaches in the Mississippi Sound
14:45	*The nidobiome as a framework to understand microbiome assembly Campos-Cerda F, Bohannan BJ	*Deep snow and dense cover influence habitat selection in a winter-adapted bird Shipley AA, Zuckerberg B	Assessing halogenated marine persistent organic pollutants in the critically endangered California condor and their marine mammal prey Stack ME, Hoh E, Dodder N, Tubbs C, Vilchis I, Felton R, Johnson J	Morphologically, genetically and vocally divergent Warbling Vireo subspecies exhibit indiscriminate aggression toward intruders in a new contact zone Spellman GM, Hammond A, Zhang T	What causes vagrancy in some New World warblers along the Pacific Coast? Ralph CJ, Wolfe JD	*Patterns of northern bobwhite juvenile survival on extensive prairies and mixed agricultural, grassland, and wooded landscapes in Missouri Sinnott EA, Thompson FR, Weegman MD, Thompson T
15:00	*Is there an association between communities of wood decay fungi and black-capped chickadee nest cavities? Gable CL, Lindsay AR, Jusino MA	*Stinky is sexy: the major histocompatibility complex, mate choice and personal odor in LeachâĂŹs storm-petrels Jennings SL, Hoover BA, Sin Y, Nevitt GA, Edwards SV, Ebeler SE	The effects of climate, habitat, and diet on methylmercury bioavailability for New York songbirds Adams EM, Sauer AK, Lane O, Regan K, Evers DC	*What drives flexible signaling? Anthropogenic noise and social context affect male house wren vocal behavior Grabarczyk EE, Vonhof MJ, Gill SA	*Migratory bird use of stopover sites in Midwestern forests and urban habitats during spring and fall Outcalt JM, Buler JJ, Smolinsky JA, Dunning JB	Cumulative effects of forest harvesting, wildfires, and roads on Olive-sided Flycatcher habitat in British Columbia, Canada: Implications for Environmental Assessment processes Norris AR, De Groot K, Robinson A, Dohms KM, Thomas J, Lee A, Moore K, Martin K
15:15	Revealing unknown interactions: the role of Patagonian tapaculos (Rhinocryptidae) on the dispersal of endemic truffles Caiafa MV, Jusino MA, Díaz IA, Smith ME	*Dominance rank and sex predict social network position in winter social groups in a passerine bird Block TA, Shizuka D, Chaine A, Lyon BE	Are wetlands hotspots for bioaccumulation of mercury in songbirds? Brasso RL, Rittenhouse KA, Winder VL	Who is there? Response to different type of territorial intruders Sandoval L, Hamzaj T, Bonilla K, Gutierrez I	What can weather surveillance radar data tell us about stopover duration of migrating land birds? Buler JJ, Zenzal, Jr TJ, Moore FR, CalderĬŇn LN, Barrow, Jr W, Wilson B	Responses of State-Endangered Common Terns (Sterna hirundo) in Ohio to the Use of Artificial Nesting Platforms Kearns LJ, Shirkey B, Picciuto M, Crouser A, Scott E
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Thursday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Genomics	Endocrinol- ogy\Physiology	Sym: Undergrad Symposium	Sym: Lessons from avian hybrid zones and the maintenance of species boundaries (Aguillon)	Sym: Permeable Boundaries in Biological and Social Sciences: Human Dimensions in Bird Research and Conservation (Naves)	Sym: Cross-Pacific migration: how the impossible becomes commonplace (Ruthrauff)
14:00	Genomic differentiation along the speciation continuum in three hummingbird species pairs Henderson EC, Brelsford A	Chronic, sublethal effects of high temperatures will cause severe declines in arid-zone birds during the 21st Century Conradie SR, Woodborne SM, Susan CJ, McKechnie AE	Use of Thermal Imaging for the Study of Seabirds in the Gulf of Alaska: Implications for Management and Conservation Kidder EA, Sherwin R	Mechanisms underlying the maintenance of species boundaries: lessons from avian hybrid zones Walsh JL, Aguillon SM, Clucas GV	How do Individual Attributes Predict Bird Conservation Behaviors Among Birders in the United States? Rich TD	Tropical Convection, Atmospheric Teleconnections, and possible links to Wind-Assisted Bird Migration over the North Pacific Feldstein SB, Gill RE, Douglas DC
14:15	*Genomics and Color Morphs: Comparison of whole genome sequence data between a melanin-based and a carotenoid-based species Shakya SB, Brumfield RT, Sheldon FH	*Will low oxygen slow range shifts? Response to a novel high elevation environment from populations across a hummingbird range Spence AR, Tingley MW	Genomics for the Management of âĂŸAlalÄĄ (Corvus hawaiiensis) in a Conservation Breeding Program Leavitt JS, Blanchet G, Datlof E, Bellinger R, Geib S, Masuda B, Sutton J	Genetic architecture and asymmetric introgression of plumage-related reproductive barriers in hybridizing birds Semenov GA, Khaydarov DR, Safran RJ, Taylor SA	Preferences of Birdwatchers and Waterfowl Hunters in the United States and Canada: Results of Discrete Choice Experiments (DCEs) Fulton DC, Dietsch A, Harshaw H, Raedeke A, Dayer A, Duberstein J	What nonstop trans-Pacific flights of shorebirds mean for our understanding of the energetic and physiological limits to endurance flight Guglielmo CG, LindstrÃűm ÃĚ
14:30	*Genomics of parallel divergence and local adaptation in two North American woodpeckers Moreira LR, Smith BT	*Out in the cold: a novel approach to understanding the physiological drivers of phenotypic flexibility in Dark-eyed Juncos Stager M, Senner NR, Cheviron ZA	Machine annotation of Puaiohi calls in environmental acoustic recordings Weyenberg GS, Rumpungworn MD, Howells LO, Paxton KL, Crampton LH, Hart PJ	Using comparative genomics to investigate non-geographic drivers of divergence and introgression in Panamanian birds McLaughlin JF	Quantifying the stability of birdsåÅZ cultural niches: changing public perceptions of the North American avifauna Schuetz JG, Johnston A	Wind assistance along the trans-Pacific migration corridor of the Bar-tailed Godwit: past, present, and future Gill, Jr RE, Douglas DC, Feldstein SB, Mills CM, Battley PF, Handel CM
14:45	A genomic comparison between flycatchers only distinguishable by innate song differences Garcia NC, Campagna L, Rush AC, Bowie RC, Lovette IJ	Long-term effects of early-life stress on the HPA axis in a short- and long-lived bird Grace JK, Anderson DJ, Angelier F	A Comparison between Traditional and Next Generation Screening Approaches to Characterize Avian Haemosporidian Parasites Ray S, Henry M, Galen S, Ostrow EN, Dispoto J, Kiziuk L, Weckstein JD	Differences in introgression across two hybrid zones in the Great Plains Billerman SM, Walsh J, Butcher BG, Lovette	Minimizing All-Terrain Vehicle Impact in Bird Habitat: Reconciling Harvest and Conservation on Private Land in Western Alaska Naneng W, Maroney RL, Naneng M, Tinker W	Minding the gap: An energetics-based perspective on not migrating Ruthrauff DR, Dekinga A, Gill, Jr R, Piersma T
15:00	Gradual evolution towards flightlessness in Steamer-Ducks Campagna Ln, McCracken K, Lovette IJ	Do high-energy lifestyles in birds promote high maximal metabolic capacities? Swanson DL, Thomas NE, Zhang Y	*Spatial patterns of habitat use of the Sierra Madre Sparrow, Mexican and endemic mountain bird, in Milpa Alta, Mexico City Savarino-Drago A, Ruvalcaba-Ortega I, Martinez M, Martinez H, Martinez-Molina Y, Garcia-Loeza S, Rodriguez-Contreras V, Martinez-Molina G	Evolutionary genomics of variable carotenoid-based ornamentation in the Red-backed Fairywren Khalil S, Walsh J, Enbody ED, Baldassarre DT, Webster MS, Karubian J	Prioritizing Regional Landscapes to Achieve Biological and Social Objectives through Bird Habitat Conservation Soulliere GJ, Al-Saffer MA	Rapid global differentiation of migratory phenotypes in Bar-tailed Godwits Conklin JR, Verkuil YI, Piersma T, Fontaine MC
15:15	Is mutation rate linked to diversification in birds? Oliveros CH, Faircloth BC	From shallow to deep: A torpor spectrum in hummingbirds uncovered using thermal imaging Shankar A, Cisneros IN, Thompson S, Graham CH, Powers DR	*Effects of lead exposure on reproductive success and extra-pair paternity in a common urban songbird Hitt LG, Khalil S, Blanchette A, Finkelstein ME, Ribeiro RD, Iverson EN, McClelland SC, Karubian J COFFEE BRI	Hybrid zones and the development of reproductive isolation in flooded versus terra firme forest birds of the Amazon Weir JT	Land Trusts and Birds: Partners in Strategic Conservation Rodewald AD, Swarthout SB, Dayer AA, Rohrbaugh RW	Migratory patterns of sooty shearwaters (Ardenna grisea) across the Pacific Ocean Shaffer SA, Harrison A

Thursday, Late Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Sym: Molecular ecology is for the birds: using molecular techniques to advance our understanding of avian ecology (Jusino)	Behavior	Urban ecology	Morphology\Molt	Migration	Conservation
16:00	Detecting ecosystem services from insectivorous birds Jedlicka JA	Social network metrics predict future social status in male lance-tailed manakins Beckman AK, Vanderbilt CC, DuVal EH	*Urban habitat use by the an Endangered Hawaiian waterbird on O'ahu, Hawaii Kawasaki MT, Hart PJ, Paxton EH	Simultaneous rectrix molt and comparative molt ecology of eastern wood-warblers Mumme RL, Mulvihill RS	Assessing optimality of migratory landbirds crossing the Gulf of Mexico using individual-based modeling of telemetry data Bolus RT, Diehl RH, Deppe JL, Ward MP, Moore FR, Celis-Murillo A, Zenzal Jr TJ, Smolinsky JA	*Where in the world are migratory birds declining during the annual cycle? The winter survival of a near threatened shorebird in South America Herbert JA, Mizrahi D, Taylor C
16:15	Using molecular techniques to study the diets and gut microbiota of migratory birds Trevelline BK	Effects of the Social Environment on Cloacal Microbiome Diversity Houtz JL, Taff CC, Zimmer C, Vitousek MN	Urbanization and elevated cholesterol in American crows Townsend AK, Staab H, Barker CM	Glare reduction properties of dark avian facial markings Lebow CK, Burt DB	Movement and Distribution of Red Knots (Calidris canutus) in the Southeastern U.S Tuma ME, Powell AN	*What factors influence nest survival of the endangered Yellow-headed Amazon? Tarazona-Tubens FL, Britt CR, Abadi F, Desmond MJ
16:30	Using box-nesting birds to explore methods in studying developmental immunity and gut microbiota Knutie SA	Differences in foraging strategies among Common Loons overwintering on a large freshwater reservoir in northwest South Carolina Mager JN, Paruk JD, Wade B	*Investigating the influence of polarized light and artificial night lighting on bird-building collisions Lao S, Anderson AW, Blair RB, Eckles JW, Robertson BA, Turner RJ, Loss SR	Evolution of molt-migration: a large-scale phylogenetic approach Pageau C, Reudink MW	Movement patterns and habitat use of endangered whooping cranes during migration through CanadaâÁŹs oil sands mining region Bidwell MT, Conkin JA, Ball J, Brandt DA, Harrell W, Kindopp R, Metzger K, Pearse AT, Wiacek R	Effects of translocation on burrowing owl (Athene cunicularia) survival, fidelity, and nesting rates in Arizona Doublet DN, Desmond MJ, Johnson DH, Abadi F
16:45	Anthelminthic drugs modulate the acute phase immune response but not the microbiome in wild song sparrows Vaziri GJ, Jusino MA, Brewer MT, Adelman JS	Does object neophobia predict exploratory behavior in a free-living wild bird? Tringali A, Prussing S, Sherer D, Windsor R, Bowman R	Relationships between local- and landscape-scale management and urban bird communities across six major metropolitan areas: Do yards matter? Narango DL, Lerman SB, Hall SJ, Hobbie SE, Neill C, Tranmell TL, Groffman P	Molt-migration in the Mexican Monsoon: 90 years of specimens reveal a phenological mismatch caused by anthropogenic climate change Terrill RS, Tsai WL, Maley JM, Rohwer S, Pimm G, McCormack JE	Revisiting Red-winged Blackbird Migration: Fine-scale Temporal and Spatial Movements of Individuals Across Annual Migration Eshleman MA, Klug PE, Greives TJ, Gillam EH	Landscape matrix and species traits mediate avian responses to forest fragmentation Kennedy CM, Marra PP
17:00	Assessing the relationship between multiple paternity and the cloacal microbiome in female tree swallows Hernandez J, McGlothlin JW, Belden LK, Moore IT	Timing of breeding in American coots: bet-hedging against nest predation when reproductive performance declines with season Lyon BE	The role of diet and nesting in bill shape diversification of frugivorous Asian barbets Krishnan A, Souza N, Reddy S	Age-, Sex-, and Size-Related Differences in the Distribution of Migrating Landbirds on the Northern Gulf Coast Calderon LN, Zenzal TJ, Barrow W, Wilson B, Buler JJ	*Demographic consequences of road mortality to Snowy Plovers at Gulf Islands National Seashore, FL Durkin MM, Cohen JB	
17:15		Neighbor-stranger discrimination in a Neotropical suboscine bird: embracing behavioral complexity to uncover patterns Kelley JP, Tarwater CE	*Effects of habitat type on provisioning Florida Burrowing Owl space use and movements Rose EH, Boughton RK	Songbirds alter their use of bird feeders in response to vocalization playback Barron DG, Sarna SD, Middleton RL	*Assessing the potential for using weather radar to predict bird collisions Elmore JA, Horton KG, Riding CS, O'Connell TJ, Loss SR	When prioritizing regions for migratory bird habitat conservation, quantifying costs can supersede parametrizing a population model Stanton Jr RA, McGowan CP, Robinson OJ

Thursday, LAte Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	7	8	9	10	11	12
Ses- sion	Ge- nomics\Systematics	Human dimensions\Policy	Sym: Undergrad Symposium	Sym: Lessons from avian hybrid zones and the maintenance of species boundaries (Aguillon)	Sym: Permeable Boundaries in Biological and Social Sciences: Human Dimensions in Bird Research and Conservation (Naves)	Sym: Cross-Pacific migration: how the impossible becomes commonplace (Ruthrauff)
16:00	Identifying and characterizing transposable element polymorphisms in the Northern Flicker (Colaptes auratus) species complex Hruska JP, Manthey JD	*Wedge-tailed Shearwater Persistence in Human-Dominated Areas Idle JL, Friswold BM, Harmon KC, Price MR	The Role of Song in Reproductive Isolation in Two Newly Overlapping White-crowned Sparrow (Zonotrichia leucophrys) Subspecies Brooks WE, Wimberger PH, Rouse ML	Hybridization in Northern Flickers reveals loci associated with feather coloration Aguillon SM, Lovette IJ	*Aspects of municipalities associated with occupancy and abundance of Chimney Swifts in Illinois Hurd ML, Benson TJ, Ward MP	*Demographic and distributional responses by long-distance migratory shorebirds to the rapid loss of staging habitat Chan Y, Lok T, Chung SS, Tibbitts TL, Hassell CJ, Piersma T, Zhang S
16:15	Immigration may decouple heterozygosity and inbreeding in declining populations of Florida Scrub-Jays Nguyen TN, Chen N, Bowman R, Fitzpatrick JW, Clark AG	If You Build It, They Will Come: Avian Utilization and Predation at a Large-Scale Photovoltaic Solar Facility Griffiths JL, Meade DE, Dart JD	*Development, not Bird Feeders, is Associated with Increased Occupancy of Northern Cardinals in Northern Michigan Toner SM, Bonter DN	Cardinals are red, buntings are blue; because they hybridize, theyåÅŹre interesting too! Megna LC, Carling MD	Cross-Cultural Considerations in Wildlife Management and Conservation Leonetti CC	Cross-seasonal interactions: the Pacific as the worldåÅZs greatest theater of bird migration Piersma T
16:30	Phylogeny of the Hawaiian Thrushes (Myadestes) Based on UCE and Mitochondrial DNA Sequences Fleischer RC, McInerney N, McIntosh CE, Sonsthagen S, Olson S, James H	Engaging undergraduate students in an authentic course-based research experience using archived nest video footage Stracey CM	*Integrating machine learning and citizen science data to generate high-performing species distribution models for the globally vulnerable Gray Tinamou (Tinamus tao)	Sex chromosome inversions may enforce reproductive isolation across an avian hybrid zone Hooper DM, Griffith SC, Price TD	Sustainability in Long-Term Collaborations: the Harvest Assessment Program of the Alaska Migratory Bird Co-Management Council Naves LC, Fall J, Tulik C, Pederson M, Keating JM, Fischer J, Schwalenberg P	
16:45	Reconciling the mitonuclear compatibility species concept with rampant mitochondrial introgression Hill GE	The Nsf is Growing Pathways to Stem for Rural Community College Students via Community Partnerships and Intensive Mentoring Gillespie LM, Heinisch S, Grandgenett N	*Modeling persistent effects of West Nile virus on avian population dynamics in the northeastern United States Dupont GL, Bonter DN, Robinson OJ	Genomic and morphological approaches to understanding speciation in Jamaican-endemic streamertail hummingbirds Judy CD, Brumfield RT, Graves GR	Banding Together to Learn and Preserve: 25 Years of Research in Cross-Cultural Western Alaska Ely CR	Closing summary: A synthesis and gap analysis of migratory connectivity knowledge available for Alaskan birds
17:00	The Common Yellowthroat genoscape- a genomic approach to delineating conservation units Bossu CM, Rajbhandary J, Smith TB, Ruegg K	Engaging with veterinarians to reduce cat overpopulation and cat impacts on wildlife populations Sherwood LJ, Wilson AG, South CS, Roche SM, Luszcz TM		Ancient and contemporary hybridization amongst wood warblers Toews DP, Taylor SA, Streby H, Kramer G, Brennan C, Jones A, Lovette IJ	Human Dimensions Applications in Shorebird Subsistence Harvest and Indigenous Knowledge in Alaska Keating JM, Naves LC, Tibbitts TL, Ruthrauff DR	
17:15	A genomic investigation of the potential despeciation of deeply divergent lineages in a Malagasy passerine Perry NL, Block NL, Younger JL, Raherilalao M, Goodman SM, Reddy	Evaluating bird feeders as tools to connect people with nature, and challenges associated with middle school interventions Hammond RL, Theimer TC		Assessing assortative mating in hybrid zones Scordato ES		

Friday, Morning Session *indicates student presenters eligible for AOS presentation award

Room	1	2	3	4	5	6
Ses- sion	Breeding biology	Citizen science	Evolutionary ecology	Foraging\Food habits	Habitat relationships	Move- ments\Dispersal
10:30	Can renesting be an effective reproductive strategy and how does it influence conservation of a threatened shorebird species? Swift RJ, Anteau MJ, Ring MM, Toy DL, Wagner HR, Sherfy MH	Eggshell characteristics as predictors of heavy metal concentration in House Sparrow eggs Hartley SM, Cooper CB	Speciation on an island: Genetic differentiation in penguins and shags Burg TM, Guevara-López J, Perkins N, Bost CA	Gyrfalcon Dietary Plasticity in a Changing Tundra Ecosystem Johnson DL, Henderson M, Anderson DL, Booms T, Robinson B, Williams CT	Habitat Modeling for Desert Thrashers Fletcher DM, Harter LB, Ammon E	Investigating Aleutian Tern Breeding Season Movements Using Satellite Telemetry Nesvacil KA, Lyons DE, Oehlers S, Skinner J, Mondragon J
10:45	Nest Initiation Time and Distance to Water Predict Nest Success of the Hawaiian Stilt in Wetlands on OâĂŸahu Harmon KC, Wehr NH, Price MR	The role of eBird in fine-scale distribution and density modeling Hallman TA, Robinson W	The genomic landscape of microgeographic adaptive divergence in an island endemic Cheek RG, Funk WC, Sillett TS, Ghalambor C	Canada Jay (Perisoreus canadensis) foraging ecology in Denali National Park and Preserve, Alaska Swift KN, Marzluff JM, Williams E	The importance of dynamic conservation programs to shorebirds in CaliforniaâÅŹs Central Valley Golet GH, Dybala K, Reiter M, Sesser K, Reynolds M, Barfield J, Spraycar P	Preferred orientation of vagrant passerines during autumn migration Zawadzki LC, Taylor PD, Guilford T
11:00	Impacts of the December 2016 to August 2017 Bogoslof Island Eruption Event on a Major Alaskan Seabird Colony Rojek NA, Drew GS	Webcams as an untapped opportunity to conduct citizen science: Six years of the American Kestrel Partnership's KestrelCam Schulwitz SE, Spurling DP, Davis TS, McClure CJ	Genetic connectivity and differentiation among Horned Larks (Eremophila alpestris) along an elevational gradient in the White Mountains of California Wang-Claypool CY, Mason NA, Cicero C, Bowie RC	Trophic Transfer of Energy via Nestling Wading Birds to a Scavenger Community in an Oligotrophic Wetland Gabel WW	Spanning the Habitat Gradient: Red-headed Woodpecker Nest-site Selection in Three Distinct Cover Types Nickley BM, Bulluck LP	Agent-based modeling and simulation âĂŞ whatâĂŹs in it for ornithologists? Clemen T, Lenfers UA, Bradshaw K
11:15	Measuring impacts of non-native species on cavity-nesting birds at the continental scale Bailey RL, Faulkner HA, Martin VY, Phillips TB, Bonter DN	Tiger sharks eat passerines: exploring the prevalence of a unique cross-system pulsed subsidy Drymon M, Feldheim K, Fournier A, Seubert E, Kroetz A, Powers S	Assessing the Influences of Habitat Structure on Bird Song Propagation Hardt BM, Benedict L	Using DNA metabarcoding to determine Seaside Sparrow diet following large-scale disturbances Snider AM, Bonisoli Alquati A, Woltmann S, Stouffer PC, Taylor SS	Innovations in measuring habitat: nest-site selection of grassland songbirds in northern mixed-grass prairies Guido NA, Correll MD, Ruskin K, Olsen BJ, Bernath-Plaisted J	Alternative pathways to success: transient dispersers in a cooperative breeding corvid Suh Y, Dent ML, Fitzpatrick JW, Bowman R
11:30	Decadal shifts in patterns and benefits of nesting near territorial predators by tundra-nesting sea ducks Miller MW, Lovvorn JR, Graff N, Stellrecht N, Quakenbush LT, Safine DE	Birds Across Borders: Uniting Curriculum, Students, Cultures, and Generations Campbell-Smith JA, Cannady G	Life history structures phenotypic variation in avian functional traits DuBay SG	Validating the barcode-biomass match: can DNA barcoding determine the contribution of arthropod taxa to the diet of birds? Verkuil YI, Ubels R, Samplonius J, Nicolaus M, Dietz M, Galema A, Kiekebos K, de Knijff P, Both C	Survival, Habitat Selection, and Behavior of Post-fledging Golden-cheeked Warblers Trumbo EM, Brawn MP, Brawn J	Pacific Arctic seabird communities: a decade of change viewed through the lens of the Distributed Biological ObservatoryåÅŹs at-sea surveys Kuletz KJ, Cushing D, Osnas E, Labunski E, Gall A
11:45	Consequences of nest outcome on investment into later broods by Gray Catbirds Redmond LJ, Haq JI, Noble D, Ricco D	Creating diverse and quality habitat for birds through application of management guidelines for land managers in northern hardwood forests Treyger SM, Burger	Factors mediating reproductive isolation between related species at contact zones Kirschel AN, Nwankwo EC, Monadjem A, Grether GF, Brelsford A	Demographic and seasonal variation in biofilm consumption by migratory Western Sandpipers (Calidris mauri) Hall LA, De La Cruz SE, Takekawa JY	Woodpecker nest survival and density in relation to a pine beetle outbreak Saab VA, Latif Q, Dresser M, Dudley J	Seasonal and directional dispersal behavior in an ongoing dove invasion Slager DL

7riday, Morning Session *indicates student presenters eligible for AOS presentation award

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Room	7	8	9	10	11	12
Ses- sion	Lightning Talks	Sym: Birds with benefits: evidence and trade-offs of multiple-benefit conservation focused on birds (Gardali)	Sym: Wild birds and the One Health initiative: Dynamic boundaries affect the health of birds, livestock, humans, and the environment (Ramey)	Sym: The Future of Global Bird Trait Datasets: A Game-changing Resource for Macroecology, Macroevolution and Conservation Biology? (Tobias)	Sym: Counting unmarked birds aAS Matching appropriate sampling and modeling techniques with particular research questions (Latif)	Behavior
10:30	Allen DC et al. Urban Bird Community Shifts in Arizona Brown TM et al. Site Availability of NA's Breeding Birds Boyce AJ et al. Grazers and North Great Plains Community Composition	What is multiple-benefit conservation and why care? Gardali T, Seavy NE, Dybala KE	Wild birds and One Health: Dynamic boundaries affect the health of birds, livestock, humans, and the environment Ramey AM	Life history trait variation across a tropical elevational gradient Jankowski JE, Scholer MN, Londono GA	Estimating avian abundance from unmarked populations: requirements, assumptions, and finding the best method for your research Amundson CL, Latif Q, Valente J	New technologies and analytical opportunities for improved inference about avian social structure Clements SJ, Silk MJ, Hodgson DH, Weegman MD
10:45	Reiley BM et al. Habitat use of Agricultural Fields Edelstein DA et al. Benefits of Canada Goose Egg Addling Ruskin KJ et al. Community Change in Acadia National Park	Trade-offs between carbon storage and biodiversity conservation in reforested riparian zones Dybala KE, Steger K, Walsh RG, Smart DR, Gardali T, Seavy NE	Evolutionary changes following a successful host shift: the case of Mycoplasma gallisepticum Dhondt AA, Dhondt KV, Dobson AP, Geary SJ, Hawley DM, Hochachka WM, Ley DH, Pflaum K, Reinoso-Peres M, Tulman ER	Phylogenetic and functional structure of avian communities along a tropical elevational gradient Boyce AJ, Shakya SS, Sheldon FH, Moyle RG, Martin TE	Sampling design considerations for making strong inference from large-scale monitoring programs Pavlacky DC	Using playback experiments to investigate species discrimination in a hybridizing population of Blue-winged and Golden-winged Warblers Janik AE, Vonhof MJ, Gill SA
11:00	Levy HE et al. Snag availability for Cavity Nesting Birds Paprocki NA et al. Golden Eagle Migration Horns JJ et al. Early Spring Migration in Turkey	Dynamic Replenishment: Implementing a multi-benefit approach to creating bird habitat and recharging groundwater Barfield Jn, Rohde M, Golet G, Reynolds M, Andrews K		The impact of species interactions on latitudinal gradients in trait evolution in birds Drury JP	On a simulated day, you can see forever: Comparing analytical methods using simulated point counts Rigby EA, Johnson DH	Landscape-level information use shapes brown pelican (Pelecanus occidentalis) foraging behaviors Geary B, James WR, Karubian J, Nelson JA, Leberg PL
11:15	Winger BM et al. Nocturnal flight calls and collision vulnerability Yappert AA et al. Winter Movement of Brown-capped Rosy-Finches Wilhite CJ et al. Habitat Use of Hawaiian Short-eared Owls	Waterbird habitat quality and groundwater recharge potential of alfalfa in the San Joaquin Valley Strum KM, Sesser KA, Shuford WD, Golet GH	Harmful algal blooms in northern waters: An emerging issue for Alaskan seabirds? Van Hemert CR, Smith MM, Schoen SK, Dusek RJ, Piatt JF, Arimitsu ML, Litaker RW, Pearce JM	Are rates of divergent evolution in "biotic interaction" traits faster in the tropics? A test using bird beaks Freeman BG, Schluter D, Tobias J	From single-day to multi-year revisits: matching sampling strategies to inferential goals Tingley MW	Age-related variation in bite force in a long-lived seabird in the Galapagos Rebol EJ, Anderson DJ
11:30	et al. et al. et al.	Multiple benefits from a migratory bird species: Where they originate and how it matters to management Semmens DJ, Bagstad K, Diffendorfer J, Mattsson B, Dubovsky J, Thogmartin W, Wiederholt R, Loomis J, Bieri J, Sample C, Goldstein J, López-Hoffman L		Global biogeographic gradients in avian colouration Cooney CR, He Y, Thomas GH	Optimizing aerial seabird survey design: pitfalls and progress Davis KL, Farr MT, Wilson RR, Silverman ED, Sussman A, Lyons JE, Zipkin EF	Effects of non-breeding rainfall on signal development, social behavior, and reproductive success in Red-backed Fairywrens Welklin JF, Lantz SM, Khalil S, Karubian J, Webster MS
11:45	Designing coastal conservation to achieve both ecological and human well-being goals Annis GM, Pearsall DR, May CA, Ewert DN		Climate, habitat, and geographic range overlap drive plumage evolution and mimicry in woodpeckers Miller ET, Leighton GM, Freeman BG, Lees AC, Ligon RA	What can we do with survey design specific biases in point-count data? Integrating roadside surveys and new technologies Solymos P, Matsuoka SM, Van Wilgenburg S, Stralberg D, Cumming SG, Bayne EM	Variability in the use of acoustic space between two tropical forest bird communities Hart P.I, Paxton K, Tredinnick G	
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7riday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	1 Abundanas	2 Symu Long town	3 Evolution	4 Disease\Parasites	5 Conservation	6
Ses- sion	Abundance, occupancy, trends	Sym: Long-term Studies of Cavity-nesting Birds: Windows into Environmental Change (Duckworth)	Evolution	Disease\Parasites	Conservation	Annual cycle
14:00	Population Trends and Connectivity of Snowy Plovers on the Southern Great Plains Heath KM, Conway WC, Boal CW, Collins DP, Beauchamp JS, Johnson WP, Hensley G, Saalfeld ST, Grisham BA	Insights into adaptation and population change from longâĂŘterm studies of cavity nesting birds Duckworth RA	Skeletal distribution of medullary bone in Neornithes - implications for the identification of reproductive tissues in non-avian dinosaurs Canoville AR, Schweitzer MH, Zanno LE	Extensive in situ radiation of feather lice on tinamous Virrueta Herrera S, Weckstein JD, Sweet AD, Allen JM, Walden KK, Johnson KP	Population genetics of a Beringian endemic, Rock Sandpiper Pruett CL, Winker K	Carry-over effects of breeding season habitat on a long-distance migrant Boyd BP, Stutchbury B, Hayes SM
14:15	Trends in Abundance and Habitat Associations of Forest Birds on Southern National Forests 1992-2017 Matseur EA, Bonnot TW, Thompson FR, Thorning MG	Long-term responses to environmental change across multiple scales in the great tit Sheldon BC	Replicated invasions reveal hotspots of natural selection in the European Starling Hofmeister NR, Rollins LA, Stuart K, Werner SJ, Lovette IJ, Clayton DF	Ecological drivers of backyard bird feeding and consequences for parasite transmission Hall RJ	How Do Seabirds See Light? Spectral Effects on the Temporal Sensitivity of Hawaiian Seabirds Moon HE, Anderson T, Travers M, Loew E, Porter M	Large-scale phenological dynamics of North American passerines Youngflesh CC, Socolar JB, Tingley MW
14:30	Long-term avifaunal change in undisturbed Amazonian rainforest: Pervasive declines and shifting baselines Stouffer PC, Rutt CL, Jirinec V, Midway SR		Testing for adaptive introgression across elevation in a rapid radiation, the South American siskins (Spinus) Beckman EJ, Witt CC	Role of food availability on a bird's response to a West Nile virus infection Owen JC, Dupuis AP, Landwerlen H, Kramer L	The Endangered Black-capped Vireo (Vireo atricapilla): Status after 30 Years of Recovery Management in Oklahoma, USA Grzybowski JA, McDonald DT	Alternate migration strategies mediate the effects of stochastic and predictable climatic changes on migratory birds Senner NR, Linscott JA, Rakhimberdiev E, Douglas DC
14:45	Estimating Hawaiian songbird population density using machine-learning produced annotations of automated acoustic recordings Weyenberg GS, Rumpungworn M, Howells L, Paxton KL, Crampton LH, Hart PJ	Long-term effects of environmental change on two cavity nesting passerines Bartlow AW, Wysner TE, Musgrave KS, Hathcock CD, Fair JM	The Indirect Effect of Flight Demands on Egg Shape in Migratory and Sedentary Fork- tailed Flycatchers (Tyrannus savana) Gómez-Bahamón VN, Chen ER, Tuero DT, Assis M, Marini MÁĆ, Bates J	Haemosporidians show seasonal patterns but little host specificity within a chickadee hybrid zone Rice AA, Curry RL, Weckstein JD	Year-round monitoring reveals a unique seasonal pattern of bird-window collisions along the Pacific coast of North America De Groot KL, Porter AN, Norris AR, Huang AC	Breeding ground habitat loss is the primary driver of population declines for a long-distance migratory songbird Hallworth MT, Marra PP, Bayne E, Love OF McKinnon E, Tremblay JA, Van Wilgenburg S, Drolet B, Ibarzabal J
15:00	Factors related to occupancy dynamics and breeding propensity of Northern Spotted Owls in a protected area: habitat, weather and Barred Owls Dugger KM, Mangan AO, Chestnut T, Vogeler JC, Breckheimer IK, King WM, Bagnall KE	Using nestboxes to understand if landscape influences American Kestrel reproduction and movements along an urban gradient in Northern Utah, USA Watson J, Oleyar D	Unidirectional introgression between Rhegmatorhina hoffmannsi and R. berlepschi in the Amazon Forest Del-Rio GC, Rego MA, Whitney BM, Schunck F, Silveira LF, Faircloth BC, Brumfield RT	Avian genomic âĂŸbycatchâĂŹ facilitates the study of symbiont ecology and evolution Galen SC, Perkins S	The effects of habitat management and landscape context on northern bobwhite winter survival in southwest Missouri Mosloff AR, Weegman MD, Thompson III FR, Thompson T	Hatching date influences winter habitat quality: Examining seasonal interactions across the full annual cycle in prairie warblers Akresh ME, King DI, Marra PP
15:15	Applying an Ensemble of Small Models to Predict Breeding Distribution of VirginiaåÄŽs Warbler in South Darkhiz R,	Connecting environment, stress coping capacity, and fitness: insights from a nest-box breeding population of Tree Swallows (Tachycineta bicolor)	Bill size evolution in response to human-mediated ecological change in a tidal marsh songbird Benham PM, Bowie RC	Sialic Acid Quantity and Glycosidic Linkage on Avian Erythrocytes Fair JM, Jankowski M, Glaberman S, Kimball D, McCabe K	Mapping wetland habitat using remote sensing data for the critically endangered White-bellied Cinclodes (Cinclodes palliatus)	Geolocators and stabl isotopes reveal the migratory route and overwintering locations of an arctic-breeding passerine
	Dixon MD, Palmer JS, Swanson DL	Vitousek MN			Gibbons RE, Otto M	McFarland HR, Will A, Powell A

7riday, Early Afternoon Session *indicates student presenters eligible for AOS presentation award

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Room	7	8	9	10	11	12			
Ses- sion	Sym: Seabirds on the edge of two worlds: ecology and conservation of Brachyramphus murrelets in marine and terrestrial environments (Rivers)	Sym: Translational ecology - producing actionable science (Saunders)	Sym: Wild birds and the One Health initiative: Dynamic boundaries affect the health of birds, livestock, humans, and the environment (Ramey)	Sym: The Future of Global Bird Trait Datasets: A Game-changing Resource for Macroecology, Macroevolution and Conservation Biology? (Tobias)	Sym: Counting unmarked birds aAS Matching appropriate sampling and modeling techniques with particular research questions (Latif)	Population biology			
14:00	Factors associated with Marbled Murrelet (Brachyramphus marmoratus) nesting activity in Western Oregon Rivers JW, Adrean L, Nelson SK, Garcia-Heras M, Roby D, Betts M	Creating a Win-Win for Ranchers and Waterbirds through Co-Produced Conservation (Social) Science Dayer AA, Sketch M, Anders L, Metcalf A	Antibiotic resistance dissemination through wild birds Bonnedahl J	Exploring the links between morphological form and ecological function in birds Tobias JA	What about those rare species? Study design implications for multi-species avian monitoring programs Sanderlin JS, Ganey JL, Block WM, Schwartz MK, McKelvey KS	Pintail populations became more vulnerable to climate change under agricultural intensification Zhao QN, Arnold T, Devries J, Howerter D, Clark B, Weegman M			
14:15	Can oceanic effects on growth and time to fledging mediate terrestrial predator limitation of an at-risk seabird? Knudson TW, Lovvorn JR, Lawonn MJ, Corcoran RM, Roby DD, Piatt JF, Pyle WH	Co-production of a continental-scale movement and energetics-based framework for collaborative management of waterbird populations Thogmartin WE		Stranger things: elaboration and innovation of island avifaunas Thomas GH, Cooney C, Beckerman A, Bright J	Estimation of Occupancy Parameters for Breeding Birds on the Basis of Single-Visit and Multiple-Visits Point-Count Designs Leu M, Scherer RD, Jirinec V, Fleishman E	Population Demographics, Breeding Ecology, and Responses to Grazing of Montana Sagebrush Steppe Songbirds Dreitz VJ, Ruth K, Berkeley L			
14:30	Breeding propensity and causes of nest failure for Marbled Murrelets in Washington State Lorenz TJ, Raphael MG, Bloxton TD	Developing a unified framework for avian monitoring in Pacific Northwest estuaries Bayard TS, Slater G, Spragens K, Koberstein M, Summers A	Whole genome sequencing provides inference on the epidemiology of antibiotic resistant bacteria in wild birds Ahlstrom CA, Bonnedahl J, Ramey A	Global raptor research and conservation priorities: Tropical raptors fall prey to knowledge gaps Buechley ER, Santangeli A, Girardello M, NeateâĂŘClegg MH, Oleyar D, McClure CJ, Sekercioglu CH	The impacts of temporary emigration on colonization and extinction estimates in dynamic occupancy models Valente JJ, Hutchinson RA, Jirinec V, Leu M, Betts MG	Population ecology of Spruce Grouse in commercially- managed forests Blomberg EJ, Tebbenkamp J, Dunham S, Harrison D			
14:45	Breeding ecology of KittlitzâÁŹs Murrelets in the Aleutian Islands, Alaska Kaler RS, Kenney L, Williams J, Piatt J	Moving bird conservation forward through collaborative action targeting grasslands and wetlands in the Chicago Wilderness region Beilke SJ, Miller N, Suarez D, Kasberg B	Prevalence, diversity, and transmission of blood parasites in Alaskan avifauna Smith MM, Van Hemert C, Meixell B, Handel C, Ramey A	Global patterns and predictors of dispersal-trait variation in birds Sheard CE, Neate-Clegg M, Alioravainen N, Jones SE, Vincent C, MacGregor HE, Bregman TP, Seddon N, Tobias JA	Nested sampling of forest restoration treatments reveals different species occupancy and richness patterns depending on spatial scale Latif QS, Pavlacky DC, Sparks RA, Truex RL	Long-term change in the intrinsic and extrinsic drivers of individual fitness Arcese P, Germain R			
15:00	Space-use of nesting and non-nesting Brachyramphus murrelets in Icy Bay, Alaska, 2007âĂŞ2012 Kissling ML, Lukacs PM, Lewis SB, Gende SM	Shared stewardship for bird conservation: linking backyard habitats, citizen science and yard management Lerman SB, Marra PP, Reitsma R, Evans BS, Narango DL, Clipp H		What information do we need to anticipate the interaction pattern of a hummingbird? Martin Gonzalez AM	Broad-scale monitoring to evaluate the contribution of local conservation to regional bird populations Green AW, Pavlacky DC	Comparative demography at the core and southern edge of the black-throated blue warbler breeding range Chandler RB, Chitwood R, Lewis W, Sillett TS, Cooper RJ			
15:15	Wide-ranging movements and long nest-sea commutes by Marbled Murrelets in Washington Lorenz T.I, Raphael MG, Bloxton TD	Reducing the impacts of cats on birds in Canada through collaborative efforts with multiple stakeholders Gow EA		Sex biases in natural history collections and consequences for bird trait studies **Cooper N"**	On point count sampling for understanding recruitment, survival and movement Zhao QN	Unintended consequences of translocation: Reproductive skew and reduced effective population size in the red-cockaded woodpecker Bowman JR, Thanneau CT, Annell			
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Friday, Late Afternoon Session *indicates student presenters eligible for AOS presentation award

Room	2	3	4	5	6
Ses- sion	Sym: Long-term Studies of Cavity-nesting Birds: Windows into Environmental Change (Duckworth)	Genomics	Manage- ment\Policy	Conservation	Migra- tion\Stopover
16:00	Long-term dynamics of tree-cavity-nesting communities in temperate and subtropical forests Cockle KL, Norris AR, Wiebe KL, Trzcinski MK, Edworthy AB, Martin K	Population Genomics of Greater White-fronted Goose Wilson RE, Sonsthagen SA, Ely CR, Talbot SL, DaCosta JM, Sorenson MD, Scribner KT, Weaver M, Skalos D	Landscape composition explains high rates of dispersal in translocated lesser prairie-chickens Berigan LA, Aulicky C, Sullins D, Haukos D, Fricke K, Reitz J, Rossi L, Schultz K	Site Fidelity and Pairing Behavior in a Wintering Population of American Kestrels in North Texas Biles KS, Bednarz JC	Examining shifted spring phenologies of seasonal avian migration: From Texas to Alaska Horton KG, Sheldon D, Farnsworth A
16:15		The long and the short of it: linking genome-wide signatures of selection across evolutionary timescales in birds Shultz AJ, Arnold B, Sackton TB	The Interactive Effects of Fire and Recreation on Golden Eagles Davis CM, Heath JA	Life on the edge: density and demography of marsh wrens and seaside sparrows in northeastern Florida Schwarzer AC, Cox WA	Global trends in avian partial migration: a meta-analysis Zavaleta ES
16:30	Population increases despite habitat saturation: what can we learn from five decades of research? Walters EL, Hagemeyer ND, Barve S, Pesendorfer MB, Koenig WD	Comparative Genomic Structure within Alaskan galliforms Sonsthagen SA, Wilson RE, Merizon RA, Talbot SL	Duration of corvid response to forest restoration thinning: Implications for conservation of the threatened marbled murrelet Hagar JC, Waianuhea LK	Saving the Kiwikiu (Pseudonestor xanthophrys): Recovery Efforts in Maui, Hawaii Mounce HL, Farmer C, Berry L, Masuda B, Warren C, Berthold L, Duvall F	Mesoscale winds shape spring stopover distributions of migrating birds along the Gulf of Mexico Clipp HL, Cohen EB, Smolinsky JA, Farnsworth A, Horton KG, Buler JJ
16:45	Consequences of long-term habitat change and resource selection for population limitation in cavity-nesting birds Martin TE	Evolutionary genomics of the Brown Creeper Manthey JD, Klicka J, Spellman GM	Effective multi-scale governance for migratory shorebirds. Lessons from the EAAF and an Australian wetland site Hamman EV	Forest Area Required to Support Landbird Population Goals for the Mississippi Alluvial Valley Twedt DJ, Mini A	Nocturnal Bird Migration and Light: Midnight Sun, a Solar Eclipse and Artificial Light Nilsson CH, Horton KG, Dokter A, Van Doren B, Farnsworth A
17:00		Do Piping Plovers in the Northern Great Plains Function as a Metapopulation & Why Does it Matter for Conservation? Anteau MJ, Swift RJ, Sherfy MH, Toy DL, Ring MM	Migration of Buff-breasted Sandpipers at two key regions in the mid-continent: northern Gulf of Mexico and the Flint Hills Lyons JE, Andres BA, Penner RL, Stone K, Wolfenbarger LL		
17:15		Generating Indicator Species for Monitoring and Management for the Cockscomb Basin Wildlife Sanctuary, Belize King DI, Jeffery M, Bailey BA	Migratory bird twilight ascent and descent rates along the southwestern shoreline of Lake Erie Wellik MJ, Kirsch EM, Sheildcastle M		

7riday, LAte Afternoon Session *indicates student presenters eligible for AOS presentation award

Doom	7	8	9	10	11	12
Ses- sion	Sym: Seabirds on the edge of two worlds: ecology and conservation of Brachyramphus murrelets in marine and terrestrial environments (Rivers)	Sym: Translational ecology - producing actionable science (Saunders)	Sym: Wild birds and the One Health initiative: Dynamic boundaries affect the health of birds, livestock, humans, and the environment (Ramey)	Sym: The Future of Global Bird Trait Datasets: A Game-changing Resource for Macroecology, Macroevolution and Conservation Biology? (Tobias)	Sym: Counting unmarked birds aÅŞ Matching appropriate sampling and modeling techniques with particular research questions (Latif)	Behavior
16:00	Dispersal and marine habitat use during the breeding season by the Marbled Murrelet in Oregon Garcia-Heras M, Adrean LJ, Nelson SK, Roby DD, Betts MG, Rivers JW	Audubon's Vision: Restoring the Gulf of Mexico for birds and people Lankford KE	ItàÄŹs not just flowerpots and tires: Defining the impacts of West Nile virus on a woodland bird, Ruffed Grouse Williams LM, Brown JD, Nemeth NM, Hutchinson ML, Helwig MW, Kyle AD	Responses of bird and plant communities to global change: coupled or decoupled? Schleuning M	A general framework to integrate repeated count and mark-resight data Rushing CS, Hostetter NJ, Boettcher R, Lyons J	Testing the Social Intelligence Hypothesis in wild birds McCune KB, Jablonski P, Lee S, Ha RR
16:15	Distribution and Use of Freshwater Habitats by KittlitzåÄŹs Murrelets on Lakes in the Lower Wood River Lake System, Alaska Nesvacil KA, Pendleton G, Swaim M, Walsh P	Using Structured Decision Making to Connect Bird Monitoring to Restoration Decision-making Adams EM, Fournier AM, Lyons JE, Wilson R, Gleason JS, Brush JM, Cooper RJ, DeMaso SJ, Driscoll MJ, Frederick PC, Jodice PG, Reeves DB		Avian functional traits and the impacts of climate change on ecosystem function Pigot AL, Trisos C, Merow C, Tobias J	The potential of citizen science data for population monitoring Johnston AA, Strimas-Mackey ME, Hochachka WM, Robinson O, Ruiz Gutierrez V, Miller E, Auer MT, Fink D	Manipulated Sex Ratios Alter Group Structure and Cooperation in the Brown-headed Nuthatch Cox JA, Cusick JA, DuVal EH
16:30	Seasonal Offshore Distribution and Habitat Use of Brachyramphus Murrelets in Alaska Labunski EA, Kuletz K, Osnas E	A strategic plan for monitoring birds in the Gulf of Mexico: translating stakeholder values into priorities Fournier AM, Lyons JE, Wilson R, Gleason JS, Adams EM, Brush JM, Cooper RJ, DeMaso SJ, Driscoll MJ, Frederick PC, Jodice PG, Reeves DB	Urban white ibises facing trade-offs in South Florida Welch CN, Hernandez SM, Murray M, Curry SE, Kidd A, Hepinstall-Cymerman J, Lankau E, Yabsley M, Navarra K, Cummings C, Lipp E, Altizer S	How trait data help improving avian biodiversity forecasts under global change Zurell D	Scaling up by integrating standardized and unstandardized, community science count data: a case study in the Upper Mississippi River Michel NL, Meehan TD, Saunders SP	Helpers mitigate negative effects of predation threat in the cooperatively breeding purple-backed fairy wren Meyer DK, Kinnebrew E, Pruett-Jones S, Johnson AE
16:45	Consistent post breeding movements of Marbled Murrelet from British Columbia to Alaska (2014-2016) Bertram DF, MacDonald CA, O'Hara PD, Cragg JL, Corcoran R, Greene R, Woo K	Golden-winged warbler conservation: Using science to take action Fowle MR, LaBarr MS, Barker SE	Lessons learned from research and surveillance directed at highly pathogenic influenza viruses in wild birds of North America Ramey AM, DeLiberto TJ, Berhane Y, Swayne DE, Stallknecht DE	The impacts of diversity and assembly history on community vulnerability Weeks BC, Tobias J	Designing a Bird Survey for Latin America: the PROALAS protocol in eBird Ruiz-Gutierrez VV, Lello-Smith A, Ortega Alvarez R	Investigating the role of avian vocalizations as 'magic traits' using on-bird sensors Tarango CA, Sillett TS, Gomez AJ, Fitzpatrick JW
17:00	Post-breeding migration of Kittlitz's Murrelets from the Gulf of Alaska to the Bering Sea and beyond Douglas DC, Piatt JF, Arimitsu ML, Madison EN, Kissling ML, Schoen SK	An Assessment of Ecological Value and Vulnerability in the Bering, Chukchi, and Beaufort Seas Smith MA, Goldman M, Knight E, Sullender B				AI seeking birds at night: an innovative method to monitor the position of nocturnal species using microphone arrays and robot audition HARK Matsubayashi SS, Saito F, Suzuki R, Nakadai K, Okuno HG
17:15		Synthesizing full annual cycle science and threats to drive conservation and policy actions for North American migratory birds Deppe JL, Auer T, Knight E, Langham G, Marra P, Mackenzie S, Rosenberg K, Smith M, Taylor L				A tale of two todies: understanding how vocalizations mediate behaviors in a sympatric zone Garrod HM, Curry R