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**52<sup>ND</sup> ANNUAL CONFERENCE  
SOCIETY FOR VECTOR ECOLOGY  
FORT COLLINS, COLORADO  
SEPTEMBER 15 – 19, 2024**

**SUNDAY – SEPTEMBER 15, 2024**

8:00 – 12:00 VECTOR-BORNE DISEASE OUTBREAK  
SIMULATION WORKSHOP (PRE-  
REGISTRATION REQUIRED)

Angela Pelzel-McCluskey, Stephanie Brault, and Sarah  
Speth

Colorado State University, Diagnostic Medical Center  
(DMC) Room 101

2:00 – 5:00 REGISTRATION (SALON FOYER)

2:00 – 3:00 JOURNAL OF VECTOR ECOLOGY EDITORIAL  
BOARD MEETING (WINDSOR/SALON)

3:00 – 5:00 BOARD MEETING (WINDSOR/SALON)

**MONDAY – SEPTEMBER 16, 2024**

8:00 – 8:30 **WELCOME**

**Lee Cohnstaedt** [lee.cohnstaedt@usda.gov](mailto:lee.cohnstaedt@usda.gov)

Vice President/Program Chair

USDA

**AWARDS PRESENTATIONS**

**Lyric Bartholomay** [lyric.bartholomay@wisc.edu](mailto:lyric.bartholomay@wisc.edu)

President

University of Wisconsin-Madison, Madison WI

**Denise Bonilla** [denise.l.bonilla@usda.gov](mailto:denise.l.bonilla@usda.gov)

President-Elect

USDA/APHIS/Veterinary Services

**PRESIDENTIAL ADDRESS**

**Lyric Bartholomay** [lyric.bartholomay@wisc.edu](mailto:lyric.bartholomay@wisc.edu)

President

University of Wisconsin-Madison, Madison WI

**8:30 – 9:30 KEYNOTE ADDRESS**

Vector ecology in an age of global change

**Ben Beard**, [cbbo@cdc.gov](mailto:cbbo@cdc.gov) Centers for Disease Control,  
Fort Collins, CO

**9:30 – 10:00 REPORTS FROM INTERNATIONAL SOVE  
REGIONS:**

**EURO SOVE**

**Filiz Gunay** [gunayf@gmail.com](mailto:gunayf@gmail.com)

Hacettepe University, Turkey

**LATIN AMERICAN SOVE**

**Christina McCarthy** [mccarthychristina@gmail.com](mailto:mccarthychristina@gmail.com)

Universidad Nacional de La Plata, La Plata, Argentina

**ASIAN SOVE**

**Rui-De Xue** [xueamcd@gmail.com](mailto:xueamcd@gmail.com)

Anastasia Mosquito Control District, St. Augustine, FL

**INDIAN SOVE**

**Ashwani Kumar** [ashwani07@gmail.com](mailto:ashwani07@gmail.com)

National Institute of Malaria Research (ICMR), DHR,  
Govt of India

10:00 – 10:30 **BREAK – SPONSORED BY CENTRAL LIFE SCIENCES**

**ASK THE EXPERT DISPLAY  
– LEADING EDGE ASSOCIATES**

10:30 – 12:00 **SYMPOSIUM 1: THE COMING PLAGUES**

Moderators: **Paula Lado Henaise**  
USDA-ARS  
Manhattan, KS  
[Paula.lado\\_Henaise@usda.gov](mailto:Paula.lado_Henaise@usda.gov)

10:30 – 10:45 Diseases all around: Manatee County (FL) Mosquito Control District's response to locally transmitted malaria and dengue in Sarasota and Hardee Counties in 2023  
**Christopher Lesser**

[Christopher.lesser@manteemosquito.com](mailto:Christopher.lesser@manteemosquito.com)

Manatee County Mosquito Control District, Ellenton, FL

10:45 – 11:00 The emerging global threat of African horse sickness  
**Marion England** [marion.England@pirbright.ac.uk](mailto:marion.England@pirbright.ac.uk) The Pirbright Institute, Woking, UK

11:00 – 11:15 Japanese encephalitis virus surveillance on U.S. Army installations in the Republic of Korea: virus genotype shift, insecticide resistance and the efficacy of countermeasures

**Craig Stoops** [craig.a.stoops.civ@health.mil](mailto:craig.a.stoops.civ@health.mil) BDAACH, Camp Humphreys, Republic of Korea.

11:15 – 11:30 La Crosse encephalitis in NC: eco-epidemiological studies make the case for serious public health and mosquito control interventions

**Brian Byrd** [bdbyrd@wcu.edu](mailto:bdbyrd@wcu.edu) Western Carolina University, Cullowhee, NC

11:30 – 11:45 Ten years and nearly ten thousand triatomines from 28 states and 5 countries: updates on the Kissing Bug Community Science Program

- Sarah Hamer** [shamer@cvm.tamu.edu](mailto:shamer@cvm.tamu.edu) Texas A&M University, College Station, TX
- 11:45 – 12:00 Are tick-borne diseases a threat in the Texas Panhandle?  
**Bianca Rendon** [bianca.rendon@ttu.edu](mailto:bianca.rendon@ttu.edu) Texas Tech University, Lubbock, TX
- 12:00 – 1:30 **LUNCH (ON YOUR OWN)**
- 1:30 – 3:30 **SYMPOSIUM 2: COOL SH\*T YOU SHOULD KNOW**
- Moderators: **Lee Cohnstaedt**  
USDA-ARS  
Manhattan, KS  
[lee.cohnstaedt@usda.gov](mailto:lee.cohnstaedt@usda.gov)
- 1:30 – 1:45 New tricks, old tricks: Experimental acquisition and transmission of *Babesia bovis* by Asian longhorned ticks (*Haemaphysalis longicornis*)  
**Karen Poh** [karen.poh@usda.gov](mailto:karen.poh@usda.gov) USDA-ARS, Pullman, WA
- 1:45 – 2:00 BugOut Wolbachia, an incompatible insect release programme in the British Virgin Islands: Data-driven support for a community driven project  
**Johanna Ohm** [johm@verily.com](mailto:johm@verily.com) Verily Life Sciences, San Francisco, CA
- 2:00 – 2:15 Call of the Wilds: ticks at a free-ranging exotic wildlife conservation center  
**Risa Pesapane**, [pesapane.1@osu.edu](mailto:pesapane.1@osu.edu) The Ohio State University, Columbus, OH
- 2:15 – 2:30 National network of research resources for vector-borne diseases  
**Anna Powers** [akp7@cdc.gov](mailto:akp7@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO

2:30 – 2:45 Exploring the potential impact of transfluthrin emanators on malaria and dengue cases  
**Jason Richardson** [Jason.richardson@ivcc.com](mailto:Jason.richardson@ivcc.com) IVCC, Fort Collins, CO

2:45 – 3:00 Challenges of natural disasters for vector and disease control  
**Broox Boze** [bboze@vdcnet.net](mailto:bboze@vdcnet.net) Vector Disease Control International, Fort Collins, CO

3:00 – 3:15 When ticks bite! Tick-bites and their contribution to alpha-gal syndrome (AGS)  
**Paulina Maldonado** [lpmaladonado@arizona.edu](mailto:lpmaladonado@arizona.edu) University of Arizona, Tucson, AZ

3:15 – 3:30 *Anopheles stephensi*  
**Sarah Zohdy** [ykr2@cdc.gov](mailto:ykr2@cdc.gov) Centers for Disease Control and Prevention, Atlanta, GA

3:30 – 3:45 **BREAK – SPONSORED BY VESERIS**  
**ASK THE EXPERT DISPLAY**  
– LEADING EDGE ASSOCIATES

3:45– 5:30 **SYMPOSIUM 3: VECTOR ECOLOGY**

Moderators: **Risa Pesapane**  
The Ohio State University  
Columbus, OH  
[pesapane.1@osu.edu](mailto:pesapane.1@osu.edu)

**Anna Fagre**  
Colorado State University  
Fort Collins, CO  
[anna.fagre@colostate.edu](mailto:anna.fagre@colostate.edu)



- 3:45 – 4:00 Towards a transboundary IMMP strategy using multidisciplinary vector surveillance  
**Filiz Gunay** [filizgunay@ufl.edu](mailto:filizgunay@ufl.edu) University of Florida, Vero Beach, FL
- 4:00 – 4:15 Sand fly larvae are capable of positive chemotaxis: A proof of concept study using *Phlebotomus papatasi* as a model species  
**Alexandra Chaskopoulou** [achaskopoulou@ars-ebcl.org](mailto:achaskopoulou@ars-ebcl.org) European Biological Control Laboratory, USDA-ARS, Thessaloniki, Greece
- 4:15 – 4:30 A field survey of larval development habitats of *Culicoides* midges in Colorado  
**Carly Barbera** [cbarbera@nd.edu](mailto:cbarbera@nd.edu) University of Notre Dame, Notre Dame, IL
- 4:30 – 4:45 Optimizing environmental DNA (eDNA) methods for *Culex* mosquito surveillance in artificial container habitats  
**Megan Schierer** [megan.schierer@maine.edu](mailto:megan.schierer@maine.edu) University of Maine, Orono, MA
- 4:45 – 5:00 Malaria infection in the urban malaria vector *Anopheles stephensi* under variable humidity and temperature  
**Brandy St. Laurent** [bs744@cornell.edu](mailto:bs744@cornell.edu) Cornell University, Ithaca, NY
- 5:00 – 5:15 Bite Diary: revealing patterns and factors of human-mosquito contact in Florida using a smart phone app-based survey  
**Panpim Thongsripong** [thongsripong.p@ufl.edu](mailto:thongsripong.p@ufl.edu) University of Florida, Vero Beach, FL
- 5:15 – 5:30 Texas ranches: A nidus for *Trypanosoma cruzi* transmission among wildlife, dogs, and triatomines  
**Rachel Busselman** [rbusselman@cvm.tamu.edu](mailto:rbusselman@cvm.tamu.edu) Texas A&M University, College Station, TX

6:00 – 8:00      **OPENING RECEPTION (PAVILLION) –  
SPONSORED BY VALENT BIOSCIENCES**

**TUESDAY – SEPTEMBER 17, 2024**

8:15 – 12:00      **FIELD ECOLOGY DAY**

Coyote Ridge Trail hike to start ~9 am

This trail is considered “easy” with an elevation gain of 564 ft and is 4.1 miles long. The hike takes about 2 hours to complete.

Carpoolers will meet in front of the hotel at 8:15 am

Lunch is on your own

6:00 – 8:00      **GALA DINNER (SALON D)**

**WEDNESDAY – SEPTEMBER 18, 2024**

7:30 – 9:00      **BREAKFAST BUFFET AND POSTER  
SESSION**

**P1**                      Repeated thermal shock events and their interaction with *Wolbachia* and dengue virus infections in *Aedes aegypti*  
**Suk Lan Ser** [sjs7721@psu.edu](mailto:sjs7721@psu.edu) Pennsylvania State University, State College, PA

**P2**                      Using nanopore sequencing for mosquito species identification and confirmation

**Linda Kothera** [lkoothera@cdc.gov](mailto:lkoothera@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO

- P3** Mosquitoes harvested from rice-fields as alternative protein ingredient in broiler feed: Insights from the first pilot study  
**Panagiota Tsafraidou** [panag.tsafarak@gmail.com](mailto:panag.tsafarak@gmail.com)  
USDA-ARS European Biological Control Laboratory, Thessaloniki, Greece
- P4** Evaluating temporal and spatial *Borrelia burgdorferi* strain diversity in endemic vs newly established blacklegged tick populations in Michigan, USA.  
**Michelle Volk** [volkmic1@msu.edu](mailto:volkmic1@msu.edu) Michigan State University, East Lansing, MI
- P5** Examining the heterogenous distribution of blacklegged ticks (*Ixodes scapularis*) in the northern Lower Peninsula of Michigan  
**Arpita Nayak** [nayakar1@msu.edu](mailto:nayakar1@msu.edu) Michigan State University, East Lansing, MI
- P6** Synergizing pyrethroid-treated military fabrics with potassium channel blockers  
**Edmund Norris** [Edmund.norris@usda.gov](mailto:Edmund.norris@usda.gov) USDA-ARS, Gainesville, FL
- P7** Passing it down: *Culex tarsalis* ovary scRNA-Seq reveals markers for studies of arbovirus vertical transmission  
**Hunter Ogg** [hunter.ogg@colostate.edu](mailto:hunter.ogg@colostate.edu) Colorado State University, Fort Collins, CO
- P8** IPM Working Group: Mosquito BEACONS – Biodiversity enhancement and control of non-native species

**Michael Riles** [mriles@central.com](mailto:mriles@central.com) Central Life Science,  
Panama City Beach, FL

- P9** Progress and highlights from the Centers for Disease Control and Prevention National Tick Surveillance Program: 2018 through 2023.  
**Erik Foster** [owm1@cdc.gov](mailto:owm1@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO
- P10** Oral delivery of a modern-day systemic acaricide formulation for pathogen vector management on white-tailed deer in Connecticut  
**Scott Williams** [scott.williams@ct.gov](mailto:scott.williams@ct.gov) Connecticut Agricultural Experiment Station, New Haven, CT
- P11** An integrative framework for tick management: the need to connect wildlife science, One Health, and interdisciplinary perspectives.  
**Karen Poh** [karen.poh@usda.gov](mailto:karen.poh@usda.gov) USDA-ARS, Pullman, WA
- P12** Circadian flight activity and vertical stratification of hemorrhagic disease vectors  
**Vilma Cooper-Montenegro**  
[vilma.montenegro@ufl.edu](mailto:vilma.montenegro@ufl.edu) University of Florida, Vero Beach, FL
- P13** Gene regulation and chromatin changes in *Aedes aegypti* following blood meal acquisition: Insights from CUT&RUN analysis  
**Zeyad Arhouma** [zkrahuma@rams.colostate.edu](mailto:zkrahuma@rams.colostate.edu)  
Colorado State University, Fort Collins, CO
- P14** Sweetening the deal: Development of a novel toxic sugar bait for managing insecticide resistant mosquitoes

**Alexandra Bauer** [bauer.a@ufl.edu](mailto:bauer.a@ufl.edu) University of Florida, Vero Beach, FL

**P15** Prevalence and diversity of *Borrelia* species in ixodid ticks and wildlife from coastal Georgia: a project proposal  
**Taylor Pearson** [tap14550@uga.edu](mailto:tap14550@uga.edu) University of Georgia, Athens, GA

**P16** Saccharine ceratopogonids: Determining sugar-source associations of *Culicoides* biting midges (Diptera: Ceratopogonidae)  
**Chip Markwardt** [tlmark19@ksu.edu](mailto:tlmark19@ksu.edu) Kansas State University, Manhattan, KS

**P17** Life history traits of male *Aedes aegypti* are influenced by exposure to microbes derived from natural larval sites  
**Luis Martinez Villegas** [martinezvillegas.1@osu.edu](mailto:martinezvillegas.1@osu.edu) Ohio State University, Columbus, OH

**P18** Microbial melees in mosquitoes: Bacterial type VI secretion systems revealed in the Mosquito-Associated Isolate Collection (MosAIC)  
**Holly Nichols** [hlnichols@wisc.edu](mailto:hlnichols@wisc.edu) University of Wisconsin, Madison, WI

**P19** Public health command, east's collaborative role in the global public health network in characterizing and preventing emerging tick-borne diseases  
**Alexandra Spring** [Alexandra.r.spring.civ@health.mil](mailto:Alexandra.r.spring.civ@health.mil) Army Public Health Command, Fort Meade, MA

**P20** A rodent and tick bait for concurrent control of white-footed mice (*Peromyscus leucopus*) and blacklegged ticks (*Ixodes scapularis*), the respective pathogen host and vector of Lyme disease spirochetes.

**David Poche** [davidp@genesislabs.com](mailto:davidp@genesislabs.com) Genesis Laboratories, Wellington, CO

**P21** The effect of larval density on adult *Culicoides sonorensis* size and susceptibility to infection with bluetongue virus  
**Bethany McGregor** [Bethany.mcgregor@usda.gov](mailto:Bethany.mcgregor@usda.gov)  
USDA-ARS, Manhattan, KS

**P22** Simulated larval control in mesocosms leads to overcompensation in the yellow fever mosquito  
**Nicole Scavo** [Nicole.a.scavo@gmail.com](mailto:Nicole.a.scavo@gmail.com) Texas A&M University, College Station, TX

**P23** Toward a transboundary IMMP strategy using multidisciplinary vector surveillance  
**Filiz Gunay** [filizgunay@ufl.edu](mailto:filizgunay@ufl.edu) University of Florida, Vero Beach, FL

**P24** *Aedes aegypti* and other mosquito species cohabitating in the Chekwouputoi cave, Uganda  
**Austin Mejia** [Austin.mejia@colostate.edu](mailto:Austin.mejia@colostate.edu) Colorado State University, Fort Collins, CO

**P25** Incriminating vectors of deer malaria (*Plasmodium odocoilei*) in a Florida deer farm  
**Morgan Rockwell** [morganrockwell@ufl.edu](mailto:morganrockwell@ufl.edu) University of Florida, Vero Beach, FL

**P26** Genetic and landscape connectivity of disease-causing blacklegged ticks during range expansion in the midwestern U.S.  
**Dahn-young Dong** [ddong22@wisc.edu](mailto:ddong22@wisc.edu) University of Wisconsin, Madison, WI

- P27** Evaluation of regional surveillance of West Nile virus and St. Louis encephalitis virus in the panhandle of Texas  
**Sierra Lewis** [sierra.lewis2023@gmail.com](mailto:sierra.lewis2023@gmail.com) Texas Tech University, Lubbock, TX
- P28** Whole genome and mitogenome analysis of *Ixodes* spp. throughout the United States  
**Jacob Cassens** [casse090@umn.edu](mailto:casse090@umn.edu) University of Minnesota, Minneapolis, MN
- P29** Kissing bugs in Delaware: *Typanosoma cruzi* prevalence and human blood feeding across the land use types  
**Alexander Kelley** [arkelley@udel.edu](mailto:arkelley@udel.edu) University of Delaware, Newark, DE
- P30** Evaluation of larvicidal efficacy, *Bacillus thuringiensis israelensis* and (S)-methoprene, on *Culex tarsalis* populations in Lubbock County, Texas, USA  
**Melissa Clawson** [meclawso@ttu.edu](mailto:meclawso@ttu.edu) Texas Tech University, Lubbock, TX
- P31** Understanding the immune response to bluetongue virus infection in ruminant hosts: A model-based analysis  
**Abhijit Majumder** [amajumde@nd.edu](mailto:amajumde@nd.edu) University of Notre Dame, South Bend, IN
- P32** Building a comprehensive insecticide resistance testing program in an integrative mosquito management district in St. Johns County, Florida  
**Connor Kuppe** [ckuppe@amcdf.org](mailto:ckuppe@amcdf.org) Anastasia Mosquito Control District, St. Augustine, FL
- P33** Investigating diurnal patterns and weather influence on *Dermacentor* ticks in Colorado

**Savanna Schroth** [scroths@colostate.edu](mailto:scroths@colostate.edu) Colorado State University, Fort Collins, CO

- P34** Refining mathematical models to better predict non-systemic transmission of tick-borne pathogens  
**Stacy Mowry** [smowry@nd.edu](mailto:smowry@nd.edu) University of Notre Dame, Notre Dame, IN
- P35** Ecological determinants of tick distribution and disease risk in northern Colorado  
**Sabrina Gobran** [sabrina.gobran@colostate.edu](mailto:sabrina.gobran@colostate.edu) Colorado State University, Fort Collins, CO
- P36** Developing thermal profiles to better understand and predict house fly (*Musca domestica*) activity  
**Travis Rusch** [travis.rusch@usda.gov](mailto:travis.rusch@usda.gov) USDA, Manhattan, KS
- P37** Impact of slope, aspect, and elevation on the distribution and abundance of *Dermacentor andersoni*  
**Brooke Shenkenberg** [bshenky2001@gmail.com](mailto:bshenky2001@gmail.com) Colorado State University, Fort Collins, CO
- P38** Arboviral surveillance in St. Johns County, northeast Florida: Comparing two commonly utilized surveillance methods  
**Steven Peper** [speper@amcdf.org](mailto:speper@amcdf.org) Anastasia Mosquito Control District, St. Augustine, FL
- P39** Evaluating pollen quantity by flower-visiting mosquitoes  
**Nalany Richson** [nr15837@uga.edu](mailto:nr15837@uga.edu) University of Georgia, Athens, GA
- P40** Assessing the impact of genetically engineered mosquito ingestion by several mosquito predators



**Claire Egan** [cmegan@ucdavis.edu](mailto:cmegan@ucdavis.edu) University of California, Davis, CA

- P41** Patterns of West Nile virus prevalence and levels in northern Colorado raptors  
**Catalina Puska** [cpuska@colostate.edu](mailto:cpuska@colostate.edu) Colorado State University, Fort Collins, CO
- P42** Expanding the mosquito teaching collection of Colorado State University in consideration of shifting ranges and emerging pathogens  
**Anna Hartwick** [anna.hartwick@colostate.edu](mailto:anna.hartwick@colostate.edu) Colorado State University, Fort Collins, CO
- P43** Evaluating the efficacy of *Bacillus thuringiensis israelensis* (BTI) in mosquito populations in northern Colorado  
**Logan Lowe** [logan.lowe@colostate.edu](mailto:logan.lowe@colostate.edu) Colorado State University, Fort Collins, CO
- P44** Evaluating active and passive tick surveillance techniques across northern Colorado  
**Lawson Dawe** [lawson.dawe@colostate.edu](mailto:lawson.dawe@colostate.edu) Colorado State University, Fort Collins, CO
- P45** Prospects for an effective canine vaccine against the brown dog tick, *Rhipicephalus sanguineus*  
**Sri Jyosthsna Kancharlapalli** [mwm7@cdc.gov](mailto:mwm7@cdc.gov) Centers for Disease Control and Prevention, Atlanta, GA
- P46** Utilizing drone technology to control red imported fire ant predation on the endangered Florida grasshopper sparrow  
**Piper Reynolds** [piper@leateam.com](mailto:piper@leateam.com) Leading Edge Aerial Technologies, Daytona, FL

- P47** 2024 RaHP Vec Utah aerial adulticide efficacy  
**Jessica Larsen** [jessicalarsen17@hotmail.com](mailto:jessicalarsen17@hotmail.com) RaHP  
Vec, Fort Collins, CO
- P48** Susceptibility of the ferret (*Mustela putorius furo*) to  
infection by *Ehrlichia chaffeensis*  
**William Nicholson** [wnicholson@cdc.gov](mailto:wnicholson@cdc.gov) Centers for  
Disease Control and Prevention, Atlanta, GA
- P49** Survey of *Ixodid* ticks and rickettsial pathogens collected  
at state parks in north and central Georgia  
**Bryan Ayres** [ylt9@cdc.gov](mailto:ylt9@cdc.gov) Centers for Disease Control  
and Prevention, Atlanta, GA
- P50** Assessing susceptibility of adult mosquitoes to pyrethroid  
insecticides in Larimer County, CO  
**Sofia Christensen** [sofia.christensen2@gmail.com](mailto:sofia.christensen2@gmail.com)  
Colorado State University, Fort Collins, CO
- P51** Assessing the impact of community science tick stations  
at trailheads on the knowledge, attitudes, and practices of  
natural area visitors in Colorado  
**Foram Raval** [fraval@colostate.edu](mailto:fraval@colostate.edu) Colorado State  
University, Fort Collins, CO
- P52** Phenology and pathogen risk presented by tick and  
*Tabanid* vectors in Ohio agriculture  
**Benjamin Zeiger** [zeriger.17@buckeyemail.osu.edu](mailto:zeriger.17@buckeyemail.osu.edu) Ohio  
State University, Columbus, OH
- P53** Attributing the efficacy of a spatial repellent against  
*Aedes*-borne diseases to entomological mechanisms  
**Alex Perkins** [tperkin1@nd.edu](mailto:tperkin1@nd.edu) University of Notre  
Dame, Notre Dame, IN

- P54** A spatial, agent-based model to explore mechanisms of bluetongue virus persistence at the interface of domestic and wildlife animal populations  
**Geonsik Yu** [yu851@purdue.edu](mailto:yu851@purdue.edu) University of Notre Dame, Notre Dame, IN
- P55** Comparative evaluation of an inexpensive mosquito trap for surveillance of invasive *Aedes* and *Culex* mosquitoes in southern California  
**Robert Cummings** [rcummings1026@gmail.com](mailto:rcummings1026@gmail.com)  
Orange County Mosquito and Vector Control District, Garden Grove, CA
- P56** A low-cost light trap for the surveillance of phlebotomine sand flies and mosquitoes  
**Sergio Mendez-Cardona** [Sergio.mendez@ufl.edu](mailto:Sergio.mendez@ufl.edu)  
University of Florida, Vero Beach, FL
- P57** Phenology and wildlife host associations of hard ticks, *Rickettsia*, and *Borrelia* species in east Texas  
**Jordan Salomon** [jordansalomon@tamu.edu](mailto:jordansalomon@tamu.edu) Texas A&M University, College Station, TX
- P58** Field evaluation of the Biogents BG-Pro trap and the CDC Miniature light trap for the collection of host-seeking mosquitoes in Kennesaw, Georgia, USA  
**Andrew Haddow** [ahaddow@kennesaw.edu](mailto:ahaddow@kennesaw.edu) Kennesaw State University, Kennesaw, GA
- P59** Hybridization of *Ixodes scapularis* behavioral phenotypes: observations of offspring behavior and survival  
**Jean Tsao** [tsao@msu.edu](mailto:tsao@msu.edu) Michigan State University, East Lansing, MI

- P60** Single nucleotide polymorphism detection using ddRAD-Seq of *Culex quinquefasciatus* and *Aedes aegypti* specimens  
**Jacqueline Sitko** [sjb2@cdc.gov](mailto:sjb2@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO
- P61** Acquisition of *Borrelia burgdorferi* sensu stricto by *Haemaphysalis longicornis* nymphs during interrupted feeding  
**Christina Parise** [osb1@cdc.gov](mailto:osb1@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO
- P62** Factors associated with historical West Nile virus activity in northern Colorado  
**Zane Wilson** [zanewilson99@gmail.com](mailto:zanewilson99@gmail.com) Colorado State University, Fort Collins, CO
- P63** Population structure, hybridization, and local adaptation of *Aedes aegypti* in California  
**Melina Campos** [mdelima@ucdavis.edu](mailto:mdelima@ucdavis.edu) University of California, Davis, CA
- P64** Ecological aspects of Dengue mosquito (*Aedes aegypti*) and *Culex* spp in disease outbreak areas of Pakistan  
**Farhan Majeed** [farhannoon@yahoo.com](mailto:farhannoon@yahoo.com) Health Services Academy, Islamabad, Pakistan
- P65** Are efforts to conserve urban bees unintentionally increasing risk of mosquito-borne disease?  
**Hannah Debus** [dehus.5@osu.edu](mailto:dehus.5@osu.edu) Ohio State University, Columbus, OH

9:00 – 10:30 **SYMPOSIUM 4: VECTOR GENETICS AND WILDLIFE**

Moderators: **Tyler Sherman**  
Colorado State University  
Fort Collins, CO  
[tyler.sherman@colostate.edu](mailto:tyler.sherman@colostate.edu)

**Karen Poh**  
USDA-ARS  
Pullman, WA  
[Karen.poh@usda.gov](mailto:Karen.poh@usda.gov)

- 9:00 – 9:13 New genome for the biting midge *Culicoides sonorensis*  
**Phillip Shults** [Phillip.shults@usda.gov](mailto:Phillip.shults@usda.gov) USDA-ARS,  
Manhattan, KS
- 9:13 – 9:26 Metagenomic sequencing to determine risks of human  
pathogens from pastured cattle in Arkansas  
**Cameron Osborne** [cjosbo@uark.edu](mailto:cjosbo@uark.edu) University of  
Arkansas, Fayetteville, AR
- 9:26 – 9:39 Current status of metatranscriptomic studies in  
hematophagous disease-transmitting vectors  
**Christina McCarthy** [mccarthychristina@gmail.com](mailto:mccarthychristina@gmail.com)  
Universidad Nacional de La Plata, Argentina
- 9:39 – 9:52 Microsatellites and single nucleotides reveal speciation  
within the *Amblyomma maculatum* group  
**Henry Deese** [hdeese@arizona.edu](mailto:hdeese@arizona.edu) University of  
Arizona, Tucson, AZ
- 9:52 – 10:04 Exotic tick records for Florida: A summary of  
opportunistic reporting  
**Denise Bonilla** [denise.l.bonilla@usda.gov](mailto:denise.l.bonilla@usda.gov) USDA-  
APHIS, Fort Collins, CO
- 10:04 – 10:17 Natural history of *Amblyomma maculatum* sensu lato, a  
newly recognized vector of *Rickettsia parkeri* rickettsiosis  
in the Southwestern United States  
**Tammi Johnson** [tammi.johnson@ag.tamu.edu](mailto:tammi.johnson@ag.tamu.edu) Texas  
A&M University, College Station, TX

10:17 – 10:30 Ectoparasites as ecosystem health indicators: Bat and bugs as a blueprint  
**Anna Fagre** [anna.fagre@colostate.edu](mailto:anna.fagre@colostate.edu) Colorado State University, Fort Collins, CO

10:35 – 12:35 **SYMPOSIUM 5: STUDENT SYMPOSIUM**

Moderator: **Ayat Abourashed**  
Erasmus University  
Rotterdam, Netherlands  
[a.abourashed@erasmusmc.nl](mailto:a.abourashed@erasmusmc.nl)

10:35 – 10:47 Understanding leishmaniasis transmission through analysis of single blood-fed sand flies  
**Patrick Huffcutt** [Patrick.huffcutt@nih.gov](mailto:Patrick.huffcutt@nih.gov) National Institutes of Health, Rockville, MD

10:47 – 10:59 Tick abundance in increasing concentrations of Eastern Redcedar (*Juniperus virginiana*) encroached areas in western and central Oklahoma  
**Jozlyn Propst** [jozlyn.d.kizer@okstate.edu](mailto:jozlyn.d.kizer@okstate.edu) Oklahoma State University, Stillwater, OK

10:59 – 11:11 Impacts of antiplasmodial expression on the mosquito microbiota  
**Marisa Guido** [guidom@duq.edu](mailto:guidom@duq.edu) Duquesne University, Pittsburgh, PA

11:11 – 11:23 Survival of *Amblyomma maculatum* and *Amblyomma americanum* on commonly used types of home flooring  
**Afsoon Sabet** [sabet.17@osu.edu](mailto:sabet.17@osu.edu) The Ohio State University, Columbus, OH

11:23 – 11:35 The microbial community of five *Culicoides* midge species harbor microbes that could be targets for the development of paratransgenic and biological control approaches  
**Amanda Ramirez** [amanda.ramirez@ttu.edu](mailto:amanda.ramirez@ttu.edu) Texas Tech University, Lubbock, TX

- 11:35 – 11:47 Larva ecology and geospatial distribution of *Anopheles gambiae* s1 (Diptera: Culicidae) in Osun State, Nigeria  
**Lateef Busari** [lateef.busari@pgc.uniosun.edu.ng](mailto:lateef.busari@pgc.uniosun.edu.ng) Osun State University, Osogbo, Nigeria
- 11:47 – 11:59 Assessing zoonotic risk of bovine fascioliasis and schistosomiasis at the wildlife-livestock interface around Lake Mbuoro National Park, southwestern Uganda  
**Daisy Namirembe** [namirembedaisy1212@gmail.com](mailto:namirembedaisy1212@gmail.com) Mbarara University of Science and Technology, Mbarara, Uganda
- 11:59 – 12:11 Resisting resistance: Identifying biochemical biomarkers for pyrethroid resistance in *Aedes aegypti* mosquitoes  
**Carla-Cristina Edwards** [ccedwards@ucdavis.edu](mailto:ccedwards@ucdavis.edu) University of California, Davis, CA
- 12:11 – 12:23 Tick ecology, pathogen prevalence, and distribution in south Central Oklahoma on tribal and state-owned land  
**Meghan Gilliland** [meghan.gilliland@okstate.edu](mailto:meghan.gilliland@okstate.edu) Oklahoma State University, Stillwater, OK
- 12:23 – 12:35 Mosquito-flower power: Determining how nectar contents can influence mosquito vectors  
**Danica Shannon** [Danica.shannon@uga.edu](mailto:Danica.shannon@uga.edu) University of Georgia, Aiken, GA

12:35 – 1:45 **LUNCH (ON YOUR OWN)**

1:45 – 3:45 **SYMPOSIUM 6: JOB MARKET SURVEILLANCE: OPPORTUNITIES IN VECTOR ECOLOGY AND CONTROL**

Moderators: **Vilma Montenegro**  
 University of Florida  
 Vero Beach, FL  
[vilma.montenegro@ufl.edu](mailto:vilma.montenegro@ufl.edu)

**Mitchell Kirsch**  
 SC Johnson

Racine, WI  
[jmkirsch@scj.com](mailto:jmkirsch@scj.com)

- 1:45 – 1:50 Introduction  
**Vilma Cooper (Montenegro) and Mitchell Kirsch**
- 1:50 – 2:00 Take a chance on yourself: Finding and exploiting your strengths  
**Mark Benedict** [mbenedict@cdc.gov](mailto:mbenedict@cdc.gov) Centers for Disease Control and Prevention
- 2:00 – 2:10 Where do I fit: My career path so far  
**Jennifer Gordon** [jennifer@buglessons.com](mailto:jennifer@buglessons.com) Bug Lessons Consulting LLC
- 2:10 – 2:20 From academia to industry: Shaping vector control strategies with a researcher’s perspective  
**Casey Crockett** [casey.crockett@azelis.com](mailto:casey.crockett@azelis.com) Azelis Agricultural & Environmental Solutions
- 2:20 – 2:30 From science to service: The entomology and ecology team  
**Saul Lozano** [nkq3@cdc.gov](mailto:nkq3@cdc.gov) Centers for Disease Control and Prevention
- 2:30 – 2:40 Navigating career pathways beyond academia  
**Whitney Qualls** [wqualls@amcdfl.org](mailto:wqualls@amcdfl.org) Anastasia Mosquito Control District
- 2:40 – 2:50 Networking: Over a decade of connections  
**Michael T. Riles** [mriles@central.com](mailto:mriles@central.com) Central Life Sciences
- 2:50 – 3:00 **Break**
- 3:00 – 3:45 **Q&A discussion**
- 3:45 – 4:00 **BREAK – SPONSORED BY CENTRAL LIFE SCIENCES**



## ASK THE EXPERT DISPLAY

### – LEADING EDGE ASSOCIATES

## 4:00 – 5:30 SYMPOSIUM 7: EXPANDING THE VECTOR CONTROL TOOLBOX

Moderator: **Lyric Bartholomay**  
University of Wisconsin  
Madison, WI  
[lyric.bartholomay@wisc.edu](mailto:lyric.bartholomay@wisc.edu)

4:00 – 4:12 Partnering with pest management professionals to suppress nymphal *Ixodes scapularis* (Acari: Ixodidae) in Wisconsin backyards

**Lyric Bartholomay** [lyric.bartholomay@wisc.edu](mailto:lyric.bartholomay@wisc.edu)  
University of Wisconsin, Madison, WI

4:12 – 4:24 Expanding the toolbox for flea control and plague mitigation in rodent populations

**David Eads** [deads@usgs.gov](mailto:deads@usgs.gov) U.S. Geological Survey,  
Fort Collins, CO

4:24 – 4:36 The Southern California SIT Joint Pilot Project: Together building a foundation for X-ray sterilized male *Aedes aegypti* programs

**Amber Semrow** [asemrow@ocvector.org](mailto:asemrow@ocvector.org) Orange County  
Mosquito and Vector Control District, Garden Grove, CA

4:36 – 4:48 Incorporating sterile insect technique into IPM toolbox to control invasive *Aedes* mosquitoes in the West Valley region of San Bernardino County, California

**Michelle Brown**, [mbrown@wvmvcd.org](mailto:mbrown@wvmvcd.org) West Valley  
Mosquito and Vector Control District, Ontario, CA

4:48 – 5:00 Efficacy of Biogents CO<sub>2</sub> generator starter kit as an alternative to dry ice with adult mosquito traps in Jacksonville, Florida

**Sierra Schlupe** [sschlupe@ufl.edu](mailto:sschlupe@ufl.edu) NECE, Jacksonville,  
FL

- 5:00 – 5:12 The development of a kissing bug kill trap for surveillance and control of triatomines  
**Yuexun Tian** [yuexun.tian@ag.tamu.edu](mailto:yuexun.tian@ag.tamu.edu) Texas A&M University, College Station, TX
- 5:12 – 5:24 Building a low-cost environmental chamber for the maintenance of all life cycle stages of *Ixodes scapularis* ticks  
**Greg Joyner** [gjoyner2@uthsc.edu](mailto:gjoyner2@uthsc.edu) University of Tennessee Health Science Center, Memphis, TN
- 5:30 – 5:45 **Business Meeting**

## **THURSDAY – SEPTEMBER 19, 2024**

### **8:00 – 9:30 SYMPOSIUM 8: NOVEL VECTOR CONTROL**

Moderators: **Brian Foy**  
Colorado State University  
Ft. Collins, CO  
[brian.foy@colostate.edu](mailto:brian.foy@colostate.edu)

**Karla Saavedra-Rodriguez**  
Colorado State University  
Ft. Collins, CO  
[Karla.Saavedra\\_Rodriguez@colostate.edu](mailto:Karla.Saavedra_Rodriguez@colostate.edu)

- 8:00 – 8:14 Ivermectin-treated bird feed for control of West Nile virus transmission  
**Brian Foy** [brian.foy@colostate.edu](mailto:brian.foy@colostate.edu) Colorado State University, Fort Collins, CO
- 8:14 – 8:28 The snack that bites back: Attractive toxic sugar baits in the Intermountain West

- Nathaniel Byers** [nate@slcmad.org](mailto:nate@slcmad.org) Salt Lake City  
Mosquito Abatement District, Salt Lake City, UT
- 8:28 – 8:42 Exploring the potential impact of transfluthrin emanators on malaria and dengue cases
- Jason Richardson** [Jason.richardson@ivcc.com](mailto:Jason.richardson@ivcc.com) IVCC,  
Fort Collins, CO
- 8:42– 8:56 Evaluations of novel attractants, repellents, and traps at Anastasia Mosquito Control District of St. Johns County, Florida for public health vector control
- Whitney Qualls** [wqualls@amcdf.org](mailto:wqualls@amcdf.org) Anastasia Mosquito Control District, St. Augustine, FL
- 8:56 – 9:10 Impacts of native *Wolbachia* infection on mosquito biology
- Eric Caragata** [e.caragata@ufl.edu](mailto:e.caragata@ufl.edu) University of Florida, Vero Beach, FL
- 9:10 – 9:24 Artificial intelligence applied to vector identification and monitoring
- Tristan Ford** [tristan@vectech.io](mailto:tristan@vectech.io) Vectech, Baltimore, MD
- 9:24 – 9:29 Compositional analysis and larvicidal activity of nanoemulsified *Eucalyptus globulus* (family: Murtaceae) essential oil against *Aedes aegypti*
- Komalpreet Kaur Sandhu**  
[komalpreetkaur903@gmail.com](mailto:komalpreetkaur903@gmail.com) Akal University, Talwandi Sabo, Bathinda, Punjab, India
- 9:30 – 10:00 **BREAK – SPONSORED BY AZELIS A&ES**
- ASK THE EXPERT DISPLAY**
- LEADING EDGE ASSOCIATES**
- 10:00 – 11:30 **MODELING AND FORECAST**
- Moderators: **Karen Holcumb**  
CDC

Ft. Collins, CO  
[sne3@cdc.gov](mailto:sne3@cdc.gov)

**Bethany McGregor**  
USDA-ARS  
Manhattan, KS  
[Bethany.mcgregor@usda.gov](mailto:Bethany.mcgregor@usda.gov)

**Amy Hudson**  
USDA-ARS  
Manhattan, KS  
[amy.hudson@usda.gov](mailto:amy.hudson@usda.gov)

- 10:00 – 10:15 How a hurricane impacted West Nile virus transmission in a desert  
**Jennifer Henke** [jhenke@cvmvcd.org](mailto:jhenke@cvmvcd.org) Coachella Valley Mosquito and Vector Control District, Indio, CA
- 10:15 – 10:30 Integrating human behavior to understand the translation of tick hazard into risk: a socio-ecological approach  
**Pilar Fernandez** [pilar.fernandez@wsu.edu](mailto:pilar.fernandez@wsu.edu) Washington State University, Pullman, WA
- 10:30 – 10:45 Estimated risk of human encounters with *Borrelia burgdoferi*-infected nymphal blacklegged ticks in the eastern United States  
**Karen Holcomb** [sne3@cdc.gov](mailto:sne3@cdc.gov) Centers for Disease Control and Prevention, Fort Collins, CO
- 10:45 – 11:00 Evaluating vector control strategies for dengue: A modeling assessment of alternative approaches  
**Maile Phillips** [ruu6@cdc.gov](mailto:ruu6@cdc.gov) Centers for Disease Control and Prevention, San Juan, Puerto Rico
- 11:00 – 11:15 Dengue forecasting models for the Americas  
**Talia Quandelacy** [talia.quandelacy@cuanschutz.edu](mailto:talia.quandelacy@cuanschutz.edu) University of Colorado, Aurora, CO
- 11:15 – 11:30 Spatiotemporal modeling of zoonotic arbovirus systems: Challenges and opportunities

**Lindsay Campbell** [lcampbell2@ufl.edu](mailto:lcampbell2@ufl.edu) University of Florida, Vero Beach, FL

11:30 – 1:00 **LUNCH (ON YOUR OWN)**

1:00 – 4:30 **MULTISTATE MEETING**

Moderator: **Allison Gardner and Kristopher Silver**

1:00 – 1:20 Introduction by Allison Gardner and Kristopher Silver

1:20 – 1:40 Optimization of integrated tick management strategies  
**Megan Linske**

1:40 – 2:00 Characterization of exosome cargoes of *Culex tarsalis* cells with West Nile virus  
**Xiufeng Zhang**

2:00 – 2:20 Tick and tick-borne pathogen research at the University of Minnesota  
**Benjamin Cull**

2:20 – 2:40 A One Health approach to detecting, predicting and preventing ticks in areas of range expansion  
**Risa Pesapane**

2:40 – 3:00 Discovering factors influencing host-vector contact dynamics in mosquito-borne disease transmission  
**Panpim Thongsripong**

3:00 – 3:20 Integrating One Health for improved mosquito detection, surveillance and control  
**Megan Schierer**

3:20 – 3:40 Impacts of the microbiota on life history traits and immune defense of the yellow fever mosquito *Aedes aegypti*  
**Sarah Short**

3:40 – 4:25 Discussion on multistate projects

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story to tell?



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